

Artificial Intelligence and Employment Futures for the Arab Region

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Preface

Artificial intelligence (AI) has implications for economic growth, security, education, health, culture, government services, finance, equality, ethics and many other areas. In the Arab region, Governments, private sector actors, and others have already been promoting AI for a number of years as a tool for accelerating progress in all these areas. As its uses expand, so will its impacts on jobs.

AI will transform the livelihoods of tens of millions of people in the Arab region. Unlike prior technologies, AI will not only automate lower- and middle-skilled jobs involving routine and manual tasks. It will also make affect higher-skilled jobs centred on non-routine cognitive tasks.

The exact impact on jobs and livelihoods is still unclear, making it critical for policymakers of the region to be as ready as possible for alternative possible futures. They must be prepared to contend with whatever the outcomes of AI may be as it takes hold in workplaces in every sector.

This joint report between the United Nations Economic and Social Commission for Western Asia (ESCWA) and the International Labour Organization – Regional Office for Arab States (ILO-ROAS) follows three prior reports by ESCWA between 2022 and 2025 on megatrends, and ILO report on digital and artificial intelligence revolution.

Megatrends are the forces of change that transform societies at the intersections of social, technological, economic, policy and other domains. They emerge when innovations in each of those individual domains spark innovations in all the others at once, disrupting existing societal norms and creating new ones, with a mix of beneficial and harmful effects. They demand actions by leaders across sectors to strengthen and take advantage of positive impacts while mitigating potential harm.

In 2024, United Nations member States unanimously endorsed the Pact for the Future, making new commitments to future-focused policymaking and future generations. Within the Pact was a Global Digital Compact in which member States pledged to engage in international collaboration and planning to ensure that AI benefits humanity rather than causing harm. This report is a contribution to this commitment.

In considering areas in which leaders in the Arab region can take action in the coming years to pave the way for future generations, few are more vital than the intersection of AI and employment. This report gives policymakers a range of views into what that intersection might look like, and insight into the different choices they can make to shape it for social good.

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Executive Summary

This report by the United Nations Economic and Social Commission for Western Asia (ESCWA) and the International Labour Organization – Regional Office for Arab States (ILO-ROAS) examines the potential implications of artificial intelligence (AI) for employment in the Arab region between 2025 and 2035. While timelines and specifics are impossible to predict, the impacts of AI on employment are inevitable. Preparing for a range of possible futures is crucial.

The spread of AI is projected to further drive changes in labour markets and for workers. As with the broader economic impacts of AI, these changes are not just projections for the future; they are already happening. Multiple reports have assessed AI exposure, the degree to which a significant portion of the tasks of a job, an industry or an individual worker's tasks can or cannot potentially be performed by or augmented with AI. Evidence is only now emerging of AI eliminating or disrupting jobs around the world. The greatest impacts thus far have been on entry level workers, with some companies making workforce cuts.

Projections of the future impacts on employment are numerous, with one report estimating the elimination of 83 million jobs worldwide by 2027 due to AI, offset by creation of 69 million new jobs. The net loss of 14 million jobs represents 2 per cent of the global workforce.

The novelty of the phenomenon of AI, combined with the speed at which it is advancing throughout the world, makes all such projections uncertain. The only certainty about the impacts of AI on employment is that they will be considerable. It is thus essential that leaders utilize a strategic foresight approach and consider a range of alternative future scenarios as to what the impacts might be, and consider different policy choices and actions that could influence the impacts in different ways.

AI rolls out across the Arab region

The landscape and trajectories of trends in AI investment, research and development, startup and adoption in the Arab region portend substantial changes in the region's societies and economies.

Infrastructure investment has been particularly strong in the Gulf Cooperation Council (GCC) countries, and is accelerating in many other Arab countries. Investment will continue to grow. Across the GCC countries alone, projections show data centre capacity rising to 3.3GW by 2030, more than triple the capacity in 2025. The foundation is being laid for a decade of robust AI acceleration across the Arab region.

A number of Arab countries are already emerging as leaders in AI research and development. nine countries in the Arab region have national AI strategies, and Nine others have national digital transformation strategies encompassing AI in various ways. Research and development are central elements of many of these strategies.

A vibrant ecosystem of AI startup companies is growing throughout the Arab region, with the potential to have a substantial impact on local economies and in the global economy. There were 332 active AI startup companies in the Arab region in 2025, a 30 per cent rise over the previous year, and investment from around the world is fuelling AI startup activity in the region.

The rates of adoption already being seen in businesses, Governments and other types of enterprises indicate that the Arab region is embracing AI in ways that have direct and substantial implications for jobs and employment.

By 2035, there is a projected regional rise in gross domestic product (GDP) of nearly $900 million from the 2025 baseline GDP of $3.5 trillion. This rise is being fuelled by widescale AI adoption transforming industries including manufacturing, agriculture, energy, retail, transportation, finance, public administration and health.

AI and the present and future of labour markets

AI is already impacting the structural and other dynamics that have defined the labour markets of the Arab region for generations, and is poised to further disrupt them in unprecedented ways. These disruptions could worsen employment prospects for many. At the same time, it is possible that AI will provide opportunities for the region to escape the labour market dynamics that historically have kept it from realizing its full economic, social and human potential.

Modelling provides an indicative picture of how AI could reshape employment in the Arab region between 2025 and 2035. AI automation may reduce employment in clerical, sales, retail and routine administrative functions, while increasing jobs in health, education, management and technology-intensive activities. The effects of AI will differ substantially across demographic groups between 2025 and 2035. Young people (aged 15–24 years) are poised to benefit most. Workers aged 25–54 years may experience short-term displacement as automation substitutes mid-skill routine tasks, before reskilling and mobility toward new jobs allow recovery and eventual net gains. Older workers (55+ years) face the highest risk of exclusion due to AI, and gender disparities are expected to remain pronounced.

ILO analysis shows that regional GDP could expand by as much as $14 billion above the baseline due to productivity gains and innovation triggered by AI-enabled jobs. After initial job losses, employment is projected to return to positive ground, potentially producing a net gain of nearly 120,000 jobs. However, these jobs are not expected to be evenly distributed across the economy. AI is likely to reshape sectoral balances rather than to cause a universal expansion in jobs, and policymakers, employers and workers can expect gains and losses at the level of specific occupations. AI integration into economies in the Arab region between today and 2035 will also intersect with other social divides, deepening challenges of inclusion and vulnerability affecting persons with disabilities, migrants, refugees and low-skilled workers. AI has the potential to lift productivity in multiple ways, but the expected net result is that AI will amplify existing structural divides. The productivity improvements will depend not only on technology, but also on the capacity of firms to reorganize workflows, invest in human capital, and embed innovation into business models.

Building the skills for an inclusive AI ecosystem

The Arab region is at a pivotal moment. With coordinated and sustained investment in human capital, lifelong learning pathways and regional governance capacity, the region can evolve from primarily being a user of imported technologies to a contributor and shaper of global AI development. The window for action, however, is finite.

Preparing for an era of AI-driven jobs involves more than producing more programmers or adding isolated modules to traditional curricula. AI readiness is a lifelong, inclusive system of learning that supports individuals through different life stages. Citizens and residents in every Arab country require a baseline of digital and AI literacy. There is also a need for a spectrum of advanced and applied technical competencies including machine learning, cybersecurity, data stewardship, robotics and AI-driven engineering. Equally critical are governance and ethical competencies for AI deployment. Human skills including creativity, systems reasoning, leadership, communication, research literacy and ethical judgment competencies will be essential as automation expands. These skills will ensure that AI complements human agency rather than replaces it.

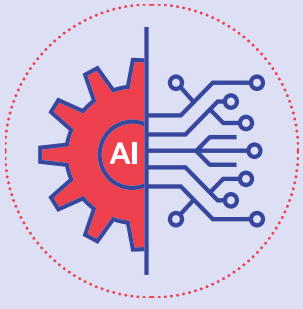
The first pillar of a framework for developing human capital for AI-centric employment in the Arab region is advanced technical and research capabilities. Strengthening technical capacity also means expanding research ecosystems and building talent-retention pathways. AI technical specialists in the region must also understand societal context and responsible AI innovation practices.

The second pillar is the recognition that the transformation of employment in the Arab region due to AI extends beyond technical professionals. Workers across sectors including public administration, education, logistics, manufacturing, health, tourism, finance and creative industries will increasingly interact with AI-enabled tools and services. AI literacy will enable workers to understand how automated systems operate, interpret their outputs, and integrate them responsibly into everyday workflows.

The third pillar focuses on the competencies required to guide AI deployment responsibly and align it with public interest priorities. AI systems will increasingly support decision-making in public services, legal systems and economic governance. There will be a growing need for policymakers, regulators, legal experts, civil servants and institutional leaders to have skills in AI oversight, procurement, auditability, transparency and ethical evaluation.

Developing the skills required for an inclusive and resilient AI economy in the Arab region will require long-term systemic effort. This includes alignment across education systems, labour markets, public institutions and innovation ecosystems. Transition from fragmented initiatives to an integrated skills strategy will depend on institutional enablers as foundations for Arab countries to gradually, sustainably and equitably build the AI talent and skills they need.

The first requirement is the establishment of a coherent national vision for AI-related talent development. Curriculum reform is the second requirement; introducing AI awareness early in schooling and, at the tertiary level, transcending technical-centric curricula to interdisciplinary curricula. Teacher preparedness is the third requirement; scaling high-quality teacher training will be essential. Alongside formal education, applied and vocational learning pathways are critical in the Arab region, due to youth unemployment, rapid industrial automation and uneven workforce participation. For those already in the workforce, flexible and accessible learning models including micro-credentials, short courses, community-based programmes and Arabic-language digital content will be essential. Effective implementation of systemic AI skills and talent development must also include mechanisms for quality assurance, and sustaining progress will require shared responsibility across Governments, the private sector, universities and research institutions, and civil society, all with regional coordination.



The fastest moving among these technology advancement trends are agentic **AI tools** that take actions on behalf of human users; reasoning models that **autonomously break down complex problems, synthesize information, and produce decisions for human users to implement;** multimodal AI models that **combine text, image, audio, video, sensor and other types of data**; and **vertical AI systems** trained on **specialized data, terminology and operational processes** for specific domains or industries.

Recent and anticipated trajectories for AI technology

Emerging trends in AI technology are indicative of further challenges and opportunities that workers in every sector will face and will need to prepare for. The fastest moving among these technology advancement trends are agentic AI tools that take actions on behalf of human users; reasoning models that autonomously break down complex problems, synthesize information, and produce decisions for human users to implement; multimodal AI models that combine text, image, audio,

video, sensor and other types of data; and vertical AI systems trained on specialized data, terminology and operational processes for specific domains or industries. Other emerging advancements include physical AI that integrates AI with machines and smart spaces in factories or warehouses, as well as automated machine learning in which AI is used in creating and deploying other AI models.

Alternative futures for AI and employment

A scenario approach is here employed to provide leaders in the Arab region with a structured way of considering how the impacts of AI on employment in the region could manifest in different ways and to different degrees. Three scenarios are provided, each set in the year 2035. Because the impacts of AI on employment are impossible to predict with precision, recommendations across the three scenarios will help to ensure that leaders implement robust actions beneficial to societies no matter the timelines or specifics of the future that emerges.



Many programmes are created to provide the **upskilling people need** to transition to **new kinds of jobs**, provided by government agencies at the national, sub-national and municipal levels, and by employers and civil society organizations.

1. In one scenario, Arab countries experience a mutually reinforcing interplay over the decade between steadily advancing AI technologies and a rapid pace of AI adoption in public and private sector enterprises. Societies benefit significantly from new products, services and abilities. Stability in the pace of AI capability advancement emboldens Governments and employers to push for the deployment of AI systems very rapidly and at scale. They are confident they can manage the disruptions resulting from the kinds of task automation has enabled. The result is substantial upheaval in employment across the region. Millions of jobs are eliminated. Millions of other workers across sectors have to gain new skills and shift into new roles profoundly unlike their old ones. Familiar institutions such as national education systems are reimagined to help with the impacts. Many programmes are created to provide the upskilling people need to transition to new kinds of jobs, provided by government agencies at the national, sub-national and municipal levels, and by employers and civil society organizations. Leaders in the public and private sectors show great willingness to contend with the challenges AI poses, intent on reaping its benefits by devoting resources and creativity to transition their workforces to a new era.

2. In a second scenario, by 2035, Arab countries are leaning into an environment of AI advancing far beyond even the most optimistic expectations of a decade ago. There are successive astonishing breakthroughs in agentic AI, reasoning models and embodied AI, which combines AI-enabled sensors to perceive the physical world and take autonomous actions. Unfortunately, as AI is advancing in these ways, the mechanisms for bringing the workforce along at a comparable pace are struggling. Ministries, universities and civil society actors are siloed, deploying fragmented and often outdated approaches to reskilling, adaptation of labour laws and social protection. This mismatch, with transformative technological capability and bracing uptake, alongside inertia in transitioning workforces, is

deepening gaps in equality. Many citizens, and a growing number of business leaders, feel that no precautionary steps have been taken. These interwoven dynamics create a volatile landscape that undermines social stability and risks reversing some of the economic diversification gains made over the last decade.

3. In a third scenario, Arab countries orchestrate an AI environment that unfolds along a tempered trajectory. Businesses, government agencies and other organizations readily leverage steady advances in language models and other AI tools developed throughout the world. While not ignoring the kinds of applications that global frontier models have been making available, the priority is productivity gains and economic growth that are just as achievable from leveraging open-source and small-language models. Countries create opportunities for themselves to experiment with creative means of preparing their citizens and residents to work in the era of AI. Businesses consider how to use AI in ways that not only fuel profit and growth, but also respect ethical considerations and employees' mental and physical well-being. Governments take care to introduce policies at a pace they are confident will produce positive outcomes. These dynamics reshape the region's employment landscape in consistently constructive ways. Progress and opportunity are uneven, but a solid development trajectory is evident.

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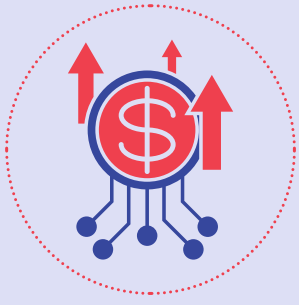
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Abbreviations, Acronyms and Glossary

Acronym	Definition
AI	Artificial intelligence
AutoML	Automated machine learning
ESCWA	United Nations Economic and Social Commission for Western Asia
GCC	Gulf Cooperation Council
GDP	Gross domestic product
GPS	Global Positioning System
GW	Gigawatt
ICT	Information and communications technology
ILO	International Labour Organization
ILO-ROAS	International Labour Organization – Regional Office for Arab States
MENA	Middle East and North Africa
MSME	Micro, small and medium-sized enterprises
MW	Megawatt
OECD	Organisation for Economic Co-operation and Development
SDG	Sustainable Development Goal
STEM	Science, technology, engineering and mathematics
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNIDO	United Nations Industrial Development Organization
WEF	World Economic Forum

Introduction, scope and background

This joint report between the United Nations Economic and Social Commission for Western Asia (ESCWA) and the International Labour Organization (ILO) – Regional Office for Arab States examines the potential implications of artificial intelligence (AI) technologies for employment in the Arab region between 2025 and 2035.



Global private **investment** in **artificial intelligence** was more than **$252 billion** in 2024, a **26 per cent** growth over the 2023 figure.

The *Artificial Intelligence Index Report 2025,* the annual analysis of trends by the Institute for Human-Centered AI at Stanford University, found that:[1]

- Global private investment in artificial intelligence was more than $252 billion in 2024, a 26 per cent growth over the 2023 figure.
- The percentage of surveyed organizations globally reporting use of generative AI in at least one business function more than doubled from 2023 to 2024, from 33 per cent to 71 per cent.
- In 2024, hiring of individuals into AI-skilled job roles grew 29 per cent and 25 per cent faster than overall hiring in Saudi Arabia and the United Arab Emirates, respectively.
- The percentage of surveyed organizations in developing economies using AI, including in the Arab region, rose to 77 per cent in 2024 from 49 per cent in 2023.

Many view AI as potentially the most transformative and fastest-moving general purpose technology in history. General purpose technologies are defined by three characteristics: they have pervasive applicability across a wide range of sectors; they are improvable over time, becoming continuously more effective and efficient; and they fuel innovation beyond just their own improvement, facilitating the creation of new products and processes in the many sectors in which they are applied.[2] AI meets all these criteria.

AI models are reaching new benchmarks faster than ever, according to the Stanford Index and other sources. The innovations AI is fuelling are difficult to keep count of given their diversity and speed of introduction, from new forms of personalized healthcare to new predictive maintenance processes in manufacturing, new kinds of models for risk analysis and management in finance, and many others. Estimates of the contribution of AI-enabled innovations to global gross domestic product (GDP) range from $7 trillion over the next 10 years[3] to between $2.6 trillion and $4.4 trillion annually.[4] Even an intentionally conservative estimate puts it at closer to 1 per cent of projected global GDP growth between 2025 and 2035, reaching $1 trillion in value creation.[5]

However, the hurdles of the infrastructure requirements for AI are considerable. Costs for data centres and concern over their energy consumption are increasing, alongside pushback from communities where they are being built. Upskilling workforces will take considerable time and resources. Another hurdle will be the social acceptance of the technology; even a general purpose technology can advance only as fast as people come to trust it and feel safe from its risks. Regulations governing AI are still nascent. Calls are strong for ensuring it creates new opportunities for workers, not just productivity growth at their expense.[6]

AI may not accelerate beyond existing technology diffusion rates, but it will continue to diffuse at a mass scale. While the timelines and specifics are impossible to predict, the impacts of AI will come. Preparing for a range of possible futures is thus imperative.



In the Arab region, Crown Prince Mohammed bin Salman of Saudi Arabia noted in February 2025 at the LEAP Tech Conference that **"as a digital economy collectively, the region has grown by 73 per cent to $260 billion from 2021 to 2024."**

Purpose of this report

The impacts of AI will span from people's daily personal lives to fuelling scientific discovery, simultaneously enhancing and jeopardizing security, to helping solve while also accelerating global challenges such as climate change, and many others. Cutting across all these areas are the impacts of AI on jobs and workers.

This report examines those impacts on the future of employment, specifically in the Arab region, outlining what policymakers can anticipate and suggesting actions countries can take to adapt to them. The report analyses and assesses both the opportunities and the threats that AI brings with respect to jobs across Arab countries. Guiding policymakers towards strategic responses can help to ensure that AI becomes a net positive force for sustainable development in the Arab region, and diminish the risks of AI exacerbating existing unemployment or inequality. By highlighting what the wide range of impacts of AI on employment could be over the next 10 years, and actions that can influence those impacts, the report aims to help leaders in the Arab region shape pathways toward shared prosperity.

The future is here – why this report matters now

AI is already fuelling economic growth around the world at levels few anticipated even five years ago. Projections of the future impact should alert policymakers as to the need for strategies and actions that will realize the potential of AI over the next decade.

J.P. Morgan in September 2025 reported that "in the first half of 2025, AI-related capital expenditures contributed 1.1 per cent to [United States] GDP growth, outpacing consumers as an engine of expansion."[7] As economist Jason Furman noted, this represented practically the entirety of the country's GDP growth over that period; the figure would have been only 0.1 per cent without AI.[8] Analysis by PwC

shows a global rise in productivity growth through AI from 7 per cent to 27 per cent between 2018 and 2024, looking just at the industries most exposed to AI. Regarding employment, the same PwC report showed that jobs requiring AI skills offer workers a positive wage differential of more than 50 per cent over those in jobs unaffected by AI, and a rise in AI related jobs of 7.5 per cent in 2025 over 2024.[9] In the Arab region, Crown Prince Mohammed bin Salman of Saudi Arabia noted in February 2025 at the LEAP Tech Conference that "as a digital economy collectively, the region has grown by 73 per cent to $260 billion from 2021 to 2024."[10] Much of that growth is attributable to hundreds of billions of dollars being invested in AI across the region.

The urgency of this present report is demonstrated in how the spread of AI is driving and projected to drive further changes in labour markets and for workers. Like the broader impacts, those changes are not just projections for the future: they are already happening.



The International Monetary Fund in 2024 determined that almost **40 per cent of global employment is exposed to AI.**

Numerous analyses have documented AI exposure, the degree to which tasks within a job, an industry or an individual worker's activities can, or cannot, potentially be performed by or augmented with AI. The International Monetary Fund in 2024 determined that almost 40 per cent of global employment is exposed to AI. This report found that advanced economies are at greater risk of disruption, with approximately 60 per cent of jobs being AI-exposed, with 26 per cent in low-income countries.[11] In 2025, the ILO looked at nearly 30,000 occupational tasks and clustered occupations according to their level of exposure to generative AI (factoring out other forms and applications of the technology). They identified approximately 25 per cent of occupations globally to fall into one of four gradients of generative AI exposure, with significant differences between women's and men's employment, and higher shares in high-income countries.[12]

Evidence is beginning to emerge of the fallout to date of AI eliminating or disrupting jobs around the world. In one widely-reported study, economists documented some of the effects seen in the United States since 2022. Analysing millions of workers across tens of thousands of firms, they found that early-career workers (ages 22-25) in the most AI-exposed occupations have experienced a 16 per cent relative decline in employment concentrated in occupations where AI is more likely to automate rather than augment human labour.[13] Thus far, other evidence has been more anecdotal than irrefutably causal. Tech giants have made significant workforce reductions as part of a broader restructuring effort to focus on AI-driven automation. Global shipping firm United Parcel Service reported it had eliminated 48,000 positions during 2025[14], describing the moves as "powered by automation", while a senior vice president at Amazon said AI is the leading cause of its upcoming reduction in force of 14,000 employees.[15] Business experts note other factors likely in play, such as market competition and internal company dynamics, with AI an easy factor for executives to impute blame.

The risks AI poses to jobs are not only displacement; evidence is already emerging that individuals working in jobs using AI face potential stresses. A growing number of companies are using or planning to use AI in ways that affect workers in harmful ways. These include AI for applicant screening in hiring; performance monitoring

including auto-generated warnings or termination notices for low productivity; using opaque algorithms to set pay and allocate work among staff; algorithmic scheduling with limited or no flexibility; and AI surveillance infringing on employee privacy.[16] Concerns are growing about workers' cognitive decline as they choose or are directed to use AI for tasks that once required human thought.[17]



As of 2023, an estimated **435 million people** were working on **545 online gig platforms.**

Both the risks and the benefits of AI are anticipated to be particularly significant for workers in the global gig and platform economy. This type of work is already being more enabled by AI, increasingly blurring the line between formal and informal labour.[18] As of 2023, an estimated 435 million people were working on 545 online gig platforms. Of these platforms, 75 per cent operate in multiple regions and workers perform jobs for clients outside their countries of residence, with implications for applications of labour laws and cross-border data transfer laws.[19] AI algorithms increasingly manage labour on these platforms, enabling micro-entrepreneurs to scale up through digital identification (ID) and mobile banking, and transforming gig work in both positive and negative ways.[20] Safeguarding of these workers' rights and safety will need to evolve as AI advances, advancing beyond efforts such as the Organisation for Economic Co-operation and Development (OECD)-developed policy toolkit in 2020, and the draft convention developed by the ILO in 2025 on standards to ensure decent working conditions.[21]



A widely cited World Economic Forum report that same year projected **83 million jobs would be eliminated worldwide by AI by 2027,** offset by the creation of **69 million new ones.**

While the evidence to date of the impact of AI on jobs is patchy, projections of its future impact are numerous and vary widely. In May 2025, remarks by the chief executive officer of AI firm Anthropic were widely reported: he estimated AI would be responsible for eliminating half of all entry-level white-collar jobs in the United States by 2030.[22] A year earlier, venture capitalist Kai-Fu Lee forecast the same impact, but three years sooner.[23] Analysis by Goldman Sachs in 2023 estimated that 300 million jobs worldwide will be eliminated or profoundly changed by AI, while at the same time, AI will boost global GDP by 7 per cent and create new jobs.[24] A widely cited World Economic Forum report that same year projected 83 million jobs would be eliminated worldwide by AI by 2027, offset by the creation of 69 million new ones. The net loss represents 2 per cent of the global workforce.[25]

The novelty of the phenomenon of AI, combined with the speed of its advance, makes all such projections inherently uncertain. One certainty is that its impacts on employment will be significant in scale and scope. Leaders must use a strategic foresight approach and consider a range of alternative future scenarios for what the impacts could be, and what different policy choices might influence the impacts in different ways.

Report scope, methodology and structure

This report examines how AI could impact job markets in the Arab region between 2025 and 2035. It examines AI-driven automation, augmentation and the new industries and business models expected as a result of AI. It considers job

displacement risks, prospects for the creation of new kinds of job roles, and how familiar job roles could be changed. It considers the readiness of the region for how AI might impact employment, focusing particularly on the readiness of education systems and other means of learning to provide the skills people need to succeed in a future where AI is prominent. It also considers what kinds of public policy decisions and actions may be required to harness the benefits of AI and mitigate the risks it poses in the context of employment across the Arab region.

The study employs a strategic foresight approach, grounded in methodologies such as those used in prior reports in the ESCWA Megatrends report series. In builds on the work of government strategic foresight entities in Canada, Estonia, Singapore, the United Arab Emirates, the United Kingdom, the United States and others; regional foresight efforts including the European Union Foresight Network and the United Nations Development Programme Regional Bureau for Asia and the Pacific; and the United Nations Industrial Development Organization (UNIDO). Rather than positing a single outcome for the impact of AI on jobs and workers in the Arab region, it explores multiple plausible futures. As described in Chapter 2, the purpose of providing policymakers with scenarios is not to predict what will happen, but to provide a range of potential scenarios to improve decision-making today. The potential scenarios are based on research, data and analysis of a wide range of sources on emerging technology and other trends. Their implications 5–10 years ahead are extrapolated in combination with analysis of social, economic and policy trends.

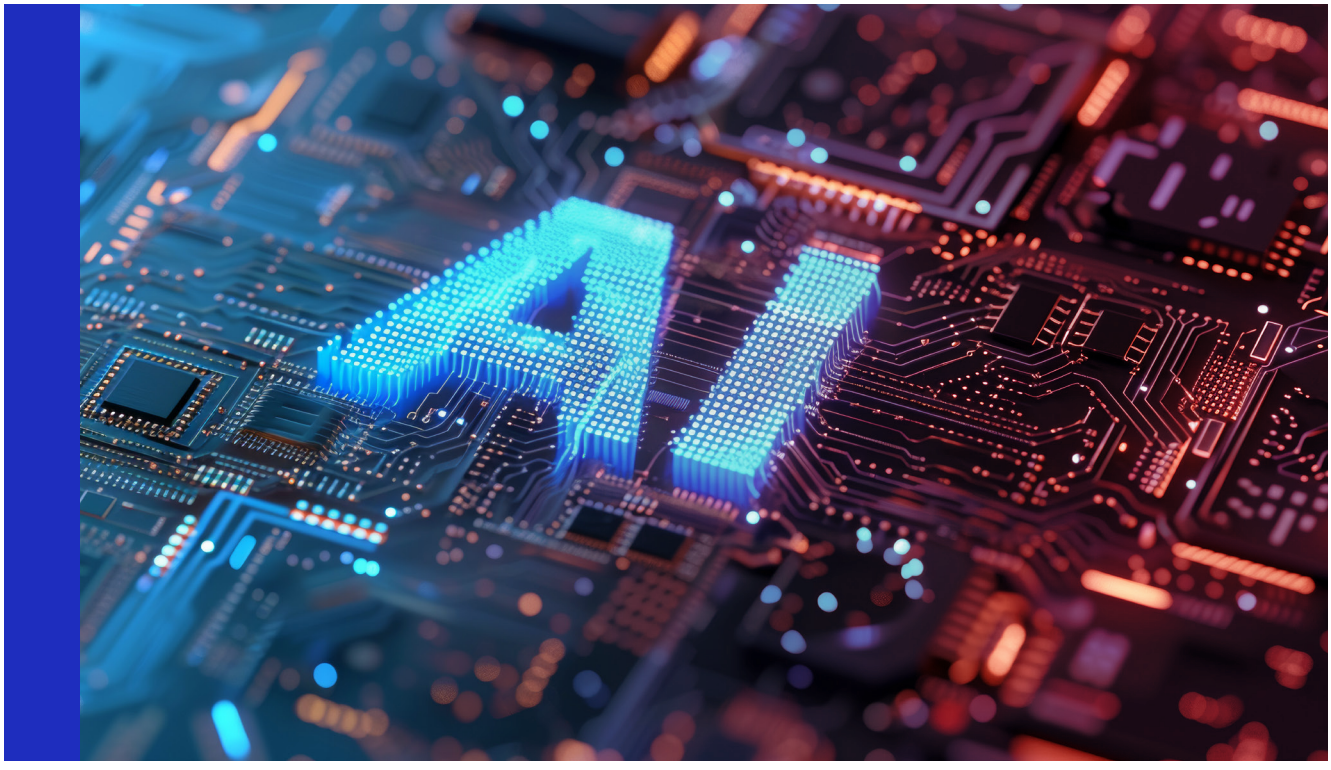
The report considers global developments in AI to assess how AI and employment trends might evolve in the Arab region. It encompasses regional developments, including the strong momentum in the region towards AI adoption at national and regional levels, exemplified by high-profile investment, infrastructure development, training initiatives and global partnerships.

The report considers key characteristics of the Arab region's labour market dynamics, including high unemployment, especially among young people; the skills gaps and education mismatch; a large informal economy; public sector dominance in some countries' labour markets; and gender gaps in employment. The research and analysis are designed to challenge the premise that the region's historical labour market patterns will inherently limit how AI might factor into the future of employment. Rather, it considers the prospect that AI is so fundamentally transformative that it could represent an opportunity to transcend those historical realities.

Chapter 1 explores the current and projected future landscape of AI investment in the Arab region, along with other trends in the advancement and adoption of AI in the region. It examines the existing state and projected future state of employment in the Arab region, focusing on how labour market conditions could be influenced by AI. It also explores the readiness of education systems and other educational resources to meet the demands of AI, and how they can become more ready to meet the demands of the future. Finally, it looks at current gaps in AI-related and other digital skills and what skills the education system will need to provide for the future.

Chapter 2 presents three plausible alternative future scenarios for AI and employment in the Arab region, crafted using strategic foresight methods. Each scenario presents a different trajectory for AI adoption and its impacts on labour markets. The scenarios chapter is designed to allow policymakers to see a range of possible futures and to highlight critical factors and decisions that will shape the future of work in the Arab region.

Informed by the insights from the scenarios and the research and analysis that underlies them, Chapter 3 presents key findings, messages and recommendations critical for policymakers to help them shape the future of AI and employment in the Arab region. They are derived from looking across all three scenarios, because the uncertainty of the topic requires policy approaches that produce beneficial outcomes in multiple possible futures, to minimize risks and maximize benefits. The key findings, messages and recommendations offer a framework of actionable steps for government leaders, businesses and educational and other institutions for adapting to the impacts of AI on employment in the Arab region. Some of the recommendations may take considerable time, coordination and investment to implement. Others are actionable steps policymakers can take in the next 12–24 months.



1. The present and future of AI, employment and skills in the Arab region

In the Arab region, commensurate with their resources, Governments, businesses and individuals are rushing to embrace AI. The interplay of trends in the development and adoption of technology, its integration into local economies, the impacts of AI on labour market dynamics, and the adaptation of education systems to the AI era will all define the future of the region in profound ways.

A. AI rolls out across the region

Four areas provide particular insight into the rapid advancement of AI in the region: infrastructure investment, research and development in AI innovation, the AI startup ecosystem, and AI adoption in private and public sectors enterprises.

1. Infrastructure investment

The Arab region's rapid movement into the AI era is clearly visible in its substantial AI-related infrastructure investment. This has been particularly strong in the Gulf Cooperation Council (GCC) countries, and is also accelerating in many other Arab countries. One of the most prominent and large-scale projects is Stargate UAE, a $500 billion multinational partnership co-led by Abu Dhabi government-owned investment firm MGX and United Arab Emirates technology firm G42.[26] Saudi Arabia has also made substantial AI infrastructure investments, including a recent partnership with United States chipmaker NVIDIA to build AI data centres in the Kingdom with 500 megawatt (MW) capacity for training and deploying sovereign AI models at scale.[27] In 2023, a partnership was announced to build the first hyper-scale data centre in Egypt, and first in the region.[28] Data centres in Iraq, Morrocco, Qatar, Tunisia and other Arab countries are beginning to employ upgraded AI technology.[29] Across the GCC, projections show data centre capacity rising to 3.3 gigawatts (GW) by 2030, more than triple the 2025 capacity,[30] while Iraq, Jordan, Lebanon and Morocco are all projected to see their data centre markets grow at compounded annual growth rates over 6 per cent between 2025 and 2030.[31] The foundation is being built for a decade of robust AI acceleration across the Arab region.



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2. Research and development in AI innovation

In this domain, GCC countries are leaders not only in the region but, increasingly, globally. Mohamed bin Zayed University of Artificial Intelligence in Abu Dhabi is the world's first graduate-level research university dedicated solely to AI.[32] The Advanced Technology Research Council in Abu Dhabi developed the Falcon family of large language models (LLMs), which "significantly outperforms other Arabic LLMs."[33] Saudi Data and AI Authority developed ALLaM, described as "the most powerful Arabic LLM in the Arab world."[34] AI research and development is also growing in Bahrain, Kuwait, Oman and Qatar. In Tunisia, Novation City opened in 2024 to bring together academia, industry and government in AI research and development.[35] The National School of Artificial Intelligence in Algiers[36] is undertaking research on AI Internet of Things applications. The national AI strategy of Egypt includes an industry-academia-research platforms initiative, and Mauritania similarly has a research and innovation in AI pillar.[37] Morocco is establishing a new laboratory to develop next-generation AI for chemistry and materials science.[38]

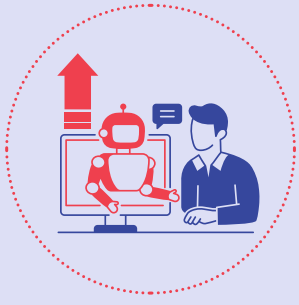
3. AI startup ecosystem

A vibrant ecosystem of AI startup companies is growing throughout the Arab region. Most Arab countries' national AI and digital economy strategies aim to boost tech startups, and broader national vision and strategy documents promote entrepreneurialism in support of inclusive and sustainable social and economic development. The Middle East and North Africa Early Stage Data Handbook reports that 332 AI startup companies were operational in the region in 2025, 30 per cent more than 2024, and notes that AI was the sixth most in-demand industry among Middle East and North Africa investors in 2024.[39] AI startups captured 12 per cent

of all venture funding in the region in 2024, a record high percentage, across more than 100 deals.[40] The span of AI startups across the region is increasing. Examples in Jordan include AI-based customer relationship management platforms and education platforms.[41] Lebanon has companies developing AI-powered software for cybersecurity, custom AI agents and more.[42] Of the over 100 AI-based companies in Egypt, most are startups.[43] Nearly every country in the region has an emerging AI startup sector, including Libya, the Syrian Arab Republic, the State of Palestine and Yemen.[44] Investment from the United Arab Emirates, Saudi Arabia and others is fuelling AI startup activity not only in their countries but also in neighbouring countries.[45]

4. AI adoption in enterprises

The rates of adoption seen in businesses, Governments and other enterprises in the Arab region have substantial implications for jobs and employment. As early as 2020, more than 80 per cent of surveyed companies had launched AI integration into their business operations, with 25 per cent planning 30 per cent of their business processes to be assisted by AI within three years.[46] Adoption in surveyed companies ranges between 25–35 per cent in manufacturing, supply chain management, finance, sales and marketing, and research and development.[47] In the GCC countries, nearly 75 per cent of organizations surveyed were using generative AI in at least one business function in 2024.[48] In Egypt, the national Health Care Authority is using AI across its radiology image archive.[49] Morocco is integrating AI into its intermodal transport.[50] A predictive AI model is supporting national grid operations in Jordan.[51] AI has enabled an Algerian firm to become the largest superapp in North Africa.[52] Financial service institutions throughout the region are using AI tools to enable digital payments, fraud protection and more.[53] The oil and gas industry is applying AI in applications from exploration to downstream operations and emissions reduction.[54] Looking to the future, the pace and scope of AI adoption in the public sector in the Arab region is poised to continue accelerating; more than 700 identified use cases facilitated by public cloud services could generate $183 billion in value in the Arab region by 2030, and cloud computing use in the public sector alone could drive one-third of that figure.[55] Looking across all these and other sectors and industries, recent analysis projects a region-wide rise in GDP of up to $1.11 trillion by 2035 from the 2025 baseline GDP of $3.57 trillion.[56]



Looking to the future, **the pace and scope of AI adoption** in the public sector in the Arab region is poised to continue **accelerating;** more than **700 identified use cases** facilitated by public cloud services could generate **$183 billion** in value in the Arab region by 2030, and cloud computing use in the public sector alone could drive one-third of that figure.

B. AI and the present and future of labour markets

AI is already impacting longstanding structural and other dynamics that have defined Arab region labour markets for generations and will disrupt them in unprecedented ways. These disruptions will worsen employment prospects for many. The potential also exists for AI to be an opportunity for the region to escape the labour market characteristics that historically have kept it from realizing its full economic, social and human potential.

1. AI entering the employment picture

Labour markets across the Arab region are deeply divided and structurally constrained. Fewer than half of working-age adults are employed, with wide differences between the oil-rich GCC economies and countries facing conflict or fiscal fragility. In the GCC countries, employment levels are relatively high but heavily dependent on migrant labour and dominated by public-sector jobs for nationals. Most non-GCC economies struggle with weak private-sector dynamism, limited diversification and persistent instability, resulting in very low employment-to-population ratios and widespread underutilization of labour.

Young people and women continue to be excluded. One in three young people in the region is not in employment, education or training, creating risks of long-term detachment from the labour market. Women's labour-force participation in the Arab region remains the lowest globally; one in five women works or seeks work owing to social norms, care responsibilities and structural barriers like transport safety, childcare provision and discrimination. Those who do work are often confined to informal or low-paid activities, reflecting the region's persistent gender segmentation.

Informality and the lack of structural transformation further weaken job quality. Nearly half of all workers hold informal jobs without social protection or legal security. Informal employment in Arab countries comprised 56 per cent of total employment in 2025[57] and represented 22 per cent of GDP.[58] The region has the second-lowest social protection coverage globally, with informal workers most at risk; only 37 per cent of the region's population have pension coverage, 46 per cent have work injury coverage, and 7 per cent have unemployment insurance.[59] Nearly two-thirds of adults across the region remain without access to a formal bank account.[60] Many economies have undergone what ILO described in a 2022 report as "premature de-industrialization," a shift from agriculture to low-productivity services without building a solid manufacturing base.[61] As a result, economic growth has not translated into enough decent jobs. This fragile context forms the backdrop against which AI is emerging, bringing technologies with the potential to generate new opportunities, but also to deepen existing inequalities if structural constraints remain unaddressed.

2. Prospects for the AI employment future, circa 2035

Recent modelling by ILO in collaboration with Cambridge Econometrics provides an indicative picture of how digitalization broadly, and AI in particular, could reshape employment in the Arab region. The analysis considered two sets of assumptions about the future: one where broadband expansion achieves near-universal connectivity, and a more ambitious one that layers AI onto that foundation of digital connectivity. The analysis focused on 12 Arab region countries. While conditions are distinct from one country to another, analysis conducted by the study team for the report suggests the projections are generalizable region-wide. The remainder of this section draws from this ILO analysis published in September 2025.[62]

Under broadband expansion, projections for 2035 find employment growth in the Arab region relatively broad-based, reflecting spillovers from greater connectivity, e-commerce diffusion, digital public services and new participation by micro, small and medium-sized enterprises (MSME). Gains are concentrated in construction, logistics, personal and business services, and medium-tech manufacturing, with only marginal job losses in traditional sectors. By contrast, the AI-integration path triggers deeper structural shifts. In those projections, automation reduces employment in clerical, sales, retail and routine administrative functions, while significant expansion occurs in education, management, health sector and tech-intensive activities. Science, technology, engineering and mathematics (STEM) occupations, along with human-centred roles including teaching, social care and creative services, are expected to show growth.

The effects of AI will differ substantially across demographic groups between 2025 and 2035. Young people (aged 15–24 years) are poised to benefit the most, as they possess relatively higher digital familiarity and adaptability. They are the main entrants into newly created digital occupations and entrepreneurial niches. Workers aged 25–54 years may experience short-term displacement as automation replaces mid-skill routine tasks, but reskilling and mobility toward technology-augmented jobs will allow recovery and eventual net gains by 2035. Workers aged 55+ years face the highest risk of exclusion in AI integration projections. Limited access to reskilling and shorter time horizons before retirement will make adaptation to AI in workplaces difficult.

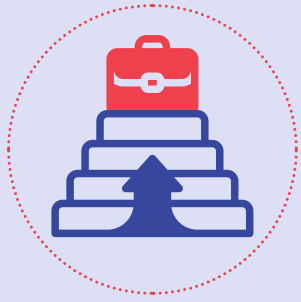
Gender disparities are anticipated to remain pronounced. Although broadband expansion benefits both men and women, men capture larger absolute gains because they are concentrated in high-growth, male-dominated sectors such as construction, transport and tech services. Where advances in AI integration layer on top of broadband expansion, these imbalances will be accentuated. For example, women, over-represented in administrative, clerical and routine service roles, are disproportionately exposed to automation, while men register employment increases in technical, logistics and managerial occupations linked to AI adoption. Without corrective policy measures, digital transformation will reinforce existing structural inequalities.



The effects of AI will differ substantially across demographic groups between 2025 and 2035. **Young people (aged 15–24 years) are poised to benefit the most,** as they possess relatively higher digital familiarity and adaptability.

AI integration into Arab economies between 2025 and 2035 will also intersect with other social divides, deepening challenges of inclusion and vulnerability affecting persons with disabilities, migrants, refugees and low-skilled workers. While these groups could benefit from the remote work, digital entrepreneurship and flexible online platforms that AI will enable, they also risk exclusion where digital literacy and connectivity remain weak. Equitable training availability, accessible technologies and social protection coverage will determine whether AI becomes a catalyst for inclusion or a new source of inequality for these groups.

Women, young people and displaced populations stand out as groups requiring tailored policy responses. Ensuring a just and inclusive transition requires complementary investment in reskilling and lifelong learning, gender-responsive employment policies and adaptive social protection systems.



After **an initial adjustment period** marked by **automation-related displacement,** employment would return to positive ground, potentially **a net gain of 120,000 jobs.**

3. AI-Driven growth, shifts and transformations in employment

By 2035, the AI integration pathway projected by ILO in its September 2025 analysis shows a clear shift in the region's economic trajectory. Once digital infrastructure and broadband coverage reach maturity, the introduction of AI can be expected to become a net driver of growth. Regional GDP could expand by $14 billion above the baseline, reflecting productivity gains triggered by AI-enabled production, logistics and services. After an initial adjustment period marked by automation-related displacement, employment would return to positive ground, potentially a net gain of 120,000 jobs. According to the ILO report, these jobs will not be evenly distributed across the economy. Rather, they will emerge from structural change, i.e. the creation of new, technology-augmented occupations outpacing the disappearance of routine ones. The transition will be gradual, and points to a more productive and knowledge-intensive regional economy by the mid-2030s.[63]

AI adoption is likely to reshape sectoral balances. Construction and transport-related activities are projected to record the largest employment gains, fuelled by investment in digital infrastructure, logistics networks and urban modernization. Education, professional services and health sector-related activities will also grow as economies demand more trainers, engineers and specialists capable of operating in data-rich environments. By contrast, retail, public administration and

basic manufacturing are likely to contract as automation streamlines repetitive tasks and reduces labour needs. The overall pattern shows a clear migration of employment from medium-skill, process-oriented industries toward human-intensive and high-knowledge sectors, where adaptability, creativity and interpersonal interaction are indispensable.

As AI advances, policymakers, employers and workers can expect occupational gains and losses. The occupational picture is likely to mirror sectoral transitions. The most significant employment growth may take place among teachers, personal-service providers, drivers and machine operators, and construction trades, all of which rely on physical presence, human interaction or skilled craftsmanship, areas less amenable to full automation. At the other end of the spectrum, clerical and administrative jobs, including general office clerks, data-entry staff and customer-service representatives, are projected to decline sharply as generative AI automates documentation, scheduling and client-handling functions. These contrasting outcomes highlight the dual nature of the AI revolution: it eliminates routine middle-tier tasks while creating new demand for roles that combine technical knowledge with social or problem-solving skills.

In short, by 2035, the Arab region's AI-driven transformation promises measurable economic gains but demands ambitious policies to prevent it from magnifying structural inequalities.

4. Impacts on job quality

The spread of AI across labour markets in the Arab region is not only changing what people do, but also how they experience work. AI will make some jobs more rewarding and productive, yet will also deepen insecurity and inequality if left unmanaged. The integration of AI tools into production and services opens opportunities for better-organized work processes, and greater efficiency and innovation in how tasks are done. Workers in digitally advanced firms will gain new learning opportunities, career mobility and a sense of participation in modern, forward-looking workplaces. In this regard, AI may help make jobs more engaging and better aligned with the aspirations of younger, educated workers entering the labour market.

However, these benefits are not automatic. The same technologies that will make some jobs more rewarding will make others more precarious. This is already being seen and can be expected to increase. For example, the use of AI in scheduling, monitoring and performance evaluation can lead to work intensification and greater surveillance, while algorithmic control over tasks may infringe on workers' autonomy. As firms experiment with digital outsourcing and platform-based arrangements, many workers face new pressures: less predictable income, fragmented careers and weaker social protection coverage. For women and low-skilled workers, whose employment is already more vulnerable, such trends can reinforce existing disadvantages.

The effects of AI on job quality depend on governance and inclusion. Where social dialogue is active and labour standards are adapted, AI can strengthen job quality. Where this is missing, the same technologies will erode job quality and marginalize those least equipped to adapt.

5. Potential impacts of AI on MSMEs

MSMEs remain the backbone of employment and production in the Arab region, constituting between 80-90 per cent of all businesses in the region and contributing to more than half of global employment.[64] AI is reshaping how business is done. Digitalization has already helped many small firms access new markets, reduce transaction costs, and streamline operations, but the arrival of AI is increasingly bringing both greater promise and greater complexity.[65]

On the opportunity side, AI tools are already lowering the barriers that have long limited small firms' competitiveness. Predictive analytics, automated bookkeeping, digital marketing and customer-relation tools allow MSMEs to operate with a level of insight and efficiency once reserved for large corporations. In sectors such as agriculture, tourism, logistics and retail, AI-driven data systems are improving inventory management, reducing waste, and helping firms anticipate demand. When combined with broader digital-infrastructure investment, as AI advances it will open pathways for small entrepreneurs, especially women- and young people-led enterprises, to participate in high-value supply chains and cross-border e-commerce.

At the same time, AI will create new divides within the MSME landscape. Many firms lack the digital literacy, financial

capacity or technical infrastructure to adopt even basic automation. Without public support, AI could widen gaps between a small number of digitally-ready MSMEs and the majority still operating informally or with outdated technology. The cost of AI systems, dependence on external data providers, and uncertainty about data privacy or intellectual property rights present obstacles. If these challenges are not addressed, MSMEs across the Arab region risk being confined to low-productivity sectors or being displaced by larger, AI-enabled competitors.

The AI dimension of MSME transformation is not just technological but institutional. It demands accessible financing models, simplified regulatory frameworks, and training systems that allow small entrepreneurs and their workers to understand, adapt, and benefit from AI. The inclusion of MSMEs in the AI transition will determine whether digitalization becomes a source of shared prosperity or creates more inequality across the Arab region.



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6. Impacts on productivity

Over recent years, digitalization has produced mixed results: while some firms and sectors report efficiency gains, others have seen little change in output per worker. This uneven pattern is becoming even more evident as AI becomes widely adopted.

AI has the potential to increase productivity in multiple ways: automating routine processes, improving the precision of decision-making, and enabling the creation of entirely new products and services. That potential is already being realized in organizations around the world, including in the Arab region, and will increase as AI rapidly becomes more sophisticated. Early adopters in finance, logistics and advanced manufacturing are already using AI-powered forecasting, predictive maintenance and intelligent design tools to cut costs and shorten production cycles. For the region's services sector, AI applications in digital marketing, customer analytics and e-commerce are emerging as key drivers of productivity. However, to date, these benefits are being enjoyed predominantly by larger, digitally mature enterprises, while most MSMEs still struggle to integrate even basic data systems.

AI productivity improvements depend not only on technology but on the capacity of firms to reorganize workflows, invest in human capital, and embed innovation into business models. In contexts where managerial practices, skills development and institutional support remain weak, AI adoption may increase costs without delivering measurable gains. Rapid automation of mid-skill jobs can suppress aggregate productivity if displaced workers are not re-employed in higher-value activities. The challenge is not whether AI will boost productivity in theory, but how economies in the Arab region will create the conditions for those gains to materialize broadly rather than remain concentrated among a few leaders.

AI diffusion into the economies of the Arab region over the next decade must go hand-in-hand with capacity-building. Productivity growth will depend on investment in data infrastructure, digital-skills training and adaptive business regulations that encourage experimentation while protecting decent work. When guided by an

enabling environment, AI can be a catalyst for sustainable, inclusive productivity growth across the region's diverse economies; without it, the gap between advanced and lagging sectors may widen further.

C. Building the skills for an inclusive AI ecosystem

The Arab region is at a pivotal moment. A growing youth population, new digital infrastructure and rising investment in innovation are converging to create the conditions for meaningful participation in the global AI landscape. Realizing that potential will depend on the region's ability to develop the skills, institutional capacity and equitable learning systems to shape and govern AI responsibly.

1. A turning point for the region



By 2030, **more than 20 per cent of jobs** globally will change due to technological advancements.

AI is already influencing labour markets, public administration, scientific research and more. By 2030, more than 20 per cent of jobs globally will change due to technological advancements.[66] On average, at the global level, workers can expect that two-fifths of their existing skill sets will be transformed or become outdated over the 2025-2030 period.[67] More than 60 per cent of workers see AI advancements compelling them to upskill or reskill on an ongoing basis to remain competitive and secure in their careers.[68] Employers report increasing difficulties in recruiting workers with strong technical and analytical skills and the ethical judgement needed for AI-enabled environments.[69]

These dynamics reflect not just a skills gap but also a broader equity challenge. The region is not starting from scratch in addressing the human capacity needs for the AI era; national AI strategies, expanding university programmes, and emerging innovation hubs demonstrate the growing readiness and commitment to create the AI users and leaders of the future.

With coordinated and sustained investment in human capital, lifelong learning pathways and regional governance capacity, the Arab region can move from being primarily a user of imported technologies to becoming a contributor to and shaper of global AI development. This transition is both achievable and strategic. It offers the potential to strengthen economic resilience, improve public services, accelerate science and innovation, and ensure that AI systems reflect local languages, cultural contexts and societal values.

The window for action, however, is finite. The choices made now with respect to developing the AI skills and talent foundation of the region will determine whether AI becomes a driver of shared prosperity or a new source of exclusion. With deliberate leadership, inclusive policy design and commitment to dignity, equity and future-readiness in AI skill and talent development, the region can ensure its societies are not merely adapting to global technological change, but actively shaping desired digital futures.

2. In the AI era, skills are currency

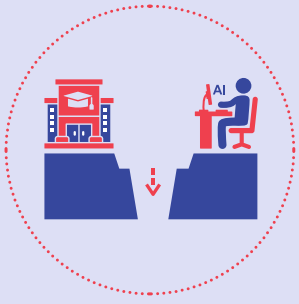
Preparing people for an AI-driven jobs era cannot be reduced to producing more programmers or adding isolated modules to traditional curricula. AI readiness must be an inclusive system of learning that supports individuals through different stages of life.

Citizens and residents in every Arab region country require a baseline of digital and AI literacy, not necessarily to become specialists, but to navigate rights, risks and opportunities. This includes understanding how AI systems use personal data, how automated decisions affect daily life, and how to critically assess digital information.

There is also a need for a spectrum of advanced and applied technical competencies including machine learning, cybersecurity, data stewardship, robotics and AI-driven engineering. These skills need to align with national development priorities such as healthcare, climate adaptation, agriculture, digital government, cultural heritage preservation and energy transition.

Equally critical are governance competencies. AI deployment must be accompanied by regulatory knowledge, algorithmic auditing, policy design and responsible data governance approaches, all aligned with international human rights frameworks.

Human skills like creativity, systems reasoning, leadership, communication, research literacy and ethical judgment are essential as automation expands. These skills ensure that AI complements human agency rather than replaces it.



Across the Arab region, evidence from ongoing **analysis in the ESCWA Skills Monitor** and Higher Education Alignment programme consistently shows **a wide gap** between what universities teach and what employers increasingly require in an **AI-driven labour market,** particularly in terms of technical skills. For **the 500 most demanded skills,** the gap ranges between **40 per cent and 70 per cent** for some Arab countries.

3. Core competency areas, skills priorities and institutional enablers

Building on this context requires a framework that articulates the core competency areas, skills priorities and institutional enablers for an inclusive and future-ready AI ecosystem in the region.

a. Technical and AI research and contextual skills

The first pillar of such a framework is advanced technical and research capabilities for countries seeking not only to adopt, but also to develop and adapt AI systems. These competencies include strong competencies in mathematics, statistics, computing and software engineering, as well as applied expertise in machine learning, data science, robotics and natural language processing. As systems become more complex and embedded in critical sectors including health, energy, mobility and agriculture, skills in scalable system design, data stewardship and model lifecycle management will become increasingly important.

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skills, the gap ranges between 40 per cent and 70 per cent for some Arab countries.[70] Curriculum analyses reveal that course offerings often emphasize traditional computing concepts but rarely integrate applied AI skills such as machine learning, data engineering or cloud services, despite these emerging as employer-demanded core competencies. While many universities teach generic mobile application development, only a few explicitly reference AI or advanced software architectures, and some top institutions omit technical skills that employers treat as essential. This pattern confirms that university curricula remain anchored in legacy models even as employer requirements shift rapidly.[71]

For the Arab region, strengthening technical capacity also means expanding research ecosystems, building talent retention pathways, and advancing Arabic-language AI and multilingual models. Regional disparities in research investment, data access and compute infrastructure need to be addressed to avoid concentrating innovation capacity in only a few economies. Collaborative research platforms, shared datasets and cross-border academic partnerships can support the development of frontier knowledge and ensure that local priorities, not only global commercial interests, shape innovation trajectories.

In addition to technical expertise, the skillsets needed for the future of employment for AI technical specialists in the Arab region must also encompass understanding of societal context and responsible AI innovation practices. Integrating ethics, human-centred design, and human-rights-based model development and model training approaches into technical training will help ensure that AI systems are developed in ways that respect cultural values, prevent harm, and maintain public trust. As the pace of advancement accelerates, mechanisms such as research fellowships, international exchanges and lifelong professional development will be essential to sustaining a capable and future-ready technical workforce.

b. AI literacy and productivity skills for all workers

The second pillar recognizes that the transformation of employment in the Arab region due to AI extends beyond technical professions. Workers across sectors will increasingly interact with AI-enabled tools and services. AI literacy will allow these workers, to understand how automated systems operate, how to interpret their outputs, and how to integrate them responsibly into everyday workflows.

Competencies in this pillar include digital fluency, a foundational understanding of AI concepts, and the ability to collaborate with AI-assisted systems in ways that enhance productivity while maintaining human oversight. Skills such as critical evaluation of automated outputs, adaptability, teamwork and problem-solving are vital as roles evolve and new forms of work emerge.

Ensuring equitable access to these skills requires inclusive learning pathways, recognition of non-formal and vocational learning, public-sector training initiatives, and micro-credentialing systems that allow workers to upskill throughout their careers. This pillar is particularly relevant for groups that face barriers to participation in rapidly evolving digital economies: women, young people, rural communities, displaced populations and older workers. If these communities are not engaged, AI risks reinforcing, rather than reducing, existing inequalities in access to opportunity.

c. Governance, ethics and policy skills

The third pillar focuses on the competencies required to guide AI deployment responsibly and align it with public interest priorities. As AI systems increasingly support decision-making in public services, legal systems and economic governance, there will be a growing need for policymakers, regulators, legal experts, civil servants and institutional leaders to have skills in AI oversight, procurement, auditability, transparency and ethical evaluation.

Capabilities in this pillar include understanding rights-based and ethical frameworks, assessing the social and environmental impacts of AI, and navigating complex regulatory landscapes. These skills are essential to ensuring accountability, preventing discrimination and misuse, and building trust in AI-enabled public systems. Because governance models are still emerging globally, the region will need capacity to interpret and adapt international standards while contributing regional perspectives to global policy dialogues, particularly regarding language, cultural contexts and development priorities.

Strengthening this pillar also requires multi-stakeholder engagement, cross-disciplinary education and institutional learning systems that evolve as technology advances. Coordinated regional approaches like shared standards, regulatory alignment and knowledge exchange can reduce fragmentation and support the responsible deployment of AI in both high-capacity and resource-constrained settings.

4. Building the foundations: institutional enablers for systemic AI skills development

Developing the skills required for an inclusive and resilient AI economy in the Arab region requires long-term, systemic effort. It requires alignment across education systems, labour markets, public institutions and innovation ecosystems. The transition from fragmented initiatives to an integrated skills strategy will depend on clear policy direction, strong coordination mechanisms and investment in people, institutions and infrastructure. Institutional requirements are the foundations for countries in the region to gradually, sustainably and equitably build the AI human talent and skills they need.

The first requirement is the establish a coherent national vision for AI-related talent development. Comprehensive AI and education strategies will be most effective when they are anchored in national development priorities and equity commitments. Rather than treating AI training as an isolated component of education reform, such strategies can embed AI competency development into basic education, higher education, technical and vocational pathways, and lifelong learning systems. Aligning these frameworks with international guidelines, such as the United Nations Educational, Scientific, and Cultural Organization (UNESCO) competencies for students, educators and civil servants can support the harmonization of efforts and avoiding duplication while allowing room for culturally and linguistically relevant adaptation. Connecting skills planning to the region's digital industrial strategies and national AI roadmaps is essential.

Curriculum reform is the next institutional requirement. Introducing computational thinking, data reasoning and AI awareness early in schooling helps normalize these skills rather than treating them as specialist expertise. At the tertiary level, reform efforts need to convert the technical-centric curricula of engineering faculties into interdisciplinary curricula where AI intersects with law, ethics, sustainability, health, creative sectors and public administration. Given the region's growing investment in digital government, smart cities and renewable energy, aligning university curricula with these national priorities will ensure relevance and accelerate labour market readiness.

Transforming education systems also depends on another institutional requirement: teacher preparedness. Across the region, many educators lack familiarity with AI concepts or confidence in integrating digital content into learning. Scaling high-quality teacher training, through national academies, digital learning platforms and regional centres of excellence is essential. Structured pathways for certification, peer mentoring and professional incentives enable educators not only to adopt new content, but also to model responsible and ethical engagement with emerging technologies.

Alongside formal education, applied and vocational learning pathways are critical in the Arab region, especially in light of youth unemployment, rapid industrial automation and uneven workforce participation. Partnerships between Governments, universities, vocational institutes and technology companies can create applied learning environments, innovation labs, internship pipelines, apprenticeship programmes and sector-specific transition support hubs. While billions are being spent in the Arab region and globally on AI technical upskilling, there is growing recognition that preparing workers for future labour markets will require more than just training. It must also encompass internships for hands-on AI practice, development of capacities such as critical thinking that become more important in AI jobs, and support for AI-exposed workers coping with the mental health toll of economic insecurity. Through public–private AI partnerships, Arab countries can align technical skill learning with the multidimensional aspects of helping displaced and at-risk workers adapt to the AI jobs era.[72]

For those already in the workforce, flexible and accessible learning models including micro-credentials, short courses, community-based programmes and Arabic-language digital content will be key. These can help ensure that upskilling for the AI jobs of the future is feasible regardless of geography, age or employment status. Ensuring that such learning opportunities reach rural communities, women and displaced populations will be central to preventing an AI-skills divide.

Effective systemic implementation of AI skill and talent development must also include mechanisms for quality assurance and credential recognition, funding and procurement frameworks, and digital infrastructure for access to content and tools. Data governance policies, equity safeguards, and accountability frameworks must accompany skills deployment to ensure that expansion of AI competencies also strengthens trust, transparency and public welfare.

Sustaining progress will require shared responsibility. Governments can provide direction and regulatory architecture. The private sector can and must bring applied knowledge and innovation. Universities and research institutions will provide depth. Civil society can play a key role ensuring inclusion and transparency. Regional coordination, through shared datasets, research platforms and mutual recognition of training standards can help reduce fragmentation and accelerate progress, particularly in countries with limited infrastructure or capacity.



Global software firm Salesforce projects a **300 per cent increase in agentic AI** between 2025 and 2027, from use in **15 per cent** of organizations to **64 per cent**, and they expect that in the near future businesses will be required to **"facilitate human workers"** transition from task execution to AI supervision, cultivating crucial skills in leadership, strategic thinking, and human-AI collaboration.

D. Recent and anticipated trajectories for AI technology

Leaders in the Arab region will need to contend with the continuously accelerating advancement of new breakthroughs in AI. Those next breakthroughs will have their own impacts on the future of jobs in the region. Evidence is now emerging as to how the dominant form of AI, generative AI, will affect employment. The effects of the next forms of AI, and the forms after that, are less clear but must be considered. Policymakers can only prepare for the job impacts of the next generations of AI through ongoing strategic foresight efforts.

A brief look at some emerging trends in the technology of AI highlights potential challenges and opportunities that workers in every sector will face and will need to prepare for or adapt to.

1. Agentic AI

Agentic AI tools and systems are being rolled out. While generative AI produces content in text, visual or other forms, agentic AI goes beyond this to take actions on behalf of human users. It executes tasks, not by responding to a prompt or instructions but by interpreting data available to it, deciding on a course of action, then carrying it out. Each execution feeds that insight back into the AI agent's future behaviour. AI agents are built to complete tasks from start to finish with little to no human input.[73]

Agentic AI is already impacting workplaces. Future implications for workers will relate more to the training and upskilling they need to use it in their job roles rather than risk of displacement. It will have important roles in functions including human resources, marketing, customer services, legal and finance.[74] So-called frontier firms are envisioned to be structured around and powered by hybrid teams of humans and agents, with agents "taking on specific tasks at human direction" and ultimately running entire business processes and workflows, with humans checking in as needed.[75] Global software firm Salesforce projects a 300 per cent increase in agentic AI between 2025 and 2027, from use in 15 per cent of organizations to 64 per cent, and they expect that in the near future businesses will be required to "facilitate human workers' transition from task execution to AI supervision, cultivating crucial skills in leadership, strategic thinking, and human-AI collaboration."[76]

2. AI reasoning models

A growing class of reasoning models, also called planning models or thinking AI, is being developed. Reasoning models autonomously conduct analysis, breaking down complex problems, synthesizing information, and producing decisions or recommendations that human users can then implement.[77]

Reasoning models are an emergent development in AI, expected to have utility in a wide range of business functions and industry, from finance (analysing macroeconomic scenarios and generating risk mitigation actions), the legal industry (simulating different litigation strategies and recommending optimal courses of action), to software development (diagnosing failures in code and iterating fixes). As reasoning models mature and are adopted across industries, one of the main potential employment implications is the threat they could pose to higher-skilled workers in roles where the analytical tasks they undertake can be performed by AI.[78]

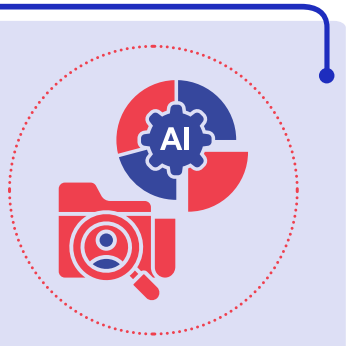
3. Multimodal AI

Multimodal AI models are being introduced in sectors such as healthcare, manufacturing, education and agriculture. These models combine text, image, audio, video, sensor and other forms of data. Multimodal AI provides a more complete understanding of context by processing visual, auditory and other senses simultaneously. Market research projects compound annual growth of more than 37 per cent in multimodal AI from $1.64 billion to $20.58 billion between 2024 and 2032.[79]

In healthcare, multimodal AI will enhance diagnostics and treatment planning by combining medical images, text-based patient records, laboratory results and genetic data.[80] In manufacturing, multimodal models can be used for predictive maintenance and quality control by combining data from equipment sensors, production line cameras and maintenance logs.[81] Teachers can use multimodal models to adapt content to students' individual learning styles, merging text, video lessons, audio discussions and interactive simulations.[82] In agriculture, multimodal models can help optimize crop management by using satellite imagery, in-field sensors and weather data to predict yields, manage pests, and more.[83]

4. Vertical AI

There is growing recognition of the limits of general-purpose models and a movement toward vertical AI. Enterprise AI models are built to span and serve multiple business functions with the same broad functionality in all industry sectors, working with the kinds of data common in any sector. Vertical AI systems are designed for and trained on specialized data, terminology and operational processes uniquely relevant to the industry for which they were built, allowing them to capture contextual subtleties that general-purpose models cannot. This deep, domain-specific tuning from initial model training through operational usage enables vertical AI to deliver more precise business results.[84] One projection in 2024 found vertical AI companies growing 400 per cent year-over-year,[85] and another estimates that "by 2027, more than half of the GenAI models used by enterprises will be domain-specific, up from 1 per cent in 2024."[86]

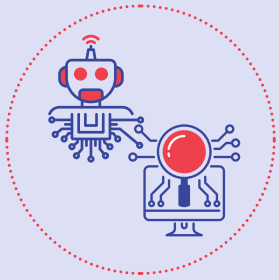


One projection in 2024 found **vertical AI companies growing 400 per cent year-over-year,** and another estimates that "by 2027, **more than half** of the **GenAI models** used by enterprises **will be domain-specific,** up from 1 per cent in 2024."

Many of the same industries that will employ multimodal AI models are expected to increasingly turn to vertical AI as well. For example, the types of images, textual records and sensor outputs that are core to healthcare functions differ from the images, terminology, and other data sources and outputs in financial service firms, energy companies, Governments or other types of enterprise. Vertical AI will enable greater compliance and security in companies for whom industry-specific regulations and risks are frequently changing. As with reasoning models, a major employment implication of vertical AI is that it could potentially displace highly skilled workers.[87]

5. Physical AI

Physical AI is the integration of AI with machines such as robots and self-driving cars and smart spaces in factories or warehouses where work activities involve the movement of people and machinery. Generative AI models trained not only on text and image data, but also on data about spatial relationships and the rules of movement in three-dimensional (3D) space, enable these machines to perceive and interact with the physical world. Physical AI, also described as embodied AI or AI in the world, processes data from cameras, microphones and various types of sensors and actuators to make decisions and perform actions in spatial environments. Physical AI is expected to advance technologically and in usage substantially over the next decade. One report notes a 400 per cent growth in funding for general purpose robotics research and development between 2022 and 2024 and compound annual growth of 40 per cent in patent filings in the domain over the same period.[88]



One report notes a **400 per cent growth** in funding for general purpose robotics research and development between **2022 and 2024** and compound annual **growth of 40 per cent** in patent filings in the domain over the same period.

Uses for physical AI in workplaces will span numerous sectors. In healthcare, robots controlled by human surgeons will increase accuracy and speed while reducing risk to patients, with the AI analysing progress in real time enabling the robot to confer with the surgeon. Manufacturing facilities can use physical AI systems to reconfigure assembly lines and perform quality control on items moving through the production workflow. AI-enabled robotic systems can inspect fleet vehicles in transit systems and coordinate and physically facilitate container movements in port operations. In agriculture, AI-powered precision tractors can help improve crop yields and efficiency, and farm bots can assist with planting, monitoring and harvesting. Experts anticipate more augmentation of job roles than displacement, and in some cases new job creation, as the AI systems interacting with people in physical spaces will require considerable monitoring for safety.[89] Physical AI also offers safety improvements for human workers in jobs with hazardous conditions or high physical strain, lowering injury risk for humans as machines undertake more dangerous tasks, with human supervision.

6. Self-improving AI

AI is progressing to the point where it can and will develop itself. Automated machine learning or AutoML is where the end-to-end process of AI model development is performed more by software and algorithms than by human programmers and

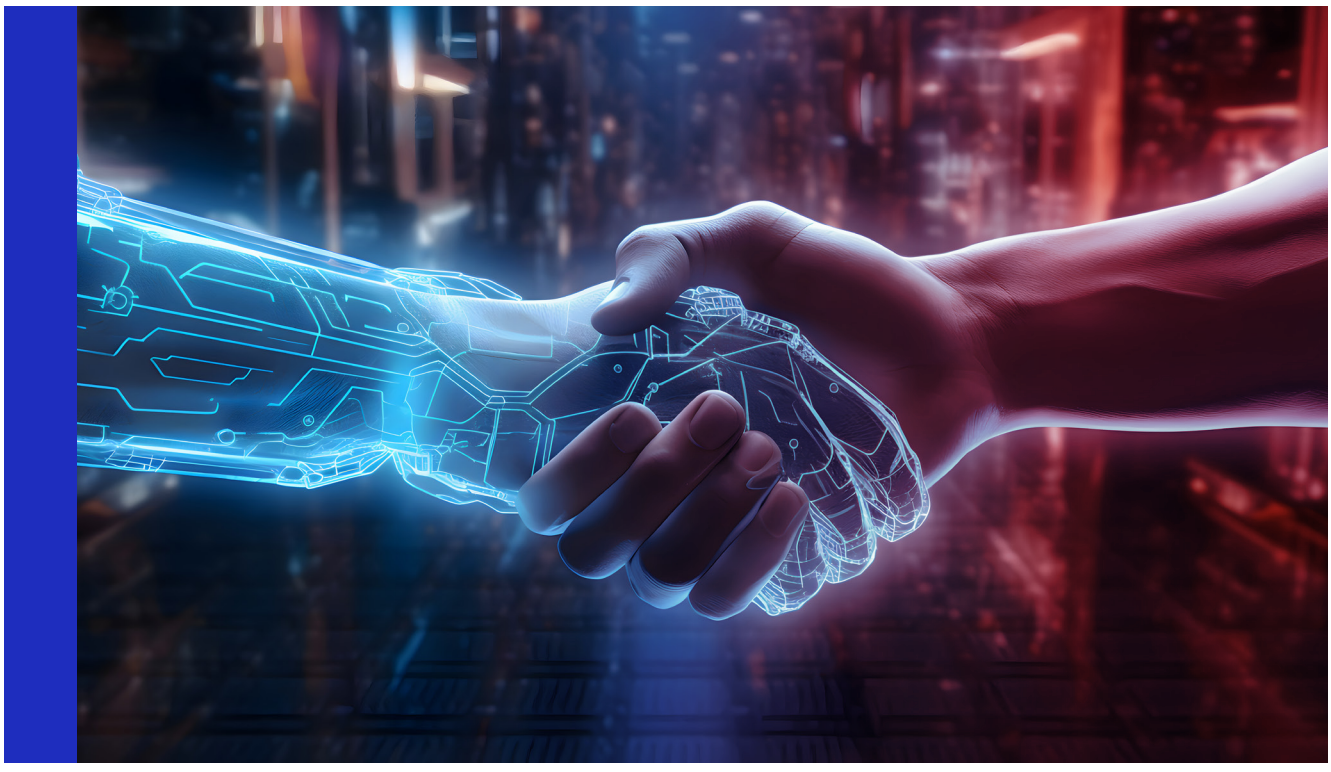
engineers. AutoML will take over many of the time-consuming tasks of AI model development and allow data scientists, analysts and developers to build models with high scale, efficiency and productivity.[90]

The rise of AutoML will significantly impact the job market for data scientists and software engineers. This automation will shift the focus of these skilled professionals from repetitive tasks to higher-level thinking and problem-solving, rather than displacing them. Human developers will be needed to instruct and advise AutoML tools and safeguard against potential errors. It is likely there will also be an increased need for humans to integrate AutoML systems and their outputs into existing enterprise workflows. At the same time, there are concerns about the potential for deskilling in the software engineering profession, polarization of the field's job markets as entry-level developers become superfluous, and ethical risks if humans are less involved in model design. Software engineers are expected to need to engage in continuous development of new skills different from traditional information technology (IT) skillsets.[91]

7. The future of AI will drive the future of work

These and other technical AI trends, post-generative AI, are already in early stages of prototyping and use. The challenges and opportunities they present for the Arab region and other labour markets are likely to come about quickly.

Policymakers and other leaders need to understand that the technical capabilities of AI will be continuously changing, with successive waves of novel impacts on the future of employment. This demands agility and foresight in monitoring AI developments. This will be critical to enable adaptive policy and other responses to the benefits and risks they pose to workforces.



2. Scenarios: Alternative futures for AI and employment in the Arab region

This chapter explores three scenarios as to how AI could impact employment and workers in Arab region countries between 2025 and 2035.

A. Approach

Scenarios provide narratives about different plausible futures. They enable policymakers to explore the unknown, preparing them and their organizations for a range of possibilities rather than relying on a single prediction. By considering alternative future scenarios, leaders can anticipate potential changes in their environments and enhance their planning and decision-making as to how to address them proactively.

The previous chapter introduced some of the wide range of impacts AI could have on employment in the Arab region. We now use scenarios to provide leaders in the Arab region a structured way of considering how those impacts of AI could manifest in different ways and to different degrees.

The scenarios were developed by synthesizing data and projections about key trends relevant to the impacts AI could have on employment, globally and in the Arab region. They are designed to do three things:

- Be provocative – exploring key issues related to the potential impacts of AI on employment and workers through vivid depictions of what those impacts could be.
- Challenge assumptions – moving leaders beyond conventional thinking and their own implicit or explicit beliefs about what might be true in the future.
- Provide context for policy recommendations to optimize the impacts of AI on employment in the Arab region while minimizing its negative impacts, aligning decision makers on decisions and actions that can be robust in different possible future conditions.

B. Methodology

The alternative future scenarios in this report were developed using a framework that considers three critical variables regarding the future implications of AI in the economies of the Arab region. There are many such variables. Based on research and analysis, the authors selected three variables that they assessed to be the most impactful on employment in the region.

The critical variables use the same three factors as their defining context. The authors identified two distinctly different ways each critical variable could manifest along a spectrum. These extremes are not the only ways they could manifest, and they are not necessarily opposites from each other.

Critical variable	Extremes of the critical variable
Pace of AI advancement	**Steady** AI has seen continuous moderate but meaningful improvement in what it can do between 2025 and 2035.
	Steep AI models and other tools have repeatedly reached new astonishing breakthroughs in what they can do between 2025 and 2035.
Pace of AI adoption	**Tempered** Public and private sector organizations have taken a tempered, careful approach to integrating AI capabilities into how they conduct their operations.
	Rapid Public and private sector organizations have pursued highly ambitious agendas for rapidly integrating AI capabilities into how they conduct their operations.
AI workforce transition innovation	**Unsystematic** Entities relevant to transitioning workers to AI-era employment are working in unsystematic ways in their own niches with conventional tools and approaches.
	Cohesive Entities relevant to transitioning workers to AI-era employment are taking creative approaches to collaborating across lanes of responsibility and across borders.

Each scenario depicts a future in which each of the three critical variables is at one or the other extreme.
The scenarios are written from the perspective of futures as if they have already occurred.

C. Scenario A – A bold approach

AI capability curve = Steady

Pace of AI adoption = Rapid

Transition innovation = Cohesive

Since 2025, countries in the Arab region have experienced a mutually reinforcing interplay between steadily advancing AI technologies and a rapid pace of AI adoption in public and private sector enterprises. Consumers have benefitted significantly from the resultant new products and services. Concurrently, people have benefitted from progressive efforts by different types of institutions to prepare workers for a new era of employment.

Language models have matured incrementally but meaningfully, broadening the kinds of workplace and other functions they can perform. This stability of pace in AI capability advancement and the kinds of task automation it has enabled have emboldened Governments and employers to push for the deployment of AI systems very rapidly and at scale. They recognize that disruptions will be substantial but are confident they are manageable because the technology has advanced less radically than many had predicted back in the mid-2020s.

Disruptions have indeed been substantial. Millions of jobs have been eliminated. Millions of workers across sectors have had to gain new skills and shift into new roles. However, institutions such as national education systems have been reimagined and, with the involvement of civil society and other actors to ease these transitions, are providing training for people to take on new AI-centric jobs. New social safety net provisions are in place. Public and private sector leaders have shown great willingness to contend with the challenges AI poses, intent on reaping its benefits by creatively transitioning their workforces to a new era.



In 2035, **AI contributes nearly 25 per cent of the region's GDP.** Global tech firms have helped fuel this rapid and large-scale adoption, investing in **AI infrastructure** and **financially supporting local workforce** transition efforts.

1. AI in the Arab region's economies in 2035

Throughout the region, AI has become prominent in how business is conducted and work is done. The growth of AI as a source of value creation and economic output has been strongest in the GCC countries, especially in their financial services, energy, retail and logistics sectors. However, the integration of AI into business and products and services is far from limited to the GCC countries. Adoption of AI has surged in the automotive industry in Morocco, in the tourism and agriculture sectors in Egypt, in mining and manufacturing in Jordan, the banking sector in Lebanon, and the top industries in other countries. In 2035, AI contributes nearly 25 per cent of the region's GDP. Global tech firms have helped fuel this rapid and large-scale adoption, investing in AI infrastructure and financially supporting local workforce transition efforts.

The information and communications technology (ICT) sector in some Arab countries is effectively an AI sector. Companies like G42 and HUMAIN have emerged as major actors in the region's tech landscape and also in the global AI economy. They are developing and providing full-stack AI capabilities including data centres and other infrastructure, cloud platforms, advanced AI models and user-facing applications. AI sectors in other Arab countries have developed on a smaller scale, with growth rates consistent with their GCC neighbours and impressive numbers of startups developing AI tools and services. The offerings of these startups are eagerly embraced by businesses across sectors for a range of functions including content creation, productivity and automation (chatbots, assistants, analytics), software development and cybersecurity.

Forging global and intra-regional partnerships has been a substantial part of the region's AI ecosystem growth. Joint ventures and co-investment collaborations have proliferated, linking GCC companies with Western tech giants such as Google, OpenAI and Nvidia. Along with tech companies in the European Union and Asia, they are also partnering with companies and Governments across the region. Partners outside the region are funding and delivering AI training, providing access to data platforms to integrate AI in Arab countries' economies and co-sponsoring joint AI research. Within the region, the trend has not seen vigorous competition, but rather collaboration. Since 2027, multi-country partnerships on data centre development for shared use have emerged, along with numerous cross-border joint ventures for AI model and product development and sharing of resources for AI talent development.



White collar entry-level roles decreased by more **than 50 per cent** compared to 2025 across the region. **Salaries have adjusted downward** for the remaining entry level workers, as most of **their tasks** are now **supported by AI.**

2. Job replacement and job augmentation

The enthusiastic integration of AI into businesses in nearly every sector has disrupted employment. Region-wide, the net impact has been more job displacement due to AI than job role augmentation, for several reasons. Agentic AI has moved forward technologically, but many businesses and Governments have struggled to redesign workflows to take advantage of it. Many also found their managerial-level staff lack the key skills to oversee hybrid teams of humans and AI agents. Eager for productivity and other benefits, they instead accelerated their use of simpler generative AI tools that take over less complex and more repetitive tasks, resulting in the displacement of significant numbers of workers. White collar entry-level roles decreased by more than 50 per cent compared to 2025 across the region. Salaries have adjusted downward for the remaining entry level workers, as most of their tasks are now supported by AI.

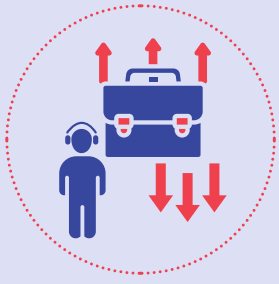
In fields ranging from legal to healthcare, finance, manufacturing, marketing and retail, AI is pushing workers out of jobs and into the transition ecosystem. Varying degrees of upskilling are necessary for people to make transitions, depending on the industry and individuals' backgrounds. Since 2025, many programmes have been created and made widely available to provide that training. Some are employer-sponsored, seen as a high-payoff investment to increase their businesses' economic output. The majority of programmes, however, are provided by government agencies at the national, sub-national and municipal levels, and in some cases by civil society organizations.

3. Job prospects for different age and skill level groups



On average across the region, **employment in 2035** for people **aged 15-24 years** has hardly improved over the last decade.

With AI being used more for automating tasks in entry-level and other lower-level jobs, the negative impacts in Arab region economies have been disproportionately felt by young people. Jobs that were previously gateways into work for young people, especially in sectors where they have historically been highly represented, such as retail and hospitality, are now largely performed by AI. While training in coding and other basic IT skills was more available to young people in the mid-2020s, it no longer offers as many opportunities, as entry-level roles in software development have been replaced with AI. On average across the region, employment in 2035 for people aged 15-24 years has hardly improved over the last decade. The prospects for young people began improving around 2030 when the partnerships between education systems, civil society organizations, employers and workers organizations in most Arab countries began to scale AI-specific skill development programmes, with government funding support. These include not only technical competencies such as machine learning, cybersecurity and AI engineering, but also AI governance and ethical judgement competencies, creativity, critical thinking and communications skills that have become even more essential as AI automation has expanded. Increases in AI-centric jobs appropriate for young people's experience levels compensate for the losses from AI driving youth unemployment up by nearly 10 per cent between 2025 and 2030.



Increases in **AI-centric jobs** appropriate for **young people's experience levels** compensate for the losses from **AI driving youth unemployment** up by nearly **10 per cent** between 2025 and 2030.

In some sectors, senior-level workers are being affected in negative ways. For them, learning new approaches to leadership and team-building in AI-centric workplaces is more important than developing new technical skills. Some have worked hard to do so but struggled, and others have resisted, resulting in job losses based on poor performance. Top executives, frustrated with a slower than expected rise in productivity, are more open to replacing tenured senior staff. This is opening doors for tech-savvy people with talent and ideas for making AI deliver.

While the region still has a sizable youth bulge, most countries also have growing aging populations. There is concern about the younger working population's ability to fund pensions, healthcare and social security, given job losses resulting from AI over the last decade and the still-limited job opportunities for young people. Many older people now face pressure to keep working longer but have struggled learning the requisite skills and adapting to AI in the workplace. In some cases, they face age-related biases and limited employer willingness to invest in their retraining. Calls for government agencies or other resources dedicated to lifelong learning for older workers' upskilling have been heard, and their emergence is just now being seen.

4. Burgeoning AI infrastructure across the region fuels job growth

In 2035, every Arab country has a national AI strategy in place. Infrastructure development is a key element in most of these strategies, and since 2025 the number of data centres in the region has grown from nearly 180 to more than twice

that number. Construction of these data centres generated a substantial, albeit temporary, boom in jobs, many of them well paid and not requiring an advanced education. As data centres became operational, permanent jobs emerged for facility managers, engineers and other technically-skilled people. The growing number of local data centres helped existing MSMEs and larger technology companies grow, and spurred the creation of new ones, creating jobs. Many of these firms have partnered with local educational institutions and civil society organizations to invest in workforce training and development programmes.

GCC countries made a push to become hubs for green data centres, combining their aspirations to be leaders in the global AI economy with their efforts to develop renewable energy. Leveraging data localization regulatory environments that facilitate cross-border data transfers, these green data centres have helped neighbouring Arab countries boost their AI use and create jobs without their having to invest as heavily in their own physical data centres.



In 2035, **every Arab country** has a **national AI strategy** in place. **Infrastructure development** is a key element in most of these strategies, and since 2025 **the number of data centres** in the region has grown from nearly **180 to more than twice that number**.

5. AI transforms public sector employment

Even in countries where public sector jobs have historically been a factor in the social contract, a strong push began in around 2028 to bring AI into government functions. The priority was to make dramatic improvements in the quality of public services, despite the inherent job losses. Here, the embrace of agentic AI has been greater than in the private sector.

Several Governments led the way with the deployment of hundreds of AI-powered solutions designed to streamline public services and enhance operational efficiency. Ensuring the code for these apps is open source enabled Governments of other countries throughout the region to make their own versions, customized to the specifics of the public services they provide. This accelerated the elimination of public service jobs in those countries.



Reductions in **public sector employment** since 2030 range between **15 per cent up to 35 per cent** depending on the country.

Some countries experienced a complete revamping of public services, introducing AI agents to replace repetitive tasks and labour previously undertaken by entry- and mid-level workers. Reductions in public sector employment since 2030 range between 15 per cent up to 35 per cent depending on the country. Because the public sector has high women's labour force participation in some countries, but mostly in lower-level positions, women have been disproportionately affected by AI replacing their jobs.

6. Rising to the challenges

Between 2025 and 2035, at the macro level in terms of overall GDP growth, emergence of strong and competitive tech sectors, and partnerships with global tech sector leaders, AI has markedly improved the economies of countries across the Arab region. At the more granular level regarding impacts on workers, the results have been mixed. What keeps AI adoption moving forward, and keeps populations

supportive of the transformation, are the ways Governments, businesses and civil society actors are working together to address the challenges.

In the public sector, new roles were created alongside the job eliminations, many filled by people previously doing lower-level and manual tasks in their ministries. Policies were developed that require humans to fulfil oversight roles to protect against problems that might stem from the AI functions in public service delivery. These roles require higher-level judgment and decision-making capacity. Another new role has government workers providing tech support for rural and other less-digitally-skilled people, helping them to take advantage of AI-delivered services they might have difficulty navigating.

Upskilling programmes for young people are diverse, supporting young people to get past the entry-level skills stage. In many organizations, formerly mid-level jobs are the now the new entry level jobs. Governments are funding local community-based organizations to design and provide these programmes, for young people as well as workers who have lost jobs and need upskilling to secure new ones. Officials in ministries recognize these programmes will lead to greater effectiveness and higher returns on investment than if they tried to design and push skilling and reskilling solutions top-down. Many countries have also seen a rise in peer-led team-learning classes at universities and high schools. High-achieving students guide small groups of their peers in project-based learning of basic and advanced AI-related skills using real-world challenges and use-cases. At the other end of the age spectrum, national and local-level organizations are starting to offer programmes specifically for upskilling older workers so they can stay in the workforce longer.

The informal labour sector has grown since 2025 due to the displacement of so many people from their formal jobs. In some countries, this has been presumed to be related to increased levels of crime and insecurity. New mechanisms have been put in place for some social protections for these new entrants to the informal sector. In some countries, this has been through new government-resourced national funds for workers displaced by AI. In most cases, these benefits have been extended to those who were already informal workers, improving living standards for a substantial portion of the population.

In the private sector, employers investing in upskilling their employees has become the norm. This includes not only initial training, but also continuous learning to keep up with ongoing advances in AI technology and changes in businesses' workflows. In some countries, employers are working with peers within their sectors to pool resources for upskilling staff to accelerate the integration of the AI into their businesses. These leaders recognize that this will benefit all the businesses involved, rather than them competing with one another for the best-skilled workers.

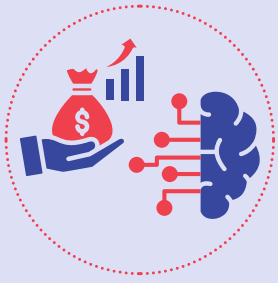
7. Lower-income and conflict-affected countries gain momentum

From the early 2020s, wealthy Arab countries made impressive strides in their adoption and homegrown development of AI. Their head start has kept them at the forefront of the region, and positioned them well in the global AI economy. Since the late 2020s, many lower-income and some conflict-affected countries have gained AI adoption momentum.

Advanced AI economies outside the region, along with international organizations in the United Nations system and others, have been instrumental in this. They are supporting these countries' efforts through technology transfer, grants and other forms of assistance. For government actors, a mix of self-interest and social-mindedness drives this. They recognize how AI can mitigate development challenges in these countries, and also how a buildup of AI capability and appetite helps grow the market for their products and services. Native talent in lower-income Arab countries is considerable and has been unlocked by this outside support and access to AI infrastructure in neighbouring Arab countries, alongside the steady advancement of open-source AI models. Researchers and business leaders from these countries have taken on a growing role in international AI discussions convened by international forums.

Two other key factors have been the Africa AI Fund, proposed in 2025 and established in 2028, and the African Union's Continental AI Strategy, announced in 2024. The Africa AI Fund mobilized $60 billion in long-term capital from international organizations, aimed at building a robust AI ecosystem across the continent.[92] Under the umbrella of the Continental AI Strategy, countries have pooled domestic

capital to fund data centres and other AI infrastructure and worked together on an Africa-centric, development-focused approach to AI. All the Arab countries in Africa, including lower-income and conflict-affected countries, have benefited from these initiatives, gaining access to knowledge and technology to further their individual and collective AI development and adoption.



The Africa AI Fund mobilized **$60 billion** in long-term capital from international organizations, aimed at building a robust **AI ecosystem** across the continent.

D. Scenario B – Overlooking the risks

AI capability curve = Steep
Pace of AI adoption = Rapid
Transition innovation = Unsystematic

In 2035, AI has advanced far beyond even the most optimistic expectations of a decade ago. There have been successive breakthroughs in agentic AI, reasoning models and, most recently, embodied AI, which uses AI-enabled sensors to perceive the physical world and take autonomous actions in 3D space. Reasoning models perform complex problem-solving by understanding context and making nuanced judgments. Some of these advances have been developed by GCC Governments and tech firms. Other countries in the region are accelerating their adoption of these next era AI innovations through partnerships with their neighbours in the GCC and with American, Chinese, European and Indian firms.



Five years prior to the public release of Chat GPT in 2022, **consensus projections** put the expected **contribution of AI** to the Arab region's GDP in **2030** at slightly **over $300 billion.**

Unfortunately, as AI has surged, the mechanisms for bringing the workforce along at a comparable pace have struggled. Ministries, universities and civil society actors are siloed, deploying fragmented and often outdated approaches to reskilling, adaptation of labour laws and social protection. This mismatch between transformative technological capability and rapid uptake, as well as inertia in transitioning workforces, has widened equity gaps. Many citizens, and a growing number of business leaders, feel that caution was not employed regarding AI. This has created a volatile landscape that is undermining social stability and risks reversing some of the economic diversification gains some Arab countries made over the last decade.

1. AI in the Arab region's economies in 2035

Five years prior to the public release of Chat GPT in 2022, consensus projections put the expected contribution of AI to the Arab region's GDP in 2030 at slightly over $300 billion.[93] In 2035, the figure is closer to $375 billion. This is largely concentrated in the construction and manufacturing, energy, healthcare, financial services and fintech, and transport and logistics sectors. The struggling pace of skill development is a barrier to the potential impact of AI on economic growth, including in countries

that were swift to develop infrastructure and native AI industries in the mid-2020s. It has not only slowed product and service development in large AI-equipped companies, but has also stymied the flow of AI opportunities to MSMEs and entrepreneurs. This is one factor in the widening of income inequality that defines many of the region's economies.

Larger businesses able to secure sufficient talent, generally by investing substantial company resources in upskilling programmes, have developed product offerings leveraging the most leading-edge advances in AI. Examples include AI reasoning models that smarten complex decision-flows in finance and logistics sectors; autonomous drones with embodied AI that deliver goods and support precision agriculture; and self-improving AI agents that manage end-to-end workflows in healthcare and manufacturing. They are finding global markets for these product innovations, fuelling the latest wave of AI-driven economic growth in the region and further concentrating the wealth creation from AI in the upper percentile of earners.

2. Labour market disparities have widened

The region saw high levels of job displacement due to the rapid automating of routine tasks across sectors in the latter half of the 2020s. By 2030, most of the replaceable jobs had been taken over. AI as augmentation then became the norm, as more advanced AI tools were integrated quickly into businesses and the public sector. For some displaced workers, unemployment was short term if they were able to find upskilling opportunities or were able to self-educate in the skills needed for jobs in AI-centric workplaces. A substantial number of workers were displaced long term.

After this initial wave of lower-skilled workers being displaced, AI empowered those already at the higher end of the tech-skill spectrum to adapt and thrive in their workplaces as agentic and other post generative AI tools were widely adopted. Mid-level workers had to work below their skill levels at reduced salaries in order to keep their jobs. Workers at the low-tech/no-tech tier of the labour market in manual labour and service jobs were largely unaffected by AI, but they remain low-wage earners with limited opportunities. Middle-skilled and middle-experienced workers are moving economically closer to low-wage earners, emerging as a new category of economically- and opportunity-disadvantaged workers. A growing number have slid into informality or non-employment.

Some junior workers displaced by AI, often only a few years out of education, were able to pivot to new industry sectors and quickly acquire domain skills to perform roles at their experience level. Experienced workers have struggled to find opportunities if they tried to move into a new field after 10 or more years in their prior one. While the early wave of agentic AI increased the demand for the human soft skills of middle managers, the agentic 3.0 of 2035 is moving past that need. A growing number of companies and government enterprises have moved from having people managing human-machine teams, to having the AI managing teams of symbiotic agentic subordinates. Mid-level staff in these firms are not completely superfluous, but far fewer of them are needed.

This trend has deepened labour market segmentation in the region, driving more people into the pool of workers confined to less desirable jobs. Upward mobility is virtually impossible, and downward mobility has become the norm. AI has shrunk the white-collar middle class even more abruptly than the first wave of computerization did in the 1980s. As the capabilities of AI are moving so rapidly, some manual labour jobs initially unaffected by the generative AI of the late 2020s are now more at risk, as embodied AI is starting to replace some jobs in the trades, including plumbing and welding, personal services such as landscaping and residential cleaning, and even care roles such as nursing assistants.

3. Struggles in the workplace

In their eagerness to adopt increasingly sophisticated agentic, reasoning and other next-generation AI applications into their operations, companies and Governments in the Arab region placed people with very rudimentary digital skills into roles beyond their ability levels. The result, especially since 2030, has been a growing number of missteps by these organizations that have damaged customer satisfaction levels, competitiveness and, in some cases, viability.

Workers pressured to use AI tools at levels beyond their skills are prone to cutting corners. They are more concerned about keeping their jobs than the negative effects their misuse of technology has on end-users of their companies' products or services. Over the last decade there have been alarming

numbers of such impacts including cybersecurity breaches, misdiagnoses of patients in healthcare contexts, quality control system failures in manufacturing firms, and bias and discrimination. In part because training and upskilling opportunities are of mixed quality and fragmented, many employees in Arab countries' commercial and public sector enterprises are causing downstream harm.

Despite the region's ambitious adoption of AI, the expected levels of improved business results are not consistently being seen. Employees are producing low-quality AI-generated work products that appear polished but lack real substance. Managers are losing substantial time sending products back for improvement or redoing them themselves. In large organizations, this results in millions of dollars in lost productivity. Some organizations have responded by leaning further into AI. They turn to increasingly sophisticated AI reasoning models to produce the high-quality work outputs they need. Once the new tools are integrated, they are reducing their workforces.

4. Everyone for themselves

Despite trying to leverage the ever-improving applications and forms of AI, some larger businesses are losing ground relative to their competitors and starting to stagnate between thriving large-firm peers and the region's MSMEs.

The deciding factor in success is the availability of workers with skill levels that match the newest iterations of AI. Some large-scale, high-revenue enterprises are pulling further ahead of their competitors and gaining ground on global leaders. The key to their success has been investment in training and upskilling programmes for their staff. With the fragmented and ineffective institutional providers in the education and public sectors, companies have no choice but to provide this training themselves. Some larger firms have recognized that the long-term payoff will outweigh the short-term expenditure. Some have even opened these programmes to residents in the communities where their offices and factories operate. Wanting to contribute to the social good, they are also looking to grow the base of future hires.

Other large businesses believe that their Governments should subsidize such training or cover the full costs. They consider such training as a public sector obligation if Governments expect businesses to fuel GDP growth with AI. In the absence of such government support, some employers expect jobseekers, and even their current employees, to fund their own upskilling if they wish to remain competitive and keep their jobs.

Even in countries where efforts are being made by public sector entities and education systems, institutional attention to AI skill development and transition assistance for workers displaced by AI have proven to be ineffectual. Private sector training providers have emerged, some local and some based outside the region. Some provide quality training and rapidly support those enrolled to reach the level of competency required for employment. Some even help with placement support. Others are predatory, offering more than they are able to deliver. For the most part, the providers selling into Arab countries from Europe, the United States and elsewhere are not overly familiar with the region. This has opened up some small-scale job opportunities for local businesses to address this gap.

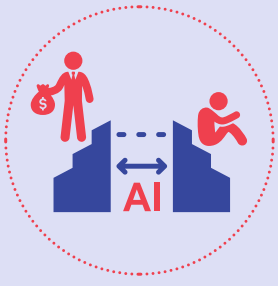
Even if commercial offerings were uniformly good, they are not affordable to many in the region, especially those who most need skill development. As a result, most young people are teaching themselves through online resources that have proliferated over the last decade. Some are forming informal study circles around free global massive open online courses, taking advantage of free cloud credits and graphics processing units made available by some global tech companies and open-source platforms. Young coders are collaborating on WhatsApp and Telegram to exchange annotated code snippets. Grassroots AI clubs in co-working spaces and community centres allow young people to learn from one another on how to develop open-source AI tools. A growing number of these self- and peer-trained young people are finding jobs not just locally but also with employers in other countries. They are working remotely from their home countries and getting paid competitive salaries at attractive rates for their foreign employers.

5. Social impacts and public sentiment

Despite the rapid technological progress resulting from AI, increased productivity and overall economic output at the macro level across the Arab region, working-class income has stagnated. The job displacements for lower-skilled

workers between 2025 and 2030, and the subsequent employment disruption for mid-level skilled and managerial talent from 2030 to 2035, widened the gap between the wealthy and the working class. Business owners are reaping high profits and other benefits from booming AI, while the majority are struggling to access the opportunities that AI can offer.

There have been several concerning effects, including declines in physical and mental health, resulting from loss of income and the stress of looking for work in an economy that demands tech skills that many lack. A second impact is the declining interest in higher-level education. A growing number of young people do not see value in attending university, given the inadequate AI and tech skills being offered. More young people are missing out on the broader education and socialization that universities provide.



The job displacements for **lower-skilled workers** between 2025 and 2030, and the subsequent employment disruption for **mid-level skilled** and managerial talent from 2030 to 2035, widened the **gap** between the **wealthy** and the **working class.**

Social protests are taking place. While they have not turned violent, people have become more vocal about their dissatisfaction with how AI is affecting their prospects. The protests have had different orientations and aims in different Arab countries. In some, demands are for a less pervasive uptake of technology because of the harm it is causing. In others, demands are for public sector entities to step up efforts to make the benefits of AI equitable, and to provide safety nets until upskilling is more widely available.

Large numbers of workers are leaving the Arab countries where AI is moving forward most rapidly and disruptively, heading to countries within the region or beyond with slower AI uptake and higher reliance on human labour for jobs that have been replaced by AI in their home countries. These growing migration flows within the region are starting to lead to political frictions between neighbours. Some countries in the West are opposed to increased migrant flows to their borders, posing a risk of political frictions with Arab countries.

6. Silver linings

The difficulties stemming from job displacements and other consequences of rapid AI adoption are a priority for policymakers across the Arab region. At the same time, the substantial rise in GDP attributable to AI in most Arab countries has had positive effects. It has provided new resources for Governments to devote to improving public services including healthcare and subsidies on goods such as fuel and food, important counterweights to the widening income inequalities.

There are trends within the advancement of AI that suggest improvements in equality. The increased use of AI in software engineering is boosting opportunities for women. STEM education initiatives predating the AI boom have led to significant improvements regarding gender parity in higher education. Growing numbers of women have gained the skills to undertake complex AI system architecting and to oversee teams of developers using AutoML, AI that can modify its own code, algorithms and parameters to enhance its performance.

Companies developing AI models and tools have been eager to take advantage of their skill levels, and in 2035 nearly 65 per cent of the skilled new hires in AI companies in the region are women.

New job roles have started to increase since 2030, such for AI auditors to monitor the effective and ethical use of AI. Variations on this auditor role are among the fastest growing AI jobs outside of developer roles. Another new job role is in training vertical AI models custom-designed for specific industry sectors.

While the larger private sector providers of AI skills training have provided mixed offerings in terms of quality and affordability, especially those outside the Arab region providing remote training, a sub-sector of homegrown entrepreneurial startups has emerged. More than 500 such businesses across the region offer courses at a fraction of the price of their larger competitors and have surpassed them in terms of market share. Another new startup sub-sector is developing AI apps specifically for MSMEs. There are startups focused on tools to help these businesses with their marketing, customer service and finance.

E. Scenario C – A measured pace

AI capability curve = Steady

Pace of AI adoption = Tempered

Transition innovation = Cohesive

Between 2025 and 2035, Arab countries employed a tempered approach to integrating advances in language models and other AI tools from around the world into how they work and live. Advances have been steady and most organizations have adopted AI incrementally. AI is consistently extending the scope of tasks it can perform. The priority in Arab countries is productivity gains and economic growth, especially those that are achievable with open-source and small-language models in Governments, large-businesses and MSMEs. This outlook of practicality and evenly paced adjustments rather than a complete overhaul in terms AI adoption came about partly due to organizations taking into account public unease over the risks of AI, and from some jarring market corrections in 2027.

This allowed time and left resources available for Arab countries to prepare their citizens and residents to work in the era of AI. Schools and ministries partnered with civil society and private firms on new training pipelines. Labour ministries coordinated across borders on migrant workforce protection. Public agencies piloted innovative welfare support for disrupted workers and for young people eager to self-train.

A measured approach has been the modus operandi with respect to AI in the Arab region. Businesses consider how to use AI in ways that not only fuel profit and growth but also respect ethical considerations and employees' mental and physical wellbeing. Governments introduce policies at a pace designed to produce positive outcomes, rather than rushing to capitalize on uncertain market and social forces as many did in the early 2020s. These dynamics have reshaped the region's employment landscape in consistently constructive ways, while progress and opportunities remain uneven.

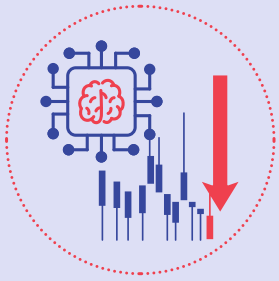
1. AI in the Arab region's economies in 2035

Estimates indicate that the annual growth in the contribution of AI to economies in the Arab region is expected to range between 20 and 34 per cent per year, with the fastest growth occurring in the United Arab Emirates, followed by Saudi Arabia.[94] In other parts of the world, the rate is two to three times as great. Still, in the Arab region, AI represents a meaningful rise in wealth and in the standard of living for many, and is enabling economies to diversify. The variances among countries do not uniformly correlate to overall income level, or to the investment and effort initially made by different countries in the mid and late 2020s. Some of the early leaders in AI among Arab countries pulled back in the wake of a market shock in 2027. Some countries at every income level have steered their local AI economies in ways that are outperforming the regional average growth rate.

In 2027, global investors responded to inflated AI valuations and revenue forecasts by driving most publicly traded AI



Estimates indicate that the **annual growth in the contribution of AI** to economies in the Arab region is expected to range between **20 and 34 per cent per year,** with the fastest growth occurring in the **United Arab Emirates,** followed by **Saudi Arabia.**



In 2027, **global investors** responded to inflated **AI valuations** and **revenue** forecasts by driving most publicly traded **AI stocks down 30–60 per cent.**

stocks down 30–60 per cent. Venture and other funding for privately held companies constricted dramatically. The major foundation model developer and hardware companies scaled back on investment and partnerships, including in the Arab region, but were not under threat of bankruptcy. Small and medium-sized firms were hard hit. In the Arab region, they are the foundation of local AI industries, and many suffered. The companies that survived leaned into the new market conditions, forging mutually beneficial collaborations rather than trying to take over competitors. They focused more on developing AI applications that help corporate adopters in high-impact verticals increase the number, diversity and customer satisfaction levels of the products and services they generate. Many corporate adopters slowed or scaled back enterprise-scale pilot projects that foreign mega-scale firms had been marketing in favour of these more modest value-driven innovations.

2. Growth in new jobs

In a number of sectors, while job displacement from AI has been seen at notable levels, there has also been notable growth in other kinds of AI-related jobs.

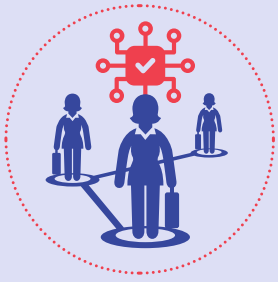
In the retail sector, for example, job losses of customer service representatives, cashiers and data entry clerks have been offset to some degree by growth in jobs in the supply chain. Automation has sped up product design and manufacturing cycles, so makers of products from clothing to household items and electronics can produce greater numbers and types of things more rapidly. More products moving to more places has created jobs in the supply chain for people across the spectrum of skillsets, including young people. Most retailers in the region have kept functions such as warehousing staffed by humans rather than opting for expensive robotics and shelf-to-person packing technology, preserving and increasing these jobs.

Job creation is evident in the tourism sector as well. AI has increasingly been employed in hospitality industry firms to help personalize travel planning and travellers' holiday experiences, crunching huge datasets on customers and on available travel options. While jobs for customer service phone representatives, travel agents, market researchers and others have declined, travel companies have increased their hiring in areas such as cybersecurity to protect customers' data and company AI assets, and technical product development operations for continuous delivery of new features in digital travel products and services, among other areas. Some traditional jobs such as on-property service at hotels are increasing as well, as convenient AI-enabled travel planning is contributing to significant rises in the number of tourists visiting countries across the Arab region.

Perhaps the most strategically important source of new AI-centric jobs in the Arab region over the last decade has been in the region's steadily-scaling service to other countries' and regions' growing AI economies. Since 2030, a sizeable number of Arab region companies have emerged providing AI products and services to customers in Europe and Asia. Their AI-based tools and services are increasingly competitive in supply chain management, healthcare, aviation, energy and smart cities. A valuable

differentiator from their global competitors is the quality of the Arabic language capabilities of the AI tools produced in the region and sold abroad.

3. Labour market trends shifting



Women's participation in the **tech sector labour force** is up an average of **20 per cent** across the region.

The measured pace of adoption of AI in Arab region economies has created space for targeted programmes that bring more women into digital AI employment. Targeted policies that earmarked funding for women in AI training programmes often include childcare support while training, and transportation to and from in-person training. Women's participation in the tech sector labour force is up an average of 20 per cent across the region.[95]

Data centre construction began moving outside of the major cities in around 2030 to peri-urban areas and rural areas. This was partly due to space constraints in densely built cities and partly to bring digital economy opportunities to poorer rural populations. MSMEs in these areas can now leverage AI in their businesses, enabling them to grow their customer bases through new product and service offerings and expand their workforces with locally hired staff to meet the higher demand. They have benefited from partnerships between development banks catalysing lending and supporting credit access for MSMEs, specifically targeted at these businesses' integrating AI into their operations, and from government grants for upskilling their staff on AI, modelled on programmes seen in the early and mid-2020s in the United Kingdom and Sweden.



The situation of **expatriate** workers in many Arab countries is markedly different to how it was in 2025. **The overall average** number is between **5-10 per cent lower** than in 2025, across the region.

The situation of expatriate workers in many Arab countries is markedly different to how it was in 2025. The overall average number is between 5-10 per cent lower than in 2025, across the region. AI automation led to job displacement for large numbers of these workers in low-skilled and routine-based occupations such as administrative and clerical work, tourism and retail. Foreign workers in construction, transport and high-skill services have seen more AI augmentation than replacement in their workplaces. Some displaced workers have returned to their home countries, receiving training in AI and other IT skills upon their repatriation, enabling them to find jobs in the emerging digital economies of their countries of origin. Others have stayed with their employers in redesigned job roles using AI in its augmenting capacities, at higher salaries than their previous roles, after training from their host countries' Governments or directly from their employers. This has been particularly visible in energy sector companies that still rely on a mix of higher- and lower-skilled foreign workers as they build their renewable energy capabilities and accelerate AI use to improve oil and gas production efficiency.

4. Different tools for different countries

Lower-income countries and some of the Arab region's conflict-affected countries have progressed with tools and approaches requiring less infrastructure and resources than their wealthier neighbours. This path has provided them with growing success in leveraging AI for economic and social development, including job creation.

Open-source AI models have been key for these countries, as they allow companies and Governments to utilize AI without the steep costs associated with building computing capacity and training a native large language model. They have made use of the increasingly available Arabic language capabilities some of these models have. They have also taken advantage of open-source AI libraries, collections of pre-written code available for anyone to use, modify, and distribute, to provide a foundation for developers to create startups and jobs building AI applications more efficiently, with reduced development time and costs.

Lower income and most middle-income countries have also made great use of small language models developed in their State-run university systems and their emerging local tech sectors. These small language models require substantially less energy and compute power than large language models, which is important given electrical power infrastructure limitations and limited resources to build large-scale data centres. Small language models have enabled MSMEs in the finance, tourism, manufacturing and agriculture industries to grow, with resulting increases in job opportunities. In some countries, locally developed small language models have been paired with open-source computer vision models to make major strides in their agriculture industries to recognize and predict crop failure and weather events. Rather than replacing human workers, use of these small language models has boosted production and thereby increased the need for agricultural workers in Iraq, Jordan, Morocco, the Syrian Arab Republic and Tunisia.

5. Navigating talent shortages

Following the GCC countries, most countries in the Arab region have initiatives and policies in place to incentivize and facilitate inflows of foreign AI expertise. These efforts accelerate their local AI industries and their integration of AI into domestic industries and over time fuel the development of domestic talent. Dedicated visa programmes and special residency arrangements targeted at highly skilled AI developers and researchers from Asia, Europe, South America and the United States are tied to commitments to support skill development for local citizens, especially young people. Other programmes use funded research fellowships to attract foreign expertise to support local AI research and development projects that are co-staffed by current students in STEM programmes in the countries' universities. The long-term aim is to not rely on imported talent, as foreign workers help to train substantial numbers of local women and men for the AI jobs of the future. Across the region, this aim is being realized. Many of those trained are finding opportunities to move quickly into the workforce. Senior staff mentor entrants to help them develop domain expertise, while the senior and mid-level staff get upskilled in AI through coaching from their junior colleagues.

6. New forms of opportunity

Diaspora populations from many Arab countries have played an important role in creating opportunities in the AI economy for people in their countries of origin. Inspired by Jobs for Lebanon, launched in 2020, in 2035 there are many country-specific platforms through which emigres from Arab countries are posting jobs and hiring candidates for remote or in-person work. Most specifically offer AI-centric jobs. Some platforms have expanded from their initial focus on hiring job-ready individuals to also providing opportunities in which people split time between doing entry-level tech work and receiving AI skills mentoring.

In some service industries in Arab countries, automation of repetitive task roles has led more to market expansion than job displacement. One example is in legal services. Law firms in 2035 require fewer paralegals, because research is now largely conducted by AI. Some firms still kept most of their paralegals, providing them additional training so the firms can serve more people. With each upskilled paralegal able to work on multiple simultaneous cases, supported by AI, legal services have become more accessible throughout the region, including at reduced rates for people who previously could not afford it. This phenomenon is being seen in other service industries, including financial planning and marketing services. The new customers in many cases are MSMEs who find the advisory support valuable for growing and formalizing their businesses, enabling them to hire more staff and in turn serve greater numbers of customers in their own sectors.

A growing number of AI-centric companies are creating tools and applications for sustainable social and economic development in the region. These include AI microfinance applications for underserved populations; applications that can run on smartphones for crop monitoring for rural farmers;

and AI tools improving maternal health outcomes through tailored advice on prenatal care. A number of Governments in the region have provided targeted support to these social entrepreneurial AI startups and MSMEs through tax and other fiscal policy incentives modelled on programmes that proved effective in Brazil, Malaysia, South Korea and the United Kingdom.

7. Harm and responses

Public attention has focused on the harm that AI can cause, both in workplaces and more broadly in Arab societies. Over the latter half of the 2020s, data breach incidents, spreads of misinformation, discrimination due to biases in AI models, and other problems were widely reported in the media, which influenced public and political debate and stoked demand for action. Governments and many businesses in the region have been responsive to these concerns. Organizations that had planned to integrate generative AI into all their products and processes have tightened their risk management. The heightened attention to AI risks and harms has also been a spur for the creation of new kinds of jobs. Some focus on mitigating societal risks, and others are designed to protect workers from the harms they face as a result of the integration of AI into their workplaces and job roles.

One example of the former is a dedicated role in tech companies to monitor the integrity of the data training their AI models, and the integrity of the models themselves, helping to ensure that the use of the company's tools by other companies does not produce unintended effects. Another is for specialists to evaluate AI systems for potential biases and discriminatory outcomes. A growing number of organizations have created roles for ensuring that the collection, use, and storage of data for AI systems comply with laws and privacy protection. More people are being hired by tech companies to manage and reduce the deleterious effects that AI is having on the natural environment, especially due to energy and water usage at data centres.

New jobs are being created for worker protection in AI-centric work environments. Some of the greatest risks are psychological and emotional harms from intrusive monitoring by AI systems; physical strain as AI systems intensify work pace demands; cognitive atrophy and skill erosion as AI handles more decision-making and tasks; and cognitive overload as continuous interaction with AI systems causes mental fatigue and burnout. Private sector companies, government ministries, schools and other organizations have created a variety of roles to safeguard against these and other dangers. These include people to audit changes to workflows, worker welfare monitors that regularly engage with colleagues to assess stress levels and health impacts, and a new role in human resources to ensure that AI algorithms do not introduce unfair practices or discriminatory outcomes in hiring.



3. Key findings, key messages and recommendations

This chapter presents key messages for policymakers, each distilled from one or more key finding from the research and scenarios, and each connected to actionable recommendations on adapting to the AI era for government officials, businesses and educational institutions.

Recommendations, along with their associated key findings and key messages, are divided into two groups. The first group outlines actions that Governments can implement at the national level, while the second focuses on measures that require regional cooperation among countries.

A. National level policy recommendations

1



Key finding

By 2030, more than 20 per cent of jobs globally will change due to technological advancements. At the global level, workers can expect that two-fifths of their existing skill sets will be transformed or become outdated over the 2025-2030 period. More than 60 per cent of workers will be required to upskill or reskill on an ongoing basis to remain competitive and secure in their careers.

Key message

As AI technology evolves rapidly, incremental changes in technical skill training and other professional developments necessary for work in AI-centric jobs and economies will leave workers unprepared for the pace of change.

Recommendation

Establish national lifelong learning agencies.
Governments should establish national lifelong learning agencies to promote continuous AI skills development and ensure that citizens and migrant populations can continuously adapt to ongoing rapid advancement in AI technology, and to the technological and workplace changes over the next decade and beyond. Substantively supported by academia and the private sector, national lifelong learning agencies should align AI education and training systems with evolving labour market needs, updating national skills frameworks. This approach will ensure that AI literacy becomes a sustained national commitment rather than a one-off intervention.

2



Key finding

Almost 40 per cent of jobs are at risk of being displaced or disrupted by the current capabilities of AI. The elimination of 83 million jobs worldwide as a result of AI is projected by 2027, offset by the creation of 69 million new ones. The net loss of 14 million jobs represents 2 per cent of the global workforce. More extreme projections put the number of jobs displaced by AI by 2030 at approximately 300 million. The Arab region is likely to experience similar trends.

Key message

While the full extent of job displacement is uncertain, proactive measures are needed to protect workers and support them in transitioning to new forms of employment. Workers and their families face a high likelihood of socioeconomic harm from job losses due to AI automation, increasing the pressure on traditional social safety nets in many Arab countries.

Recommendation

Launch national funds for workers displaced by AI.
Governments should establish national funds for workers displaced by AI, designed to finance two complementary forms of support. The first is targeted reskilling and upskilling in accredited institutions that equip displaced workers with sector-specific and AI-focused competencies for long-term employability. The second is short-term income support, including temporary financial assistance, to stabilize households during transition periods.

3



Key finding

More than 60 per cent of workers will be required to upskill or reskill on an ongoing basis to remain competitive and secure in their careers. While billions are being spent globally on AI technical upskilling, there is growing recognition that preparing workers for future labour markets will require more than just training; internships for hands-on AI practice, development of capacities including critical thinking, and support for AI-exposed workers coping with the mental health toll of economic insecurity will all be necessary.

Key message

Single-sector-led skill training programmes alone will be insufficient to meet the need of AI-exposed workers for resilient, adaptive and inclusive AI workforce transition. Training support is most effective through multisectoral collaboration which can offer the experience opportunities, networks, tools and other support required to thrive in AI-enabled economies.

Recommendation

Establish public-private-academic partnerships for multidimensional support for worker transition to AI-enabled economies.

National authorities should formalize partnerships with local, regional and global private-sector enterprises, universities, vocational institutions and AI-focused startups to design and implement coordinated multidimensional strategies for workforce adaptation. These partnerships must extend beyond skills training to encompass the full spectrum of support necessary for sustainable participation in AI-enabled work, including paid apprenticeships; professional networks and peer communities for knowledge exchange and career guidance; access to AI platforms and practice environments to self-train; and psychosocial support including counselling and well-being programmes.

4



Key finding

The effects of AI on employment in the Arab region will differ substantially across demographic groups between 2025 and 2035. Young people will benefit, but currently one in three young people are not in education or training for necessary AI upskilling. Gender disparities in AI-centric jobs will remain pronounced given the current women's labour force participation of approximately only 20 per cent. Older workers (55+ years) face the highest risk of exclusion in AI jobs due to skill obsolescence and limited access to training opportunities.

Key message

Targeted measures such as hiring incentives and positive-discrimination policies will strengthen the participation of migrant workers, women, young people and others in Arab countries' future AI-centric labour markets and will help ensure that the benefits of technological transformation are equitably distributed in AI-enabled economies.

Recommendation

Strengthen the inclusion of workers in AI-enabled labour markets.

Arab region Governments should enact national digital-inclusion frameworks that directly confront and remove the structural barriers restricting access to AI-enabled labour markets. These frameworks should expand the availability of both foundational and advanced AI-related skills; ensure access to training, upskilling programmes and AI tools for socioeconomically disadvantaged individuals; and address linguistic, financial and infrastructural constraints that disproportionately affect vulnerable groups. Both the public and private sectors should establish clear guidelines to ensure equitable access to AI-related employment pathways across recruitment, reskilling and career progression.

5



Key finding

Informal employment in Arab region countries stood at 56 per cent of total employment in 2025, ranging from 45 to 80 per cent in different countries. Informal employment represented 20 per cent of GDP. Only 37 per cent of the region's population have pension coverage, 46 per cent have work injury coverage, and 7 per cent have unemployment insurance. Nearly two-thirds of adults across the Arab region do not have a formal bank account.

Key message

AI-enabled digital platforms are playing a growing role in coordinating informal work. AI could potentially decrease equality gaps between informal and formal workers, improving the quality of life for millions. It could contribute to transforming the Arab region, which has the second-lowest social protection coverage globally for informal workers and other citizens and residents, into a more equitable region.

Recommendation

Modernize workforce formalization and enhance informal workers' wellbeing using AI.
Governments should create AI platforms and develop AI solutions and innovative service delivery models to modernize workforce formalization processes, enhancing informal workers' access to banking and financial services, social protection, job security and fair working conditions. The policy should support access to such platforms for informal workers so as to generate transaction histories, ratings and other data that create a digital footprint for those previously invisible to the formal financial system.

6



Key finding

More than 700 identified use cases facilitated by public cloud services could generate up to $183 billion in value in the Arab region by 2030. Cloud computing's impact in the public sector alone could drive one-third of that figure. While the United Arab Emirates is developing a regional sovereign cloud in partnership with Microsoft, and Egypt launched its first AI cloud computing centre for government data in June 2024, cloud adoption in the region has been slower than elsewhere.

Key message

Cloud computing is essential for large-scale AI deployment in the public sector for the massive storage, high-performance computing power and multi-enterprise collaboration it offers, which match the unique needs of government data repositories and operating processes. In the public sector more than private sector, shifting IT systems to cloud architectures will be as much a human capital challenge as a technical one. Many Arab countries are already moving toward cloud adoption at varying speeds, and accelerating this transition with transition teams is essential for enabling public-sector AI systems and ensuring that Governments become capable of delivering modern AI- and data-driven services.

Recommendation

Create specialized national cloud transition teams to accelerate AI adoption in the public sector.
Governments should create and train specialized national cloud transition teams responsible for guiding ministries and public agencies through their shift to cloud-based architectures and for preparing the public workforce for AI-enabled service delivery.

7



Key finding

A growing number of companies are using or planning to use AI in ways that affect workers in harmful ways. These include AI for applicant screening in hiring; performance monitoring, including auto-generated warnings or termination notices for low productivity; using opaque algorithms to set pay and allocate work; algorithmic scheduling with limited or no flexibility; and AI surveillance measures that infringe on employee privacy and rights.

Key message

Errors, bias and opaque logic in AI tools and systems will affect workers' rights and safety in the absence of trained and skilled human oversight. Human AI oversight introduces a new type of public- and private-sector role with responsibilities, authorities and judgment requirements unlike any existing job.

Recommendation

Develop regulations to guarantee human oversight in AI-driven tasks directly affecting workers.

Arab countries should adopt regulatory frameworks that establish a clear human-in-command principle, requiring that qualified human officials rather than automated systems are responsible and accountable for staff welfare. These frameworks should apply across both the public and private sectors and come with investment in targeted training programmes and the redesign of internal work processes to include this function.

8



Key finding

With approximately 60 per cent of jobs exposed to AI, advanced economies are at the greatest risk worldwide, and 26 per cent of jobs in low-income countries are similarly exposed. Based on their level of exposure to generative AI, approximately 25 per cent of occupations are at risk, with significant differences between men's and women's employment.

Key message

Uncertainties will persist and increase regarding the pace of AI technical advancement, use case advancement, and adoption in each Arab country and across their industry sectors. This increases the urgency of dedicating resources to monitoring and projecting changes to inform proactive policy development to prepare for the impacts.

Recommendation

Establish observatory agencies to monitor AI advances and their employment impacts.

Given the rapid pace of change in AI, Governments should establish specialized observatory bodies dedicated to monitoring and assessing the impacts of AI on labour markets. Such institutions should not be an extension of existing statistical or economic units but rather should augment Governments' analytical capacity for informing policy decisions about how to contend with the impacts of AI on jobs and workers. The observatory body's responsibilities should be to conduct periodic forward-looking national assessments that proactively identify occupations and segments of the workforce that are exposed to AI-driven automation, and to provide early warning signals to policymakers on the impacts of AI on jobs.

9



Key finding

Across the Arab region there is a wide gap between what universities teach and what employers increasingly require. For the 500 most-demanded skills, the gap ranges between 40 and 70 per cent. Courses often emphasize traditional computing concepts but rarely integrate applied AI skills like machine learning, data engineering or cloud services, despite these emerging as employer-demanded core competencies.

Key message

Preparing for an era of AI-driven jobs cannot be reduced to producing more programmers or adding isolated modules to traditional curricula. AI education should be a lifelong, dynamic system of learning that prepares individuals for how AI technology will continuously evolve in successive new stages of advancement. As AI evolves, schools and universities must adapt their curricula to ensure students are not trained in skills that quickly lose relevance. Continuous professional development supported by AI-enabled platforms and analytics can help educators to stay current with innovations in AI technology and with how AI can be used in pedagogical activities.

Recommendation

Ensure that educational curricula are agile and future-ready for the continuous evolution of AI. Educational institutions should adopt modular or competency-based curriculum frameworks that allow specific components to be updated without requiring full curriculum overhauls. In parallel, teacher training systems must evolve. Because curriculum update processes are often slowed down by bureaucratic requirements and lengthy approval cycles, ministries of education and equivalent bodies should reform internal procedures to incentivize faster, more flexible updates to curricula. Establishing a curriculum innovation unit within education ministries would further institutionalize the capacity to anticipate emerging skill demands and translate them into timely curriculum updates.

10



Key finding

Government efforts towards inclusive and sustainable economic development through taxation and other fiscal policy incentives to spur social entrepreneurial businesses have proven effective in Brazil, Malaysia, South Korea, the United Kingdom and other countries over the past two decades. Most of the Arab region countries' national AI and digital economy strategies include the development of technology startup companies as a central element, as well as promoting entrepreneurialism in support of inclusive and sustainable social and economic development.

Key message

Arab Governments' and investors' ambitions to develop an AI-fuelled entrepreneurial startup sector can lead to job creation, sustainable economic growth and positive equitable social outcomes across the region.

Recommendation

Steer tax policies towards AI jobs with social value. Governments should strategically use tax and other fiscal policy mechanisms to steer the development and application of AI toward solutions and use cases that create jobs in education, healthcare, energy efficiency and climate resilience. They should use targeted incentives to stimulate the creation of startups, as well as product and service development initiatives in larger established companies that create jobs through AI applications that enhance public welfare. These may include research and development tax credits, procurement funds, challenge funds, subsidized access to AI resources for their product and service development, workforce development credits, employment-linked tax incentives, accelerated depreciation allowances and innovative combinations of such tools.

11

Key finding

MSMEs make up more than 80 per cent of all businesses in the Arab region and account for more than 50 per cent of the formal workforce in many countries. There is a growing precedent around the world for government support targeted at MSMEs to build the skills and other capacities necessary to participate in the AI economy. The Flexible AI Upskilling Fund pilot in the United Kingdom is making grant funds available for eligible MSMEs for up to 50 per cent of the cost of AI training. A subsidy programme by the Government of Sweden innovation agency to increase the AI competencies of MSMEs has shown awardee firms exhibiting sustained increases in job postings over a five-year period.

Key message

Just as MSMEs drive a substantial percentage of the overall economic value and growth in the Arab region, they will also substantially drive the acceleration of the contribution of AI to value and growth if they have the resources and support to adopt the technology at speed and at scale in their business operations.

Recommendation

Create grants for AI training and capacity-building in MSMEs.
Governments should establish grant programmes to support MSMEs in training their workforces in the effective use and development of AI tools. These initiatives can be co-funded by Governments, private-sector enterprises and philanthropic partners, promoting shared responsibility for digital capacity-building. Grant schemes could include matching-fund mechanisms, where companies contribute a fixed proportion of training costs, ensuring employer buy-in and long-term commitment. Training programmes funded under these grants should cover not only technical AI skills but also data governance and sector-specific applications.



B. Regional level policy recommendations

12

Key finding

Many countries have some form of strategic foresight organizational capacity built into their governments, including Canada, Estonia, Singapore, the United Arab Emirates, the United Kingdom and the United States. Regional foresight efforts include the European Union's Foresight Network and the process conducted by the United Nations Development Programme Regional Bureau for Asia and the Pacific. The United Nations Industrial Development Organization is implementing regional initiatives on technology foresight in Asia, Europe and Latin America.

Key message

Alignment across Arab countries in understanding of how AI and other emerging disruptive technologies could become integrated in local economies can create otherwise unachievable gains in shared regional goals such as economic diversification, sustainable development, and transition to renewable energy and green economies. A coordinated regional-level foresight function will allow Governments to understand technological directions, emerging risks and potential disruptions at early stages, enabling strategic alignment of national AI strategies and AI industry development.

Recommendation

Create a regional foresight coordination agency for emerging and disruptive technologies in economies.
Arab region Governments should establish a regional foresight coordination agency for emerging and disruptive technologies in economies, tasked with assessing emerging and disruptive technologies' impacts, not on jobs but more broadly on the future economies in which jobs will exist. Initially this body should focus exclusively on AI, given the momentum of the technology, with planned expansion into other emerging and disruptive technologies over time.

13

Key finding

As of 2023, an estimated 435 million people were working on 545 online gig platforms, with 75 per cent of those platforms operating in multiple regions and workers performing jobs for clients outside their countries of residence. The application of local labour laws to gig workers varies significantly between countries, while online platform employment involves cross-border data transfers with remote access, encryption and data sovereignty, all governed differently in different countries.

Key message

Because AI-driven job displacement will occur unevenly across countries, displaced formal sector workers face a heightened risk of being pushed into gig work, increasing the potential for cross-border migration in search of opportunities and the volume of cross-border remote work spanning across the region.

Recommendation

Develop flexible regulations for AI-enabled cross-border work.
Governments across the Arab region should work together to modernize and align their labour frameworks to accommodate the cross-border, project-based and AI-mediated nature of the growing number of gig and platform jobs. A core element of these policy efforts should be the establishment of region-wide minimum social protection standards for freelance and gig workers. As AI-driven regional labour mobility becomes increasingly important, Governments should harmonize regulations for freelance and flexible work to enable cross-border recognition of licenses, permits and professional credentials.

14

Key finding

AI technologies pose significant risks to online and place-based gig workers , including intrusive monitoring, algorithmic bias, potential worker surveillance and discriminatory decision-making. With exposure to AI in the region likely mirroring the global projected average of 40 per cent, these risks represent potential harm to millions of workers in the Arab region. Global attention to workers' rights and the safety of gig and platform workers is growing while AI is transforming how freelance work is initiated, managed, and executed. The ILO developed a draft convention in August 2025 on standards and regulations to ensure decent working conditions for online and place-based gig workers. In 2020, the OECD developed a toolkit and documented initiatives by nine countries, the G20, and the European Commission to codify decent working conditions in platform work, focused on job and income security, access to social protection, career development and rights to collective bargaining.

Key message

As different countries across the Arab region have different legal frameworks and levels of labour protection, harmonized standards will help mitigate the risks faced by workers, including migrant workers, who are at heightened risk of algorithmic discrimination, intrusive monitoring, and unequal access to AI-enabled opportunities.

Recommendation

Adopt decent work standards for gig and other workers using AI. Arab region countries should establish and enforce regional labour standards to ensure decent work in AI-enabled environments, particularly for gig and platform workers.

Annex 1. Recommendation details

This annex provides more details on the recommendations provided in chapter 3.

Recommendation 1

Establish national lifelong learning agencies.

Institutionalizing continuous reskilling can mitigate some of the adverse impacts of AI on workers, support employment transitions, and expand opportunities for inclusive growth. Lifelong learning agencies could directly deliver training through in-person learning and accessible online programmes for learners. They would maintain permanent administrative and instructional staff and operate in structured partnerships with public and private universities with expertise in AI-related fields. Each year, participating universities should contribute to the design and delivery of training programmes in coordinated efforts for nationwide reach.

The agencies' continuous AI training programmes will be tailored to meet the needs of key population groups: entry-level professionals, mid-career workers, senior professionals and retired persons seeking to update digital and AI competencies.

Each agency should adopt a hybrid cost-sharing model. Domestic public funding, through national budgets for education and workforce development, should form the core of financing. The SkillsFuture model in Singapore provides a case study, providing training grants to all adults, supporting reskilling and upskilling throughout their careers.[96] Countries with greater fiscal space may self-fund their agencies, while others can rely more on multilateral co-financing during early phases. This would include private-sector participation, including employer contributions to national training funds, provision of training resources and support for apprenticeships, internships and work-based learning programmes. Part of the agencies' support should also be secured through multilateral development partners, which can play a catalytic role by providing startup funding, technical assistance and policy advice. Several multilateral institutions already finance initiatives with comparable objectives. For example, the World Bank's Tertiary Education and Skills Multi-Donor Trust Fund, launched in 2022 with support from Mastercard Foundation, is designed to reframe, reform, and rebuild skills systems for the digital and green transitions.[97]

SDGs supported: 

4 (particularly target 4.4), 8 and 10.

Recommendation 2

Launch national funds for workers displaced by AI.

Governments should establish national funds for workers displaced by AI, designed to finance two complementary forms of support: targeted reskilling and upskilling in accredited institutions that equip displaced workers with sector-specific and AI-focused competencies for long-term employability; and short-term income support. To ensure that both objectives are achieved, the mandates of reskilling and income support should be clearly delineated. Short-term financial assistance provides immediate stability, while reskilling programmes focus on sustainable employability. Coordination is essential, but reskilling must remain a dedicated instrument for labour market transition. Income support should be positioned within the broader social financing ecosystem, complementing existing social protection measures, unemployment insurance and social assistance schemes, rather than replacing them. This will create a coherent national approach to labour market stabilization,

ensuring that temporary support and skills development reinforce one another without overlap or fragmentation.

Given constraints on public resources, the funds should be co-financed with the private sector, with firms contributing matching financing tied to guaranteed employment pathways for beneficiaries. This will ensure that public investment catalyses private commitment to workforce reintegration, while sharing cost burdens and increasing programme effectiveness.

SDGs supported: 

1 (particularly target 1.3), 4, 8 and 10.

Recommendation 3

Establish public-private-academic partnerships for multidimensional support for worker transition to AI-enabled economies.

Government-led training programmes alone will be insufficient to meet the need for comprehensive and inclusive transition solutions for workers transitioning to AI-enabled economies. Efforts must extend beyond skills training to encompass a full spectrum of support that can only come from formalized partnerships with local, regional and global private-sector enterprises, universities, vocational institutions and AI-focused startups that can provide:

- Structured pathways for practical exposure to AI-integrated roles and building workplace-relevant competencies.
- Professional networks and peer communities for mentorship, knowledge exchange and career guidance.
- Access to tools, platforms and environments that allow workers, particularly those from underserved groups, to experiment with AI outside formal classroom settings.
- Psychosocial support, including counselling, well-being programmes, and guidance for workers managing the challenges of technological change and economic insecurity.

Given the financial requirements associated with establishing and sustaining these public-private-academic partnerships, the initiative could be financed through a shared-cost model that allocates responsibilities according to each sector's comparative strengths. Private enterprises and academic institutions can contribute free or subsidized self-training platforms, paid apprenticeships, project-based short-term assignments, internships and the option to return for transitioning workers. Many universities are well-positioned to supply psychosocial support services. In return, Governments should introduce targeted incentives, such as tax credits and expanded research grants for universities, to encourage sustained multi-sector participation in workforce transition initiatives. A diversified financing architecture would ensure that national authorities do not bear the full fiscal burden, while strengthening private-sector commitment, enhancing programme sustainability, and increasing the effectiveness and scalability of national worker-transition ecosystems.

This constitutes an immediate policy priority that Arab countries are well-positioned to operationalize within the next 12–24 months. Unlike large-scale institutional reforms, such partnerships rely on coordination mechanisms, incentive structures and existing institutional capacities that can be activated rapidly.

SDGs supported: 

17 (particularly target 17.H).

Recommendation 4

Strengthen the inclusion of workers in AI-enabled labour markets.

Some Arab region countries have made significant progress in embedding digital inclusion within their national transformation strategies. For example, the Digital Economy Policy in Saudi Arabia encourages increased workforce participation among women and people with disabilities. Bahrain has undertaken efforts to ensure that all citizens and residents, regardless of age, gender, background or social status, can fully benefit from digital opportunities. Further action will be required to extend these benefits to all segments of society in other countries in ways customized to emerging AI job markets. Migrant workers, who often remain excluded from digital opportunities and access to digital services, should be a key focus.[98]

Targeted measures such as inclusive hiring incentives and positive-discrimination policies can strengthen the participation of groups who lack access to AI learning and skills development. Embedding these inclusion measures within national AI and labour market strategies will help to ensure that the benefits of AI are equitably distributed and that all workers can participate in and benefit from the transition to AI-enabled economies.

SDGs supported: 

5 (particularly target 5.5), 8, 9 (particularly target 9.8) and 10 (particularly target 10.2).

Recommendation 5

Modernize workforce formalization and enhance informal workers' wellbeing using AI.

Governments in the Arab region should mitigate the risks of AI-driven job displacements in the informal sector by using AI solutions to modernize workforce formalization processes. AI can make formalization procedures more accessible and inclusive, offering both online and in-person services to ensure the participation of citizens and migrants with varying levels of digital literacy. Processes should also be made available in multiple languages to reduce barriers to entry and ensure equitable access. Such measures would establish clear, transparent and inclusive pathways for informal workers to integrate into the formal labour market, thereby strengthening economic resilience and social protection systems.

The development and availability of AI-enabled products and services for banking and other financial services should be promoted. According to a May 2025 ESCWA report, nearly 64 per cent of adults across 21 Arab countries do not have a bank account.[99] Most of these individuals are informal sector workers, as well as migrant workers, refugees and undocumented populations.[100] Limited access to financial services constrains economic and labour participation and hinders the region's progress toward achieving the SDGs. When large segments of the population remain unbanked, fewer can participate effectively in the digital and AI-driven economy, which in turn constrains broader productivity gains.[101]

Complementary AI-supported financial literacy initiatives should be introduced to strengthen individuals' capacity to effectively manage digital financial services. These may include AI-driven learning platforms, multilingual conversational agents, and personalized training modules adapted to the income patterns and literacy levels of informal workers.

SDGs supported: 

1, 8 (particularly target 8.A), 9 and 10.

Recommendation 6

Create specialized national cloud transition teams to accelerate AI adoption in the public sector.

Only 44 per cent of United Nations Member States have legislation on cloud computing. Cloud migration is essential to ensure that all Arab region Governments can participate in AI-driven development.[102] To shift workloads to secure public cloud services and standardize adoption across agencies, Governments should establish specialized teams with technical expertise to guide the transition process, address operational challenges, and develop shared resources. These teams will work directly with ministries and public agencies, prioritizing those with the greatest operational need for cloud-enabled AI services. To ensure sustained coordination, each ministry should designate a senior public servant as the primary liaison with their country's national cloud transition team, responsible for facilitating internal preparations and timelines, communicating technical needs, managing risks, and supporting capacity-building activities.

Specific responsibilities would include:

- Developing standardized migration guidelines.
- Supporting all institutions in assessing readiness and planning transitions.
- Ensuring critical systems and sensitive data are migrated safely and incrementally.

- Upon completion of transitions, providing ongoing maintenance, optimization and security of cloud-based services and responding to operational challenges or support requests.
- Monitoring global developments in cloud and AI technologies and providing proactive advisory support to ensure government systems remain aligned with emerging standards, best practices and technological advances.

As these will be permanent units within the national government, they should be funded directly through government budgets. This constitutes an immediate policy action that Arab region countries should establish within the next 12–24 months.

Singapore launched a successful model. Through its Government Technology Agency, it launched an initiative in 2018 to move non-sensitive systems to the cloud. By 2024, Singapore had migrated 80 per cent of eligible workloads, enabled by a centralized adoption team which held regular clinics with agencies, published a standardized cloud adoption playbook, and introduced training to build internal competencies. The migration was implemented incrementally to safeguard critical systems.[103]

SDGs supported: 

Recommendation 7

Develop regulations to guarantee human oversight in AI-driven tasks directly affecting workers.

Under this policy, human workers (civil servants and private sector workers) must retain the authority to make the final decisions in uses of AI that impact workers, with AI systems serving exclusively as decision-support tools. This will safeguard transparency and due process while strengthening workers' autonomy and establishing unambiguous accountability in institutions. Governments should identify and legally define which tasks constitute a direct impact on workers, for example, eligibility determinations, sanctions and approvals, financial assessments, or hiring and termination processes.

The mandate must explicitly prohibit automatic dismissal, sanction or adverse administrative action based solely on AI-generated determinations.

Governments and companies must ensure adequate skills, training and process redesign for human oversight over AI roles. Training should cover AI-systems understanding, risk assessment, ethical decision-making and procedures for validating AI recommendations. Internal workflows must be adapted to integrate human review steps, define accountability lines, and ensure decision-makers have both the authority and institutional support to override AI outputs. This preparation is essential to make these oversight roles operationally viable.

Human oversight requirements over AI should extend to the private sector, with enforcement by the ministry of labour or an equivalent national authority, to monitor and enforce compliance across both public and private entities. This mandate should include: establishing clear compliance standards and transparency requirements for companies using AI in worker-affecting processes; creating a dedicated reporting mechanism for workers to submit concerns when they believe human oversight has not been properly executed; and conducting audits, requesting documentation, and imposing penalties for violations.

Given that this regulation establishes a national standard with a designated authority tasked with monitoring compliance across both public and private sectors, all operational and administrative costs should be covered by the Government. Authority to enforce compliance and impose penalties for violations must reside with the Government for legal enforceability.

Establishing human oversight is an emerging area of regulation but this recommendation must not be delayed until global standards fully mature. Regulation and authority should be established to begin monitoring and implementation within the next 12–24 months, allowing Governments to safeguard citizens while shaping regional and global norms.

SDGs supported: 

Recommendation 8

Establish observatory agencies to monitor AI advances and their employment impacts.

Since 2025, ILO classifies global occupations according to four gradients of exposure to generative AI.[104] These classifications of occupations will change over time as AI evolves, making observatory bodies essential to keep Governments proactive. Such observatory bodies should be agile and multidisciplinary, bringing together experts from the public and private sectors, academia and civil society. This is essential so as to anticipate the long- as well as short-term societal and labour market impacts of AI exposure. Observatory bodies should generate long-term and semi-annual labour market projections using AI-based modelling and advanced tools. It is critical to safeguard the observatory bodies from being absorbed into traditional bureaucratic structures that prioritize routine statistical reporting over anticipatory governance.

An urgent priority for the observatory bodies should be to map the future projections of demographic and sectoral distribution of workers across the four ILO exposure gradients. Breaking down this data by industry, income level, educational attainment, gender, age and geographic location will enable policymakers to proactively identify the populations most at risk and design targeted interventions to support vulnerable groups. With this information, Governments can design targeted interventions and long-term labour market policies to support these groups.

The observatory bodies should be supported through co-financing involving the Government, private sector and academic institutions committed to advancing responsible AI and future-of-work research. Participating entities should have structured access to the observatory bodies' periodic national assessments, forecasts and analytical outputs, enabling evidence-based decision-making across sectors. Designed as described here, the observatory agencies can be operationalized within 12–24 months.

SDGs supported: 

Recommendation 9

Ensure that educational curricula are agile and future-ready for the continuous evolution of AI.

In the public education sector, the responsibility for curriculum reform rests primarily with national Governments, and specifically with ministries of education or their equivalent authorities. Once new models for agile and adaptive curricula are institutionalized in public education systems, Governments should establish mechanisms to encourage their broader diffusion across privately-run education providers. Although private institutions may not be formally obligated to adopt public-sector curriculum standards, this should be encouraged to ensure coherence across both public and private education systems, as this is essential to maintaining equity of learning opportunities and to equipping all learners with the competencies needed for an AI-enabled future.

Given the constant evolution of AI, this policy should be implemented within the next 12–24 months to ensure preparedness for the future impacts of AI.

SDGs supported: 

4 (particularly target 4.4) and 8 (particularly target 8.6).

Recommendation 10

Steer tax policies towards AI jobs with social value.

Governments should strategically use fiscal and industrial policies to steer the development and application of AI towards applications that create jobs in areas such as education, healthcare, energy efficiency and climate resilience. By explicitly aligning fiscal and industrial levers with social priorities, Governments will steer AI job creation toward equity, inclusion and public good, helping to ensure that the benefits of AI do not bypass vulnerable segments of society or magnify existing divides. Tax and other fiscal policy incentives could include:

- Enhanced research and development tax credits or incentives such as payroll tax reductions for companies

that employ people specifically to develop AI solutions addressing underserved populations.

- Procurement set-asides or innovation grants for socially-oriented AI companies developing AI applications that create jobs in local communities.
- Subsidized access to compute, data infrastructure and regulatory sandboxes for firms building AI applications with high public value and clear job creation potential.
- Accelerated depreciation allowances for MSMEs investing in AI systems that expand productive capacity and generate new employment opportunities in rural areas.

The selection and implementation of these incentives should be supported by a rigorous monitoring and evaluation framework that links fiscal benefits to measurable indicators of job creation, distributional equity and social impact. Embedding these fiscal mechanisms within broader national industrial strategies will further ensure that employment growth in AI-for-good sectors becomes a deliberate and sustained economic objective rather than an incidental. This policy should be implemented within the next 12–24 months to begin generating positive outcomes and to incentivize companies to adopt this approach without delay.

SDGs supported: 

8 (particularly targets 8.2 and 8.5) and 9 (particularly target 9.5).

Recommendation 11

Create grants for AI training and capacity-building in MSMEs.

A large percentage of the companies aspiring to develop and sell AI products and services and/or use AI in their operations will be MSMEs. Startup companies developing and offering AI products are emerging throughout the region that will be able to register as MSMEs if they meet the appropriate criteria. Governments should support the creation and growth of these MSMEs through grants aimed at helping them develop their workforces' skills in the use of AI.

One precedent is the Flexible AI Upskilling Fund pilot programme in the United Kingdom to subsidize the cost of AI skills training for small and medium-sized enterprises (SMEs) in knowledge-intensive firms in legal, accounting, management consulting, architecture and other sectors. Eligible businesses can apply for up to 50 per cent of the cost of training their employees to develop technical skills or increase their understanding of AI use in their job roles, with the aim of increasing the adoption of AI in the SME sector to fuel overall national economic growth.[105]

This policy should be implemented within the next 12–24 months to enable companies to access grants and commence training without delay.

SDGs supported: 

Recommendation 12

Create a regional foresight coordination agency for emerging and disruptive technologies in economies.

At the national level, the observatory agencies described in Recommendation 8 can anticipate the AI-related risks of job displacement or disruption in specific sectors or occupations, using forecasting methods. At the regional level, strategic foresight should be implemented to consider how AI and other disruptive technologies could transform the fundamental dynamics of economies in individual Arab countries and the economy of the Arab region as a whole.

Substantial differences exist in different countries' AI development, readiness, governance and global partnerships. Existing frameworks for how to leverage AI for national economic growth differ from country to country. How these differences interact will determine what alternative futures emerge at the regional level. Forward-looking analysis at this level requires a different set of strategic foresight capabilities than the more granular future projections of AI job impacts that observatory agencies will conduct.

Governments in the Arab region should establish a regional foresight coordination agency for emerging and disruptive technologies in economies, charged with assessing emerging and

disruptive technologies' impacts not just narrowly on jobs, but on economies. This body should initially focus exclusively on AI, given the technology's momentum, expanding to other emerging and disruptive technologies over time. It will examine the policy, economic and social experiences that could emerge from trends in these technologies' development and advancement and from various adoption and integration scenarios. A coordinated regional-level foresight function will allow Governments to understand technological directions, emerging risks and potential disruptions at early stages, enabling strategic alignment of national AI strategies and AI industry development.

The regional foresight coordination agency for emerging and disruptive technologies would facilitate:

- Policy harmonization by promoting shared understanding of the pace and direction of AI and other emerging and disruptive technology development, globally and in the region.
- Exchange of good practices in assessing the future implications of AI advancement in areas such as governance, digital inclusion and workforce adaptation.
- Sharing of experiences of early AI adopters to inform strategies for later adopters.
- Regional monitoring and foresight of the broader socioeconomic impacts of AI and other emerging and disruptive technologies, including impacts that shape the mid- and long-term future.

SDG supported:

Recommendation 13

Develop flexible regulations for AI-enabled cross-border work.

The Arab region, linked by a common language, has a strategic opportunity to cultivate a shared, AI-skilled freelance workforce capable of serving regional and global markets. Strengthening mobility within the region can also help retain talent that might otherwise migrate outside the region. However, flexible work regulations must not create incentives for employers to shift workers from standard employment into perpetual freelance arrangements. Mechanisms such as time-limited access to social protection for freelance work would help prevent long-term reliance on precarious employment structures.

Several Arab States have already taken steps to modernize labour regulations to accommodate flexible work. As the ILO has documented, Saudi Arabia has a structured system, with over 2 million registered freelancers by late 2024 and the Saudi Ministry of Human Resources and Social Development issuing licenses in over 120 professional fields, allowing freelancers to work independently, open bank accounts, and voluntarily enrol in social insurance. The same ILO report describes how the United Arab Emirates has freelance visas and flexible work permits that allow individuals to work independently across various sectors.[106]

Greater regional coordination is needed to ensure consistency in standards and recognition of freelance credentials across borders. Governments in the Arab region should:

- Harmonize regulations governing AI-related freelance and flexible work to enable cross-border recognition of licenses, permits and professional credentials.
- Facilitate regional social protection mechanisms tailored to freelance and gig workers in AI-mediated sectors, ensuring continuity of benefits as workers move between countries.
- Promote gender-responsive and youth-focused frameworks that ensure equitable access to flexible AI-related work opportunities, drawing on best practices from international models, where flexible work arrangements are coupled with full social and labour protections.

Policies should guarantee that part-time, project-based or freelance arrangements carry the same rights, benefits and protections as full-time employment, and allow workers to move seamlessly between full-time and part-time status. Cross-border flexible work regulation for Arab countries could be advanced and formalized for action in the next 12-24 months.

SDGs supported:

5 and 8 (particularly targets 8.3 and 8.5).

Recommendation 14

Adopt decent work standards for gig and other workers using AI.

AI can contribute to worker burnout and fatigue, as well as deepen structural discrimination; there is an urgent need for safeguards in workplaces. AI can also amplify existing inequalities, such as disadvantaging migrant workers in hiring and task allocation, or reproducing gender-based disparities in career progression. Harmonized region-wide regulations and practices to protect workers from such risks should be adopted, with structured participation from unions, employer organizations and private-sector consortia to ensure that standards are comprehensive, enforceable and reflective of regional labour market realities.

At the regional level, Governments should:

- Integrate decent work principles, including fair wages, adequate rest periods and regional working time directives, into national legal frameworks.
- Establish safeguards against intrusive or disproportionate workplace monitoring through AI technologies, following international best practices such as those in the European Union AI Act on high-risk technologies.
- Protect workers from wage suppression or reclassification due to AI augmentation. AI should not be used as a pretext to reduce pay, intensify performance targets, or reclassify job roles into lower-wage tiers. Harmonized regulations across Arab countries should prohibit wage reductions or negative reclassification linked to AI-driven efficiency gains.
- Ensure inclusive access to AI tools, training and upskilling opportunities within the workplace. Employers should be required to prevent discrimination in access to AI resources and capacity-building, ensuring that no group of workers is marginalized or excluded from the opportunities created by AI adoption.

Enhanced regional coordination of decent work standards for workers using AI should be an urgent priority area for early action in the next 12-24 months. This will help ensure that AI progress contributes to inclusive, fair and sustainable employment across the Arab region.

SDGs supported: 

8 (particularly target 8.8) and 16.

Annex 2. Building momentum – pathway for AI skills development in the Arab region

Achieving an inclusive, future-ready AI skills ecosystem requires a phased adaptive approach. While Arab countries differ in digital maturity, economic priorities and institutional capacity, a shared sequencing logic can support coordination and progress over time. The following roadmap outlines three complementary phases that lay foundations, scale systems, and sustain long-term capability, forming a continuous cycle of learning, refinement and renewal.

Phase 1: Foundations and early mobilization

The initial phase focuses on establishing enabling conditions and building early momentum. Governments begin by conducting national skills assessments and mapping existing initiatives to identify gaps and synergies. Pilot programmes, including AI literacy initiatives, teacher training and introductory modules on ethics and responsible AI can be launched across universities, teacher colleges and community centres. Scholarship schemes or targeted participation pathways for women, young people and communities traditionally excluded from digital opportunities can help ensure equity from the outset. At this stage, multi-stakeholder taskforces or advisory councils can play a crucial role in setting priorities, defining competency benchmarks, and aligning implementation across institutions.

Phase 2: System integration and expansion

The next phase centres on integrating AI competencies across mainstream education and workforce systems. This includes embedding AI modules into national curricula, aligning vocational education pathways to key economic sectors, and expanding teacher training through national centres or regional hubs. Public–private partnerships can help accelerate implementation through shared training facilities, internship pipelines, research collaboration and the creation of applied learning environments such as testing labs. Developing commonly recognized micro-credential systems can ensure portability, transparency and labour-market relevance across borders. At this stage, outcome monitoring, including graduate pathways, employment data and feedback from employers, becomes critical for continuous improvement.

Phase 3: Consolidation and lifelong learning culture

The long-term goal is to normalize AI literacy and strengthen continuous learning in civic and professional life. This phase emphasizes equitable access to training for all population groups, including mid-career workers and those in informal or rural labour markets. National institutes and regional consortia

can support horizon scanning, research networks and policy alignment on issues including emerging AI safety norms, data governance and public trust. Over time, success can be seen in the emergence of a vibrant AI research and innovation ecosystem where startups, public agencies, universities and civil society organizations collaborate, and skilled talent contributes to economic diversification, scientific discovery and human development.

Monitoring progress, ensuring accountability, and advancing equity

Countries across the Arab region will engage with these stages from different points based on their current digital maturity, institutional capacity and policy readiness. The roadmap serves as a flexible framework that accommodates varying entry points and progress. Ensuring sustainability will require a set of cross-cutting enablers, such as long-term financing mechanisms, safeguards for responsible use and safety, and coordinated regional platforms for knowledge-sharing, standards development and mutual support. Embedding these elements from the outset will help ensure implementation is aligned with national development priorities, while also advancing shared regional objectives and maintaining coherence with global principles and ethical commitments.

Effective implementation requires mechanisms to monitor progress, strengthen accountability, and ensure the benefits of AI capacity-building are shared equitably. Establishing a culture of evidence-based policymaking will help Governments to assess whether reforms are delivering the intended outcomes, to identify gaps, and support continuous improvement. A robust monitoring and evaluation framework with indicators that reflect reach, relevance and fairness is key.

The first dimension of monitoring is to understand who is benefiting from training opportunities. Participation data disaggregated by gender, age, geography, socioeconomic background and disability status can offer insight into patterns of inclusion and exclusion. Tracking enrolment and completion across universities, vocational training, online learning programmes and community-based initiatives can help policymakers ensure access expands over time.

The second focus is on institutional transformation. Data on curriculum adoption, teacher training and programme accreditation can help determine how deeply AI competencies and ethical considerations have been embedded across education and workforce systems. Over time, the share of schools integrating computational thinking, the number of universities offering interdisciplinary AI programmes, and the proportion of vocational colleges adopting sector-relevant AI modules can serve as markers of systemic progress.

Ensuring labour market relevance also requires monitoring the alignment between workforce demand and available talent through the analysis of job postings, hiring trends and employer feedback to help countries adjust training pathways to evolving economic priorities. Employment outcomes such as job placement rates, wage progression and career mobility for graduates of AI-related programmes provide further insight into the effectiveness and equity of learning pathways.

Equity is a central consideration across all measurement dimensions. Monitoring representation in AI research, leadership roles and high-value occupations can help ensure that national AI ecosystems reflect the diversity of their societies. Changes in public perceptions, such as whether young people, women and rural communities view AI as relevant and accessible, can function as qualitative indicators of cultural and social inclusion. Likewise, monitoring digital access and affordability can signal whether structural barriers are being reduced or reinforced.

Partnerships are another important area of assessment. The number and quality of collaborations, from university–industry research projects to non-governmental organization-led community learning programmes, can show whether multi-stakeholder coordination is maturing and whether collective effort is translating into system-wide capacity.

Progress-tracking also needs to be institutionalized. Annual or biennial reporting supported by national observatory bodies, statistical agencies or regional coordination platforms can provide transparency and continuity. Public reporting also encourages shared responsibility across sectors and strengthens trust between institutions and the communities they serve.

As with any long-term reform, monitoring is a continuous process of reflection and adaptation. Grounding decisions

in evidence and maintaining a commitment to fairness can help ensure Arab countries transition to an AI-enabled future that does not replicate existing inequalities but instead expands opportunities, accelerates innovation, and empowers all communities.

To further strengthen this monitoring agenda, national efforts should be aligned with established international frameworks, including the SDGs, the UNESCO Recommendation on the Ethics of AI, and emerging guidance under the Global Digital Compact. As data systems and institutional capacities vary across the region, such platforms can support shared measurement structures and foster peer learning, helping ensure consistency and comparability. Monitoring should also encompass safeguards for responsible and ethical AI deployment, including indicators on data protection, cybersecurity, algorithmic fairness and safety oversight.

Enabling conditions for regional coordination and sustainable implementation

Successful implementation of this roadmap will depend not only on willingness to develop policies, but also on enabling conditions that ensure continuity, equity and coherence across national systems. These help transform skills development efforts from isolated initiatives into a coordinated regional ecosystem capable of adapting over time and sustaining meaningful impact.

The first enabling factor is the recognition that different Arab countries are coming from different starting points. Levels of digital readiness, institutional capacity and AI infrastructure vary widely. Some countries may prioritize scaling research excellence, Arabic-language AI development and advanced workforce specialization. Others may first focus on foundational digital literacy, infrastructure access or large-scale teacher preparation. A differentiated approach ensures progress is inclusive and realistic while contributing to shared regional priorities.

Sustainable financing is another vital dimension. Building and maintaining AI skills ecosystems requires predictable, long-term investment in training systems, infrastructure, research and public–private collaboration. National budgets, strategic public procurement frameworks, and cost-sharing arrangements with industry and development partners can help support these efforts. Regional financing instruments, including pooled funds, partnership platforms or concessional mechanisms for conflict-affected countries, can further reduce fragmentation and ensure that access to AI education does not depend solely on national resource levels.

Clear governance and coordination mechanisms are also essential. A regional cooperation model could facilitate shared benchmarking, mutual recognition of credentials, and cross-border capacity-building efforts. At the national level, inter-ministerial committees or advisory councils can support alignment across education, labour, digital economy and innovation agendas, while institutionalizing stakeholder participation from civil society, academia, the private sector and young people.

Risk awareness and safeguards must accompany all stages of implementation. As AI education and tools expand across learning environments, strong frameworks are needed to protect personal data, ensure responsible use, and anticipate the social and labour implications of AI adoption. Ethical oversight mechanisms, periodic review processes, and alignment with international instruments can help ensure responsible advancement and public trust. Attention to risks specific to the region, including Arabic-language algorithmic bias, cybersecurity vulnerabilities, and uneven access to compute or proprietary models, will also be important.

Finally, shared digital infrastructure can accelerate progress and reduce duplication. Regional platforms providing Arabic-language datasets, interoperable micro-credential frameworks, and context-appropriate training materials can help ensure that learners region-wide, whether in major cities, rural settings, refugee communities or remote education systems, benefit from consistent access and quality. Such shared assets also reinforce regional solidarity and support interoperability across diverse national systems.

A shared future

The recommendations outlined in this report provide a foundation for building an inclusive, capable and future-ready

AI ecosystem across the Arab region. Realizing this vision requires coordinated implementation, sustained investment, and a shared commitment to ongoing learning and adaptation. While countries will advance at different speeds, common direction and collective governance can ensure progress is both equitable and regionally coherent, so that no community is excluded as AI reshapes economies, public services, cultures and daily life.

The urgency of this moment demands that AI skills development be understood not simply as a labour-market priority, but as a pillar of human development, social stability and regional resilience. National Governments, regional institutions, industry leaders, civil society organizations and educational systems each have a role in ensuring that the opportunities created by AI translate into meaningful access, dignity and agency for all.

If the region acts collectively, with foresight, responsibility and unwavering attention to equity, AI can become a public good that strengthens opportunities, deepens participation, and reflects the cultural, ethical and developmental aspirations of the societies it serves. The work ahead should be approached not as a technical exercise, but as a shared regional commitment to shaping an AI future that benefits everyone and leaves no one behind.

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This joint report by the United Nations Economic and Social Commission for Western Asia (ESCWA) and the International Labour Organization – Regional Office for Arab States (ILO-ROAS) examines how artificial intelligence (AI) is reshaping employment, skills and productivity in the Arab region between 2025 and 2035. As AI investment, infrastructure and adoption accelerate across the region, the impacts on labour markets are becoming both immediate and transformative.

Drawing on modelling, regional data and a strategic foresight methodology, the report analyses how AI-driven automation and augmentation may alter sectoral balances, occupational structures and job quality. It highlights the importance of inclusive skills systems, lifelong learning pathways and adaptive social protection to ensure a just transition. Through three alternative future scenarios set in 2035, the report offers policymakers a structured framework to anticipate uncertainties and shape proactive responses. It concludes with actionable national and regional policy recommendations to harness AI as a driver of sustainable, inclusive and resilient development in the Arab region.

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