ASOCIO
Reimagining the Digital Era

TALENT DEVELOPMENT POLICY AND LANDSCAPE 2024

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Auckland, New Zealand. ***Photo courtesy of freepik.com.***

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Message from the Chairman of ASOCIO

Dear Members and Colleagues,

It is with great pride and anticipation that I present to you the ASOCIO Talent Development Policy and Landscape 2024 publication. This report marks a significant milestone in our collective journey to enhance the technology landscape across the Asia-Oceania region. As we stand on the brink of transformative changes driven by emerging technologies, the importance of nurturing and leveraging tech talent cannot be overstated.

Our region is rich in diversity: geographically, culturally and in terms of technological maturity. While these differences present challenges, they also offer unparalleled opportunities. The report addresses how we can harness our diverse strengths to overcome obstacles and drive innovation.

I extend my deepest gratitude to all member economies for your invaluable input, which has been instrumental in shaping this report. Special thanks are due to the Policy Task Force (PTF) led by the Japanese Information Systems Association (JISA) for your exceptional leadership. I also wish to acknowledge the National Tech Association of Malaysia (PIKOM) for your efforts in collating and developing this comprehensive report.

ASOCIO remains committed to championing these policies and driving forward the momentum necessary for a thriving and inclusive tech ecosystem. Together, let us build a future where technology thrives and benefits us all.

Warm regards,
Dr Brian Shen
Chairman, ASOCIO

Bangkok, Thailand. Photo courtesy of freepik.com.

EXECUTIVE SUMMARY by the ASOCIO Policy Task Force (PTF)

Introduction

The Asian-Oceanian Computing Industry Organization (ASOCIO) has long been at the forefront of shaping policies for the tech industry within the region, mainly focusing on critical areas such as the development of tech talent and addressing challenges associated with brain drain of human resources out of the region.

Given the evolving geopolitical landscape and technological advancements, ASOCIO finds it timely to revisit and enhance its policies. This report, spearheaded by the ASOCIO Policy Task Force and supported by member organizations, outlines updated policy statements to address regional tech talent and diversity challenges.

Diversity and Tech Landscape Challenges

ASOCIO identifies several key challenges within the tech industry across its member economies:

- Gender Diversity: Significant gender imbalances exist in tech roles and leadership.
- Ethnic and Cultural Diversity: Ensuring broad representation within tech companies remains a challenge.
- Age Diversity: Balancing the inclusion of different age groups in the workforce is crucial, but difficult.
- Geographical Diversity: The vast ASOCIO region struggles with ensuring equitable tech representation.
- Inclusive Workplace Cultures: Creating uniform inclusive environments across diverse organizations is challenging.
- Job Displacement due to AI: The rise of AI technologies threatens job security, highlighting the need for reskilling and upskilling.

In addition, disparities in tech industry maturity, technological advancement, skills development, innovation ecosystems and regulatory environments across member economies exacerbate these challenges. Addressing them requires fostering inclusivity, promoting collaboration and supporting capacity-building initiatives.

Policy Statements

This report presents nine key policy statements:

- *Promoting Inclusivity in Tech Recruitment:* Advocate for inclusive hiring practices to address disparities in gender, disability and ethnicity.
- *Education and Training:* Call for increased investment in tech education and training to develop a skilled workforce.
- *Cross-Border Collaboration:* Encourage regional cooperation to retain and attract tech talent and prevent brain drain.
- *Welcoming Immigration Policies:* Urge member economies to streamline visa processes and create supportive environments for foreign tech professionals.
- *Industry-Academia Partnerships:* Stress the importance of collaborations between tech companies and educational institutions to bridge talent gaps.
- *Work-Life Balance:* Promote flexible work arrangements and wellness initiatives to enhance employee satisfaction and productivity.
- *Investment in R&D:* Advocate for increased funding and support for tech research and development to drive innovation.
- *Governance and Ethics:* Emphasize the need for robust governance and ethical standards in tech developments.
- *Support for Workers Affected by AI Displacement:* Implement programs to assist workers transitioning from jobs displaced by AI and automation.

Rationale

The proposed policies aim to address critical issues within the tech industry, from enhancing diversity and inclusivity to supporting workforce transitions impacted by technological advancements.

By fostering inclusive recruitment, investing in education and promoting cross-border collaboration, ASOCIO seeks to create a dynamic and equitable tech environment. Enhanced immigration policies, robust industry-academia partnerships and a focus on work-life balance are expected to drive innovation and economic growth, while simultaneously ensuring ethical practices and addressing the impact of AI on employment.

Vision for the Future

ASOCIO's updated policies are designed to reshape the tech landscape across the Asian-Oceanian region, positioning it as a global leader in technology and innovation. By addressing disparities, promoting inclusivity and fostering collaborative and ethical practices, ASOCIO envisions a vibrant and resilient tech ecosystem.

This future is characterized by enhanced regional cooperation, sustainable growth and societal benefits, ensuring that technological advancements contribute to prosperity and well-being for all member economies and their citizens.

Colombo, Sri Lanka. Photo courtesy of freepik.com.

Dhaka, Bangladesh. Photo courtesy of freepik.com.

POLICY:
Talent Development 2024

Introduction

Over the past few years, ASOCIO (Asian-Oceanian Computing Industry Organization) has developed and issued policy statements on challenges and opportunities in the tech industry, particularly on the development of tech talents. At this stage, it is timely that ASOCIO revisit these policies with the objective of renewing, re-enforcing and / or replenishing them.

ASOCIO is aware and mindful of the issue of brain drain, especially the departure of talents from the region, as well as threats to the multilateral trading system. In response, we advocate for a rational approach to ensuring individual privacy, security and data protection in order to balance fundamental rights with the equally-important protection of national security and data without impacting on the economic and social capability of digital information.

With these in mind, ASOCIO had embarked on this initiative and developed a set of policy statements on talent development, with an onus on addressing the risks of brain drain from the region.

These policies were derived through surveys conducted throughout Asia-Oceania to determine urgent and important priorities. The analysis is based on regional qualitative and quantitative surveys including extensive desktop research. ASOCIO will undertake to continue these policy update from time to time, taking account the new realities and developments affecting cross-border talent matters.

This report would not be possible without the leadership spearheaded by the ASOCIO Policy Task Force (PTF) chaired by JISA (Japan Information Systems Association). We would like to thank all ASOCIO member economies for contributing their views and thoughts for this report, including heartfelt appreciation to the National Tech Association of Malaysia's (PIKOM) Research Committee for its assistance in compiling this report.

Challenges to Diversity and Tech Landscape

ASOCIO understands that we face several collective challenges to diversity and the tech landscape such as:

Gender Diversity: There is often a significant gender gap in the tech industry, with fewer women in leadership roles and technical positions.

Ethnic and Cultural Diversity: Ensuring representation and inclusivity of diverse ethnicities and cultures within tech companies and in leadership roles can be a challenge.

Age Diversity: Balancing the workforce to include both younger and older generations can promote innovation and knowledge sharing, but can also be a challenge due to differing perspectives and skill sets.

Geographical Diversity: As ASOCIO covers a wide region, ensuring representation and participation from all member countries can be challenging.

Inclusive Workplace Cultures: Creating inclusive environments where individuals of all backgrounds feel valued and can thrive is crucial, but can be difficult to achieve uniformly across diverse member organizations.

Job Displacement due to Tech Innovation and Automation such as AI: The rapid advancement of AI technologies has the potential to disrupt job markets by automating certain roles, which may lead to job displacement. Addressing the need for reskilling and upskilling programs to help workers transition into new roles is essential to mitigate these effects and ensure a balanced tech workforce.

In addition, there are also gaps in the maturity and pace of development of the tech landscape among member economies. The obvious ones are:

Maturity of Industries: Different countries within ASOCIO may have varying levels of maturity in their tech industries. Some may be well-established with advanced technologies and practices, while others may still be developing their infrastructure and capabilities.

Pace of Technological Advancement: The rate at which technology advances can vary significantly across different member economies. Some regions may adopt new technologies quickly while others may face challenges in keeping up due to factors such as infrastructure limitations or regulatory barriers.

Skills Development: Ensuring the workforce across ASOCIO member economies is equipped with the necessary skills to keep pace with technological advancements is crucial. Disparities in educational opportunities and training programs can affect the ability of tech industries to thrive uniformly across the region.

Innovation Ecosystems: The presence and strength of innovation ecosystems including startups, incubators and venture capital can differ across ASOCIO member economies. This can impact the ability of tech industries to innovate and compete on a global scale.

Regulatory Environment: Regulatory frameworks governing the tech industry can vary widely, affecting factors such as data privacy, intellectual property rights and market entry barriers. Harmonizing these regulations across diverse member economies can be challenging, but is important to foster a level playing field.

Addressing all these differences in diversity and the tech landscape involves inclusive policies that: promote diversity in leadership; provide equal opportunities; and cultivate inclusive workplace cultures. Policies should promote collaboration and knowledge sharing among ASOCIO member economies to support capacity building initiatives while also encouraging innovation and inclusivity among member organizations with different stages of technological maturity and development.

POLICY STATEMENTS

The following are nine key policy statements derived from this study. These policy statements can guide ASOCIO and its member economies to address the challenges related to tech talent development while also mitigating the issue of brain drain.

Promoting Inclusivity in Tech Recruitment:
Encouraging member economies to adopt inclusive hiring practices, ensuring diversity in tech talent recruitment and addressing disparities in gender, physical and mental conditions, economic status and ethnicity.

Education and Training:
Advocating for increased investment in tech education and training programs to develop a skilled workforce within the region.

Collaboration:
Promoting cross-border collaboration and knowledge-sharing to retain and attract tech talent, thereby preventing or reducing brain drain.

Immigration Policies:
Encouraging member economies to create conducive immigration policies for tech professionals, enabling easier entry for foreign talent.

Industry-Academia Partnerships:
Emphasizing the importance of partnerships between tech companies and educational institutions to bridge the talent gap.

Work Life Balance Environment:
We advocate for work-life balance within the industry championing flexible work arrangements, prioritizing employee well-being through wellness initiatives, and advocating for clear boundaries in balancing productivity and personal fulfilment.

Innovation:
Advocating for increased investment in tech research and development to foster innovation and create high-quality jobs in the region, thus, maintaining an equilibrium between creation and consumption.

Increased Vigilance over Governance and Ethics in Technology:
ASOCIO recognizes the profound impact of technology on society and commits to upholding the highest standards and discipline of governance and ethics in all technological endeavours.

Support for Workers Affected by Tech Innovation and Automation such as AI:
Proposing policies and programs that support workers who face job displacement due to the adoption of AI and automation technologies.

Hanoi, Vietnam. Photo courtesy of freepik.com.

Hong Kong. Photo courtesy of freepik.com.

POLICY STATEMENT 1:

Promoting Inclusivity in Tech Talent Recruitment

Recognizing the importance of diversity and inclusivity in driving innovation and fostering a vibrant tech industry, we advocate for member economies to adopt inclusive hiring practices. Our policy aims to address gender, ethnic and disability disparities in tech talent recruitment to create more equitable and diverse workforces.

We encourage member economies to:

- ***Implement Inclusive Hiring Practices:*** Member economies are urged to adopt inclusive hiring practices that prioritize diversity and eliminate bias in recruitment processes. This includes promoting equal opportunities for all individuals regardless of gender, ethnicity, disability or other factors.

- ***Foster Diversity in Tech Talent Recruitment:*** We advocate for member economies to actively seek out and recruit diverse talent pools to reflect the rich tapestry of perspectives and experiences within the tech industry. This involves expanding outreach efforts to under-represented groups and providing support for skill development and career advancement.

- ***Address Gender, Ethnic and Disability Disparities:*** Member economies are called upon to address systemic barriers and disparities that hinder the participation of women, ethnic minorities and individuals with disabilities. This includes implementing targeted initiatives to promote STEM (Science, Technology, Engineering & Mathematics) education and career pathways for marginalized groups.

- ***Promote Inclusive Work Environments:*** In addition to recruitment efforts, member economies are encouraged to create inclusive work environments that embrace diversity and foster a sense of belonging for all employees. This involves promoting diversity training, creating mentorship programs and establishing support networks for under-represented groups.

By promoting inclusivity in tech talent recruitment, we aim to not only enhance innovation and competitiveness within the tech industry, but to also create opportunities for all individuals to contribute and thrive in the digital economy. Together, we can build a more equitable and inclusive future for the global tech workforce.

POLICY STATEMENT 2:

Education and Training for Tech Workforce Development

Recognizing the critical role of education and training in nurturing a skilled tech workforce, we advocate for increased investment in tech education and training programs. Our policy aims to empower individuals with the knowledge and skills needed to thrive in the rapidly-evolving tech industry, thereby driving economic growth and innovation.

We prioritize:

- ***Increased Investment in Tech Education:*** We advocate for governments, educational institutions and private sector stakeholders to allocate resources and funding towards the development and expansion of tech education programs. This includes supporting initiatives such as STEM education, coding boot camps and vocational training focused on tech-related skills.

- ***Collaboration and Partnerships:*** We encourage collaboration and partnerships between governments, academia, industry and civil society to design and implement effective tech education and training initiatives. By leveraging the expertise and resources of multiple stakeholders, we can create comprehensive programs that address the evolving needs of the tech workforce.

- ***Accessible and Inclusive Education:*** We advocate for tech education programs that are accessible and inclusive, ensuring that individuals from diverse backgrounds are given the opportunity to participate and succeed. This includes addressing barriers to access, providing support for under-represented groups and promoting diversity in tech education and training.

- ***Lifelong Learning and Skill Development:*** We emphasize the importance of lifelong learning and continuous skills development in the tech industry. Our policy encourages the adoption of flexible learning pathways, upskilling and reskilling initiatives, and support for professional development to enable individuals to adapt to changing technology trends and job requirements.

By advocating for increased investment in tech education and training, we aim to build a pipeline of skilled talents capable of driving innovation, economic development and social progress within our region. Through collaborative efforts and a commitment to accessible and inclusive education, we can empower individuals to realize their full potential and contribute to tech development and adoption.

POLICY STATEMENT 3:

Promoting Cross-Border Collaboration for Tech Talent Retention and Attraction

Recognizing the importance of cross-border collaboration and knowledge-sharing in retaining and attracting tech talent, we advocate for policies that facilitate cooperation among countries to prevent brain drain and foster a dynamic tech ecosystem. Our policy aims to create opportunities for talent retention, promote innovation and drive economic growth through collaborative efforts in the tech industry.

We prioritize:

- ***Facilitating Knowledge-Sharing and Exchange:*** We advocate for the establishment of mechanisms and platforms that facilitate knowledge-sharing and collaboration among tech professionals across borders. This includes initiatives such as joint research projects, exchange programs, and cross-border partnerships between companies, universities and research institutions.

- ***Removing Barriers to Mobility:*** We advocate for policies that remove barriers to talent mobility, including streamlined visa processes, mutual recognition of qualifications and support for cross-border employment opportunities. By facilitating the movement of tech talent, we can create a more fluid labour market that encourages innovation and enables individuals to pursue opportunities where their skills are most needed.

- ***Creating Incentives for Talent Retention:*** We encourage governments and employers to implement policies and incentives aimed at retaining tech talent within their respective countries and regions. This may include tax incentives, grants for research and development, and support for entrepreneurship and startup ecosystems to create a conducive environment for tech professionals to thrive.

- ***Promoting Collaborative Research and Development:*** We advocate for collaborative research and development initiatives that bring together talent from different countries to tackle global challenges and drive technological innovation. By pooling resources and expertise, we can accelerate progress in key areas such as artificial intelligence, biotechnology and renewable energy.

By promoting cross-border collaboration for tech talent retention and attraction, we aim to harness the collective potential of the global tech community to address complex challenges, drive innovation, and create opportunities for economic prosperity and social advancement. Through collaborative efforts and shared goals, we can build a more resilient and inclusive tech ecosystem that benefits individuals, businesses and societies worldwide.

POLICY STATEMENT 4:

Welcoming Immigration Policies for Tech Professionals

Recognizing the valuable contributions of tech professionals to innovation and economic growth, we advocate for member economies to create convivial immigration policies that facilitate easier entry for foreign talent. Our policy aims to attract and retain top-tier tech professionals by removing barriers to immigration and creating a conducive environment for international collaboration and talent exchange.

We prioritize:

- ***Streamlined Visa Processes:*** We encourage member economies to streamline visa processes and reduce bureaucratic barriers for tech professionals seeking to enter their countries. This includes expedited visa processing, simplified application procedures and the creation of dedicated visa categories for tech workers.

- ***Talent Recognition and Credential Evaluation:*** We advocate for the mutual recognition of qualifications and credentials across borders to facilitate the entry of tech professionals into new countries. This includes establishing mechanisms for fast-track credential evaluation and accreditation, ensuring that foreign talents' skills and expertise are recognized and valued.

- ***Support for Spousal and Family Immigration:*** We encourage member economies to extend immigration benefits to the spouses and families of tech professionals, enabling them to accompany their loved ones and contribute to the local community. This may include spousal work permits, access to education and healthcare services and support for family reunification.

- ***Collaboration with Industry and Academia:*** We advocate for collaboration between governments, industry stakeholders and academic institutions to develop immigration policies that align with the needs of the tech industry. By consulting with key stakeholders, policymakers can ensure that immigration policies are responsive to evolving workforce demands and support the growth of the tech ecosystem.

- ***Retention and Integration Support:*** We encourage member economies to provide support for the retention and integration of foreign tech professionals, including access to language and cultural orientation programs, assistance with housing and transportation, and opportunities for professional networking and mentorship.

By encouraging member economies to create conducive immigration policies for tech professionals, we aim to foster a diverse and vibrant tech workforce that drives innovation, economic growth and global collaboration. Through proactive measures and strategic partnerships, we can harness the talent and expertise of tech professionals from around the world to address complex challenges and build a brighter future for all.

Jakarta, Indonesia. Photo courtesy of freepik.com.

POLICY STATEMENT 5:

Promoting Work-Life Balance Environment in the Tech Industry

Recognizing the importance of work-life balance in fostering employee well-being and productivity, we advocate for work-life balance initiatives within the tech industry. Our policy champions flexible work arrangements, prioritizes employee well-being through wellness initiatives, and advocates for clear boundaries to support both productivity and personal fulfilment.

We prioritize:

- ***Flexible Work Arrangements:*** We advocate for the implementation of flexible work arrangements including remote work options, flexible scheduling and compressed workweeks to accommodate the diverse needs and preferences of employees. By empowering individuals to manage their work schedules effectively, we aim to enhance work-life balance and promote greater autonomy and flexibility in the workplace.

- ***Wellness Initiatives:*** We prioritize employee well-being by promoting wellness initiatives that support physical, mental and emotional health. This includes providing access to wellness programs, resources and support services such as fitness classes, mindfulness workshops, mental health resources and employee assistance programs. By prioritizing employee wellness, we aim to create a supportive work environment that promotes overall health and happiness.

- ***Clear Boundaries:*** We advocate for the establishment of clear boundaries between work and personal life to prevent burnout and promote personal fulfilment. This includes encouraging managers and employees to establish clear expectations regarding work hours, availability and communication channels as well as discouraging the expectation of constant availability outside of regular working hours. By promoting work-life balance and respecting personal time, we aim to create a culture that values the well-being and happiness of employees.

By advocating for work-life balance within the tech industry, we aim to create a more supportive and sustainable work environment that prioritizes employee well-being, enhances productivity and fosters personal fulfilment. Through collaborative efforts and a shared commitment to work-life balance, we can create a brighter and more fulfilling future for all individuals in the tech workforce.

POLICY STATEMENT 6:

Fostering Industry-Academia Partnerships to Bridge the Talent Gap

Recognizing the critical role of partnerships between tech companies and educational institutions in addressing the talent gap, we emphasize the importance of collaboration to cultivate a skilled workforce and drive innovation. Our policy aims to facilitate meaningful partnerships that leverage the expertise of academia and the practical experience of industry to prepare students for careers in the tech sector to meet the evolving needs of the industry.

We prioritize:

- ***Collaborative Curriculum Development:*** We encourage tech companies and educational institutions to collaborate on the development of curricula that align with industry needs and equip students with relevant skills and knowledge. This includes identifying emerging technologies and trends, integrating real-world case studies and projects, and providing opportunities for internships and work placements.

- ***Industry-led Training Programs:*** We advocate for the establishment of industry-led training programs that provide students with hands-on experience and exposure to industry practices and standards. This may involve partnerships between tech companies and vocational training institutions, coding boot camps and online learning platforms to offer specialized training in high-demand areas.

- ***Mentorship and Professional Development:*** We promote mentorship programs that connect students with industry professionals to provide guidance, support and networking opportunities. In addition, we encourage ongoing professional development initiatives that enable employees from tech companies to share their expertise with students and educators through guest lectures, workshops and mentoring programs.

- ***Research and Innovation Collaboration:*** We encourage collaboration between tech companies and academic researchers to drive innovation and solve complex challenges. By funding joint research projects, establishing research partnerships and sharing resources and facilities, industry-academia collaborations can catalyze breakthroughs and create opportunities for technology transfer and commercialization.

- ***Advocacy and Recognition:*** We advocate for policies and incentives that recognize and reward successful industry-academia partnerships such as grants, tax incentives and awards. By highlighting best practices and success stories, we aim to inspire greater collaboration and foster a culture of innovation within the tech ecosystem.

By fostering industry-academia partnerships, we can bridge the talent gap, equip students with the skills and knowledge needed to succeed in the tech industry, and drive innovation and economic growth. Through collaborative efforts and a shared commitment to excellence, we can build a stronger and more resilient tech ecosystem that benefits individuals, businesses and society.

POLICY STATEMENT 7:

Advocating for Increased Investment in Tech Research and Development

Recognizing the pivotal role of research and development (R&D) in fostering innovation and creating high-quality jobs, we advocate for increased investment in tech R&D within our region. Our policy aims to stimulate technological advancements, drive economic growth and enhance global competitiveness by supporting R&D initiatives across various sectors of the tech industry.

We prioritize:

- ***Increased Funding for Tech R&D:*** We advocate for governments, private sector stakeholders and international organizations to allocate more resources and funding towards tech R&D initiatives. This includes increasing government grants, tax incentives and venture capital for R&D projects in areas such as artificial intelligence, biotechnology, renewable energy and advanced manufacturing.

- ***Collaboration and Partnerships:*** We encourage collaboration and partnerships between governments, academia, industry, and research institutions to leverage collective expertise and resources for tech R&D. By fostering inter-disciplinary collaboration and knowledge-sharing, we can accelerate innovation and address complex challenges more effectively.

- ***Support for Emerging Technologies:*** We advocate for targeted support for emerging and disruptive technologies with high growth potential. This includes funding research on cutting-edge technologies such as quantum computing, blockchain, Internet of Things (IoT) and autonomous systems, which have the potential to revolutionize industries and create new opportunities for economic growth and job creation.

- ***Talent Development and Retention:*** We emphasize the importance of investing in talent development and retention to support tech R&D efforts. This includes providing support for STEM education, research scholarships and professional development opportunities to cultivate a skilled workforce capable of driving innovation and leading R&D initiatives.

- ***Commercialization and Technology Transfer:*** We advocate for policies and incentives that facilitate the commercialization and technology transfer of R&D outputs to market. This includes supporting technology transfer offices, incubators and accelerators to help researchers and entrepreneurs translate R&D discoveries into successful commercial products and startups, thereby creating high-quality jobs and fostering economic growth.

By advocating for increased investment in tech R&D, we aim to stimulate innovation, create high-quality jobs and drive economic prosperity within our region. Through collaborative efforts and strategic investments in R&D, we can position our region as a global hub for technology and innovation, driving sustainable growth and prosperity for generations to come.

POLICY STATEMENT 8:

Increased Vigilance over Governance and Ethics in the Tech Industry

In an era characterized by rapid technological advancement and digital transformation, the governance and ethical considerations surrounding the technology industry have become increasingly paramount. As technologies such as AI, big data analytics and IoT continue to redefine the way we live, work and interact, it is imperative to ensure that these innovations are developed and deployed responsibly, with due regard for a clear ethical principles and governance frameworks. Efficiency and profit factors cannot take precedence over ethics and governance in light of emerging and new technology like AI.

We advocate for:

- ***Human Wellbeing and Safety:*** The paramount importance of human wellbeing and safety must be upheld at all times in the development, deployment and utilization of technology. Technologies should be designed and implemented with the primary goal of enhancing human lives and safeguarding their safety.

- ***Data Privacy Protection:*** Data privacy is sacrosanct and must be safeguarded rigorously. Any collection, storage, processing or sharing of personal data must adhere to strict privacy principles and comply with relevant regulations to preserve individuals' privacy rights and prevent unauthorized access or misuse of data.

- ***Ethical Education:*** Ethical principles and considerations should be integrated into educational curricula from an early age. Schools and educational institutions play a crucial role in instilling ethical values, critical thinking and responsible decision-making among students to prepare them for ethical challenges in the technology-driven society.

- ***Accountability:*** Accountability must be a cornerstone of the tech industry. Stakeholders including companies, developers, policymakers and users should be held accountable for their actions and decisions regarding technology. Clear mechanisms for accountability, transparency and recourse must be established to address any ethical or governance breaches promptly.

This specific policy aims to establish a robust foundation for ethical and responsible conduct within the technology industry, ensuring that advancements in technology are aligned with societal values, promote human welfare and foster trust and confidence in technological innovations. It is imperative that each ASOCIO member economy must have this framework in place.

Kathmandu, Nepal. Photo courtesy of freepik.com

POLICY STATEMENT 9:

Support for Workers Affected by Tech Displacement

Recognizing that the rapid adoption of AI and automation technologies can lead to significant job displacement, we advocate for member economies to implement comprehensive support programs to assist affected workers. Our policy aims to ensure that individuals impacted by technological advancements have access to resources and opportunities to successfully transition to new roles and careers.

We encourage member economies to:

- Conduct a review of potential job displacement by tech, focusing on sector analysis, job role assessment and workforce impact survey, skills gap analysis, policy, and program assessment including ongoing monitoring and reporting.

By implementing these measures, member economies can better support and prepare their workers affected by AI displacement, ensuring they have the tools and resources needed to navigate career transitions successfully and contribute meaningfully to the evolving economy.

TACTICAL PLANS

The policy statements on tech development outlined in this chapter are the foundation stones or guiding principles to be navigated by ASOCIO and member economies in the immediate future.

They revolve around addressing critical challenges and harnessing emerging opportunities in tech talent management and development. With a focus on inclusivity, education, collaboration, immigration policies, industry-academia partnerships, work-life balance, research and development and ethical governance, ASOCIO endeavours to foster a vibrant ecosystem conducive to sustainable growth and innovation.

Just as important, it is essential to gain an insight into how these policies may be implemented. While all policies are equally important, some may need a longer tenure and more extensive collaboration to bear fruit. To be realistic, the following plans are segmented into immediate and medium terms.

Immediate-Term Tactical Plans

Increased Vigilance over Governance and Ethics in Technology

ACTION PLAN
- Establish a task force to develop a code of ethics for tech companies.
- Organize seminars and workshops on ethical considerations in tech development.

OBJECTIVE
- Uphold high standards of governance and ethics in technology to build trust and ensure responsible innovation.

Promoting Inclusivity in Tech Recruitment

ACTION PLAN
- Conduct workshops and seminars to educate member countries on inclusive hiring practices.
- Facilitate forums where successful diversity initiatives are shared among tech firms.

OBJECTIVE
- Increase awareness and adoption of inclusive hiring practices, promoting diversity in tech talent recruitment.

Education and Training

ACTION PLAN
- Collaborate with member countries to identify gaps in tech education and training programs.
- Establish a task force to recommend funding mechanisms for expanding these programs.
- Initiate inter-border internship and apprenticeship programs with universities and vocational institutions.

OBJECTIVE
- Enhance the quality and accessibility of tech education, fostering a skilled workforce within the region.

Kuala Lumpur, Malaysia. Photo courtesy of freepik.com

Macao. Photo courtesy of freepik.com

Collaboration

ACTION PLAN
- Organize cross-border workshops and conferences focusing on knowledge-sharing and collaboration, for example, regional CIO and CISO conferences.
- Facilitate partnerships between tech clusters in different ASOCIO member economies.

OBJECTIVE
- Strengthen regional ties to retain and attract tech talent, combating brain drain including enhancing the tech knowledge bank and experience pool.

Industry-Academia Partnerships

ACTION PLAN
- Establish a platform for tech companies and educational institutions to collaborate on curriculum development.
- Sponsor joint research projects that address industry-specific challenges.
- Initiate inter-border internship and apprenticeship programs with universities and vocational institutions.

OBJECTIVE
- Bridge the gap between academia and industry, ensuring graduates are job ready.

Conducting a Review of Potential jobs Displacement by Technological Innovation and Automation such as AI.

ACTION PLAN
- ***Sector Analysis:*** Identify and analyze industry sectors most vulnerable to AI-driven displacement.
- ***Job Role Assessment:*** Evaluate specific job roles and functions at risk of being automated.
- ***Workforce Impact Survey:*** Conduct surveys and interviews with employees and employers to gauge perceptions and concerns about AI displacement.
- ***Skills Gap Analysis:*** Assess the current skill sets of workers in vulnerable roles and identify gaps relative to future job market needs.
- ***Economic Impact Evaluation:*** Evaluate the broader economic impact of AI-induced job displacement on local and national economies.
- ***Case Study Review:*** Review case studies of previous AI implementations and their impact on employment in other regions or industries.
- ***Policy and Program Assessment:*** Evaluate existing policies and support programs related to workforce displacement and identify gaps or areas for improvement.
- ***Stakeholder Consultation:*** Engage with key stakeholders, including industry leaders, policy makers and educational institutions to discuss AI displacement impact and solutions.
- ***Strategic Recommendations:*** Develop a set of strategic recommendations based on the findings of the review.
- ***Monitoring and Reporting:*** Establish mechanisms for ongoing monitoring and reporting on the impact of AI on job displacement.

OBJECTIVE
- To ensure that individuals impacted by technological advancements have access to resources and opportunities to successfully transition to new roles and careers.

Medium-Term Tactical Plans

Immigration Policies

ACTION PLAN
- Advocate for streamlined visa processes and policies favouring tech professionals.
- Publish a guide on best practices for member countries to attract foreign tech talent.

OBJECTIVE
- Create a convivial environment for foreign tech talent to boost regional innovation.

Work-Life Balance Environment

ACTION PLAN
- Conduct a survey among member economies to assess current work-life balance policies and practices.
- Develop guidelines for implementing flexible work arrangements and wellness initiatives.

OBJECTIVE
- Enhance employee satisfaction and productivity through supportive work environments.

Research and Development

ACTION PLAN
- Create funding opportunities and grants for tech R&D projects that align with regional priorities.
- Form R&D consortia involving multiple ASOCIO countries to pool resources.
- Collaborate with Global IT associations such as the World Innovation, Technology and Services Alliance (WITSA) to identify common areas of interests and priorities.

OBJECTIVE
- Foster innovation, create high-quality tech jobs and strengthen regional competitiveness.

By implementing these short and medium-term tactical plans, ASOCIO can effectively address the challenges outlined in its talent policies while leveraging opportunities to enhance the tech talent landscape across the Asian-Oceanian region. These proposed plans are not cast in stone, but should be reviewed and refined given the dynamism of the industry, especially the critical component of tech talent development.

VISION FOR THE FUTURE

Looking ahead, the implementation of these policy statements by ASOCIO holds the potential of significantly reshaping the tech landscape across the Asian-Oceanian region. By focusing on inclusivity in tech recruitment, enhancing education and training opportunities, potential impact of tech innovations such as AI, fostering cross-border collaboration and advocating for supportive immigration policies, ASOCIO aims to create a vibrant and diverse tech workforce.

Through industry-academia partnerships and increased investment in research and development, we envision a future where technological innovation flourishes, creating high-quality jobs and driving economic growth.

Emphasizing work-life balance and promoting ethical governance in technology ensures that our advancements are sustainable and beneficial for society at large.

By addressing gender, ethnic and cultural disparities while embracing the varied maturity levels and pace of technological advancement among member economies, ASOCIO strives for a harmonized tech ecosystem. This approach not only mitigates the risks of brain drain, but also positions the region as a global leader in technology and innovation.

As ASOCIO continues to evolve its policies in response to new realities and challenges while guided by these principles, we are committed to fostering an inclusive, resilient and forward-looking tech industry that benefits all member economies and their citizens.

Together, we can build a future where technology serves as a catalyst for prosperity, sustainability and societal well-being across the Asian-Oceanian region and beyond.

INSIGHTS & PERSPECTIVES: **Talent Development Landscape in Asia-Oceania**

Quantitative Insights by Numbers

The talent development landscape in the tech industry is evolving rapidly as companies adapt to the swift pace of technological advancement. Most companies understand that the tech evolution would in turn revolutionize the knowledge and skills required by human resources.

ASOCIO conducted a survey of member economies to gauge their views on issues related to the development of tech talent. A total of 12 economies participated in the survey.

In addition, our survey reveals that businesses in the tech sector are highly responsive to new and emerging technologies. Companies are actively investing in upskilling and reskilling their employees to stay competitive, often through internal training programs, partnerships with tech education providers, and by fostering a culture of continuous learning. This proactive approach allows them to harness the latest technologies effectively and maintain a competitive edge in a dynamic market.

Despite the agility of the private sector, government bodies and academic institutions across the region have been slower to align their strategies with the fast-moving trends in technology. Many governments are still working to update educational frameworks and policies to better meet the needs of the tech industry.

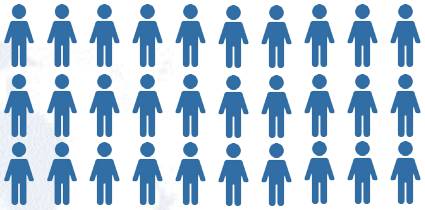
This lag in response can lead to a disconnect between the skills taught in academic settings and the competencies required by employers. Consequently, there is often a gap in the readiness of graduates to tackle real-world tech challenges, which can hinder the overall growth and innovation in the tech sector.

The discrepancy between the rapid adaptation of companies and the slower evolution of governmental and academic responses underscores a critical need for more synchronized efforts. For the tech industry to thrive, a collaborative approach involving industry leaders, educational institutions and policymakers is essential. By aligning educational programs and policy initiatives with current and future tech trends, stakeholders can ensure a steady pipeline of industry-ready talent, ultimately fostering a more robust and innovative tech ecosystem in the Asian-Oceanian region.

SURVEY PARTICIPATION

Australia
Bangladesh
Korea
Laos
Myanmar
Malaysia
Nepal
Pakistan
Thailand
Taiwan
Vietnam
Japan

12
Economies



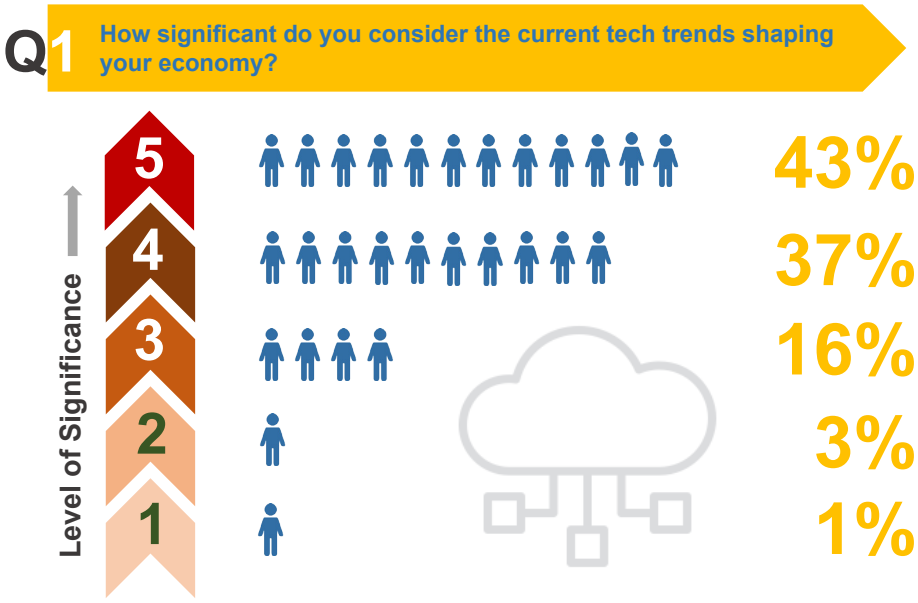
1,000
Respondents

A total of 1,000 industry respondents from 12 economies participated in the quantitative survey, providing broad but balanced insights into the tech talent development landscape across the Asian-Oceanian region.

Respondents came from advanced tech economies such as Japan, Korea and Taiwan; emerging digital hubs including Australia, Malaysia, Thailand, Vietnam, Pakistan and Bangladesh; and nascent industries in Laos, Myanmar and Nepal.

Survey participants were requested to rate 16 questions on a scale of 1 to 5 in ascending order of intensity in terms of impact, influence, effectiveness, significance or otherwise. A rating of 4 – 5 falls into the 'very' category, 3 is 'moderate' while 1 – 2 can come under the 'mild' range.

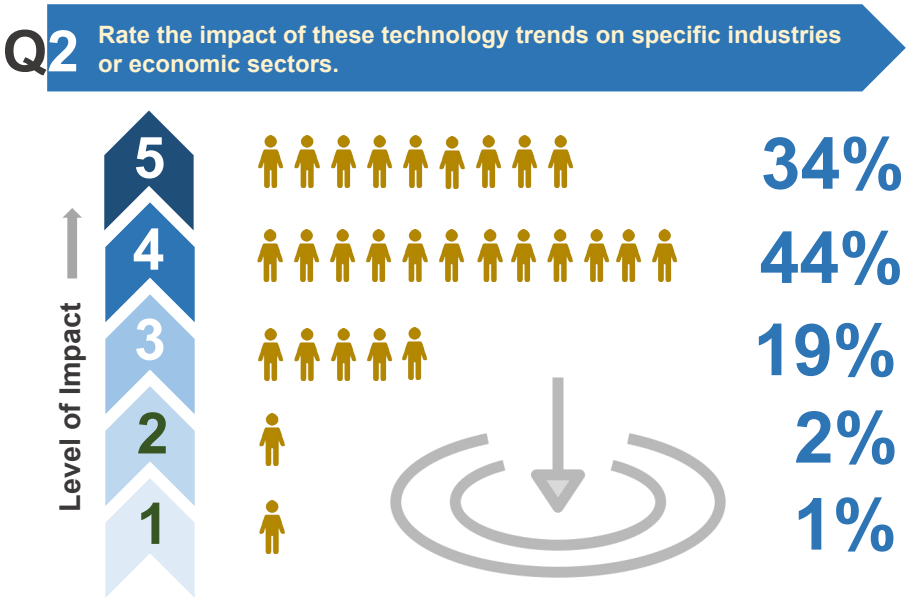
Broadly, the questions probed the response and readiness of industries, educational institutions and governments to develop competent talent tailored to current trends in tech evolution and revolution.



New technologies are reshaping economies

An overwhelming majority of industry respondents feel new and current tech are shaping their economies, with more than 96% rating their significance at level 3 or higher. Four out of 5 respondents are of the opinion that the effect is very significant (levels 4 or 5).

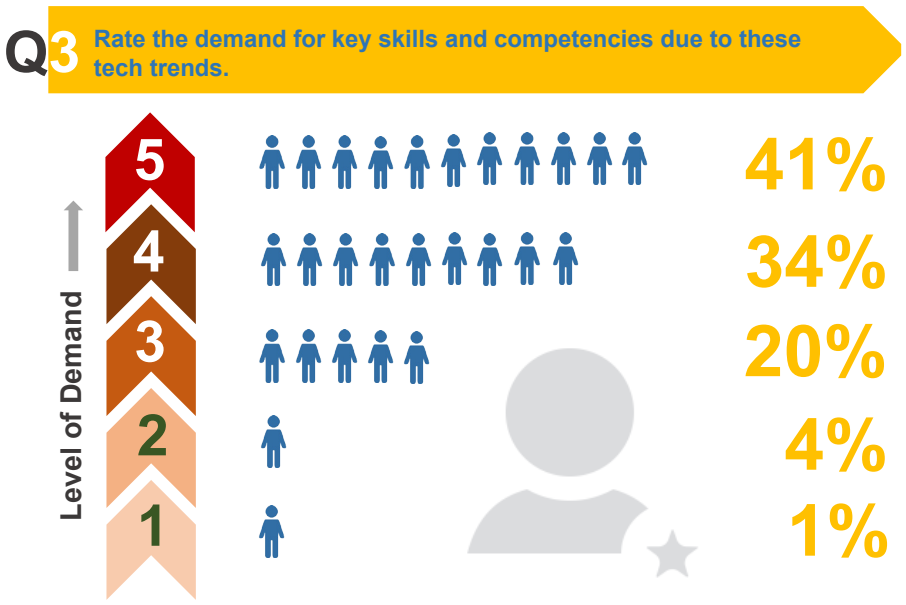
In particular, respondents from advanced and emerging tech economies view such innovations as significant agents of change to economic growth and activities.



New tech is impacting on specific industries and sectors

Similarly, the bulk of respondents perceive prevailing tech as having considerable impact on specific industries and economic sectors. More than three quarters believe the impact is very high, with 97% selecting a level of 3 or higher.

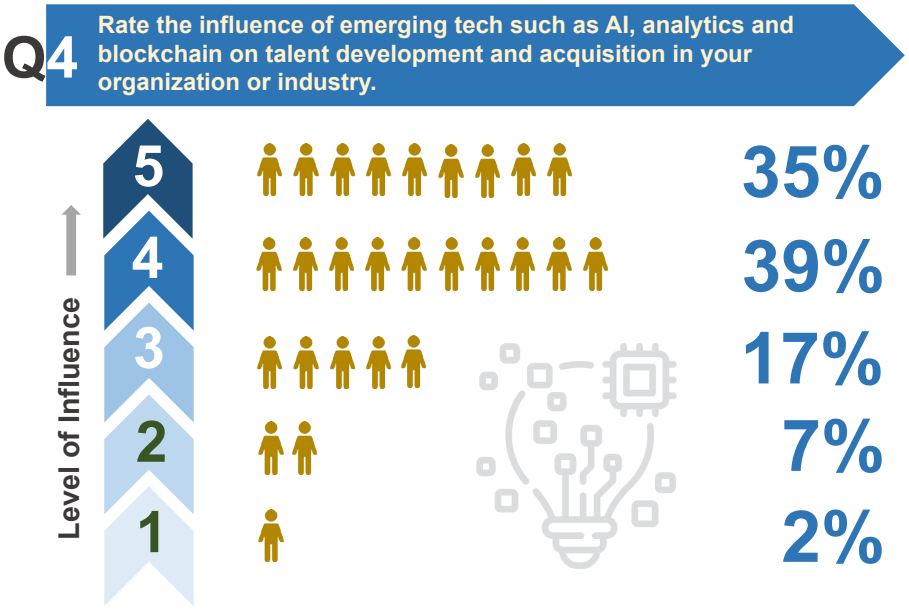
A minor difference from the previous question is that the level of impact appears to cut across all three types of tech economies (advanced, emerging, nascent).



Tech skills are in high demand

The impact of digital technologies on business and industry is fueling a high demand for tech skills and competencies throughout the region. Some 94% of respondents rate the level of demand at 3 or higher with 3 in 4 scaling the demand as very high.

It is noteworthy that a significant number of industry participants from nascent tech economies opted for the highest 5 rating, suggesting a lack of qualified talents within their ranks.

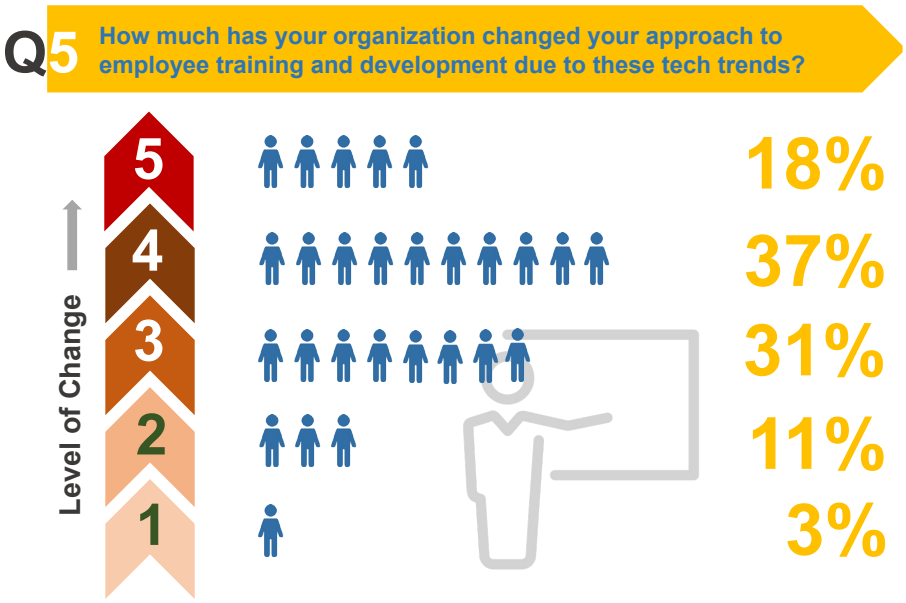


Emerging tech is influencing talent development and acquisition

Businesses and industries are tailoring their talent development and acquisition to competencies in AI, analytics and blockchain.

Almost 91% of survey participants across the three broad categories of tech economies listed a rating of 3 and above for the influence of emerging tech on their talent approach. Almost three quarters of respondents view emerging tech as very influential.

Manila, Philippines. Photo courtesy of freepik.com



Tech trends are influencing employee training

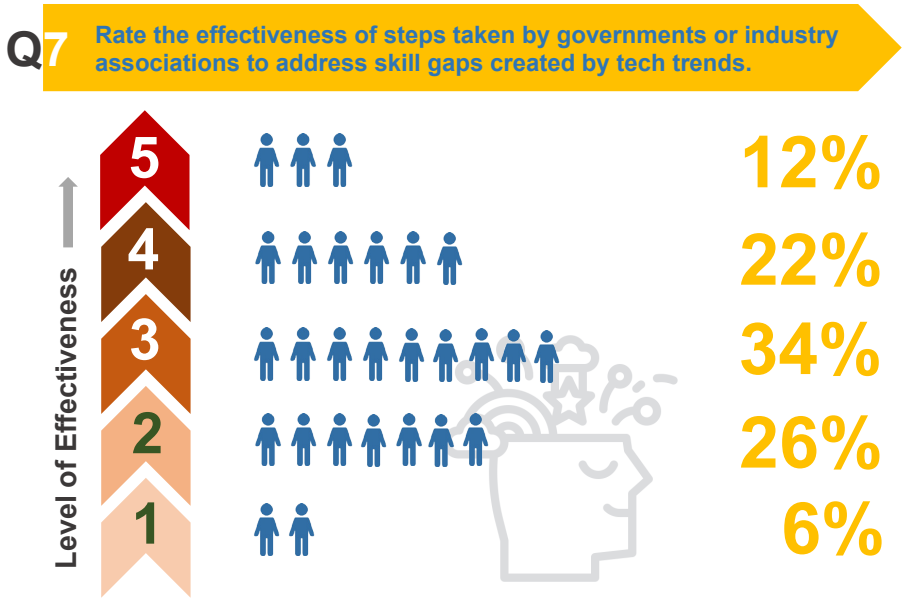
Beyond talent acquisition, organizations are also revamping their approach to employee training in line with the requirements of emerging technologies. While 86% of respondents rated the level of change at 3 or higher, just over half believe the degree of change to be very significant.

The reorientation is especially acute in nascent economies where the impact of new and emerging tech may only now be taking hold.

Organizations are effective in skewing talent strategies

Overall, businesses and industries across the region are effective in aligning talent development strategies with the shift towards emerging tech. While 83% of survey participants make this assertion, only half consider the efforts of their organizations to be very effective.

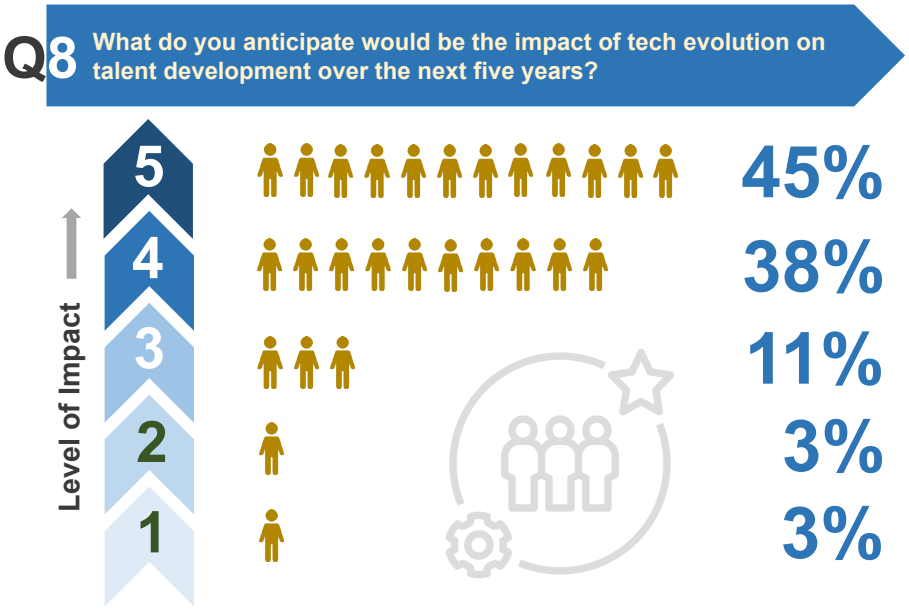
There appears to be a wide range of sentiments between the tech economies within all three classifications (advanced, emerging, nascent).



Governments are comparatively less effective in addressing skill gaps

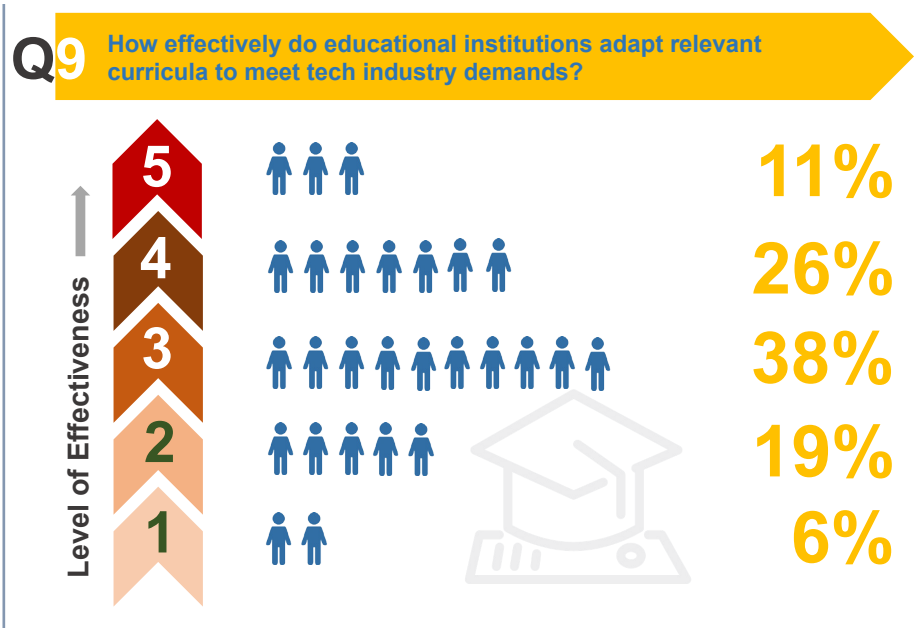
Compared to private organizations, survey respondents hold the opinion that governments and industry associations are less effective in meeting the talent requirements of emerging tech. Their responses are relatively even across the 'very', 'moderate' and 'mild' scales.

With one exception, the average score of participating economies fall below 4 and this indicates a desire by industry players for their governments and associations to step up efforts to address skill gaps related to emerging tech.



Tech evolution will sustain its impact on talent development

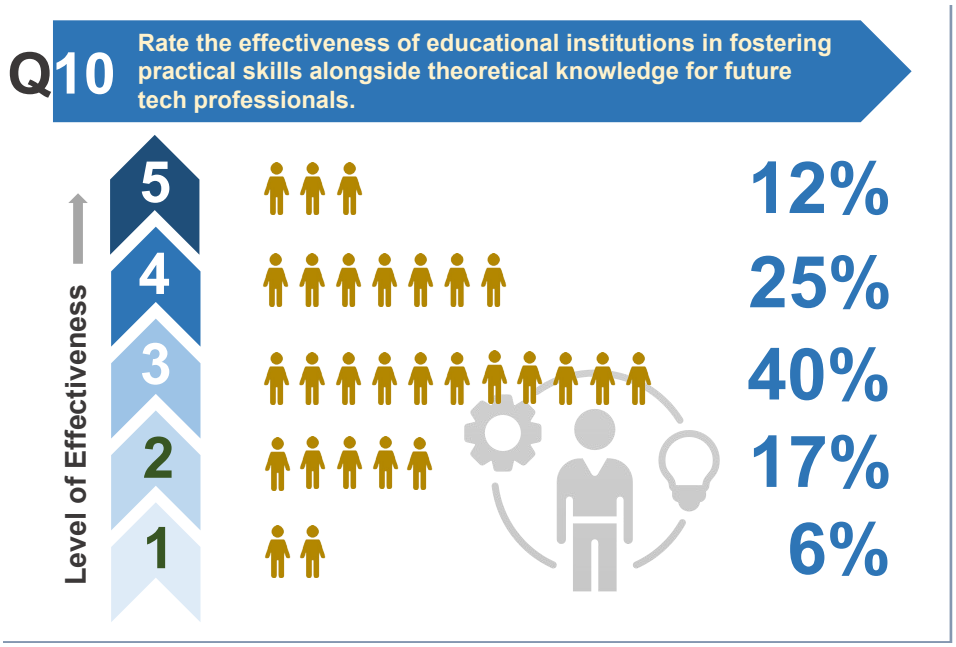
New and emerging tech will consistently require adjustments to talent strategies over the next five years. A plurality of respondents holds the view that the tech evolution will have a moderate to high degree of impact on talent development in the short to medium terms, with 83% selecting levels 4 and 5. This perception is shared by almost all economies.



Education institutions lag in adapting curricula to tech trends

As to be expected, educational institutions show a lag in responding to the rapidly-shifting tech landscape. Almost two thirds of survey respondents feel teaching establishments are at best only moderately effective at tailoring their curricula to meet the talent requirements for new and emerging tech.

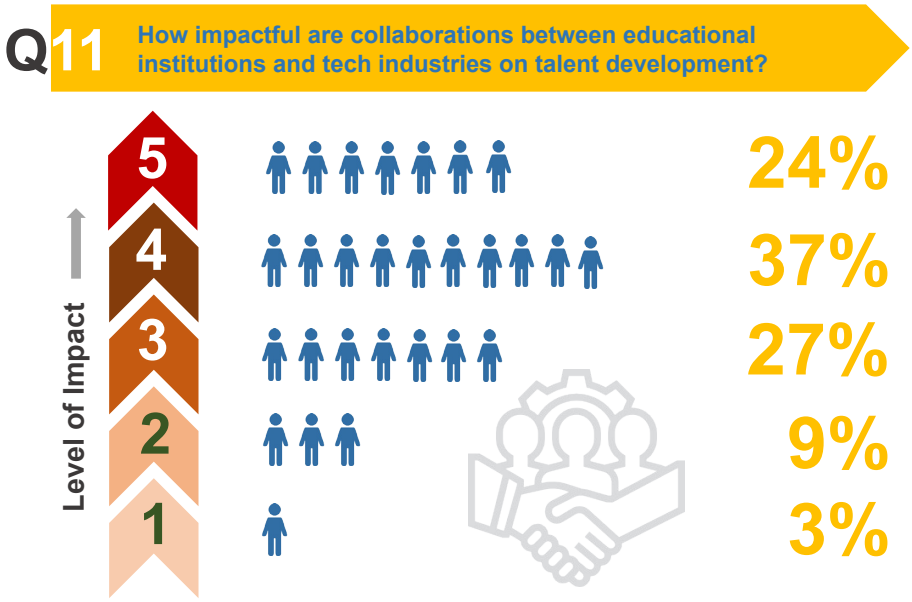
It is interesting to note that most participants in emerging tech economies appear lukewarm over the speed of adaptability by their educational institutions, leading to a relatively similar rating range of 2.7 to 3.1.



Institutions are moderately effective in teaching practical tech skills

Similar to the previous question, educational institutions are generally perceived to be slower on the uptake compared to businesses and industries. More than 6 in 10 survey participants indicate educational institutions should focus better on fostering practical skills to complement theoretical knowledge.

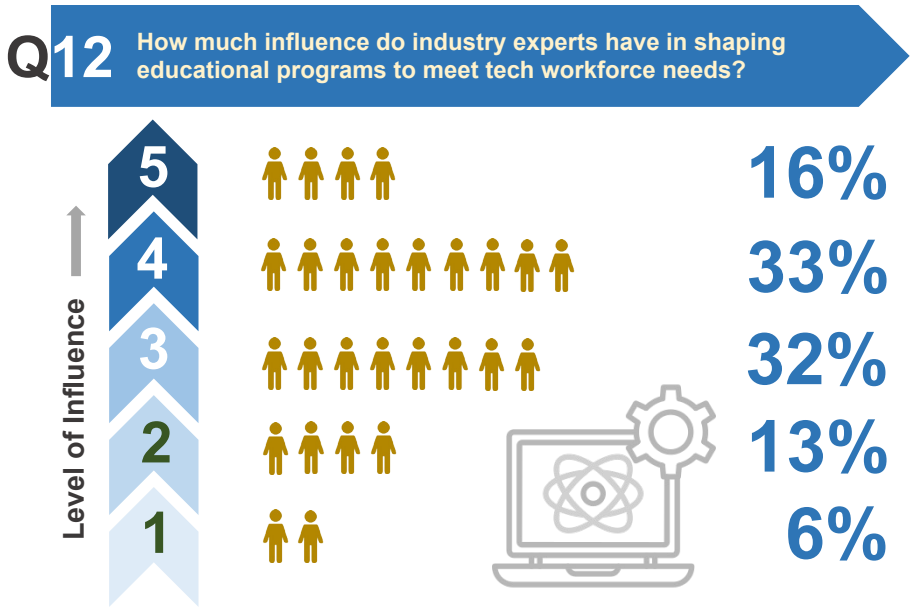
Respondents in emerging and nascent tech economies are more strident with this opinion although their counterparts in advanced economies are only tacitly confident that their learning establishments are up to speed on this matter.



Industry-academic tie ups make significant difference to talent development

Talent development benefits substantially from collaboration between tech industries and educational institutions. Almost 9 in 10 respondents attest to the advantages of industry-academia alliance.

Interestingly, respondents from nascent tech economies appear more positive in this assessment that their counterparts in advanced and emerging economies. A likely scenario for the comparatively muted response is the higher expectations that come with long-standing tie-ups between industries and teaching establishments in the latter two categories of economies.

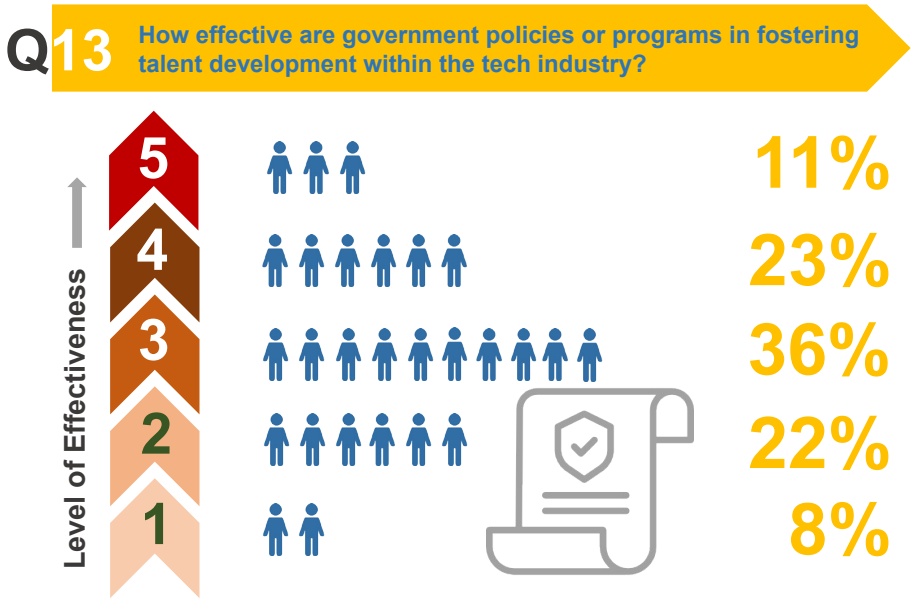


Industry experts play a significant role in shaping education programs

Most survey participants perceive industry experts as instrumental in shaping educational programs to meet the fast-changing demands of the tech landscape. Some 4 in 5 respondents agree with this viewpoint with almost half indicating industry experts exert significant influence.

However, this opinion is not universal across the 11 economies. On the whole, respondents in advanced tech economies seem to be confident that industry experts contribute substantially to educational curricula with their expertise and experience.

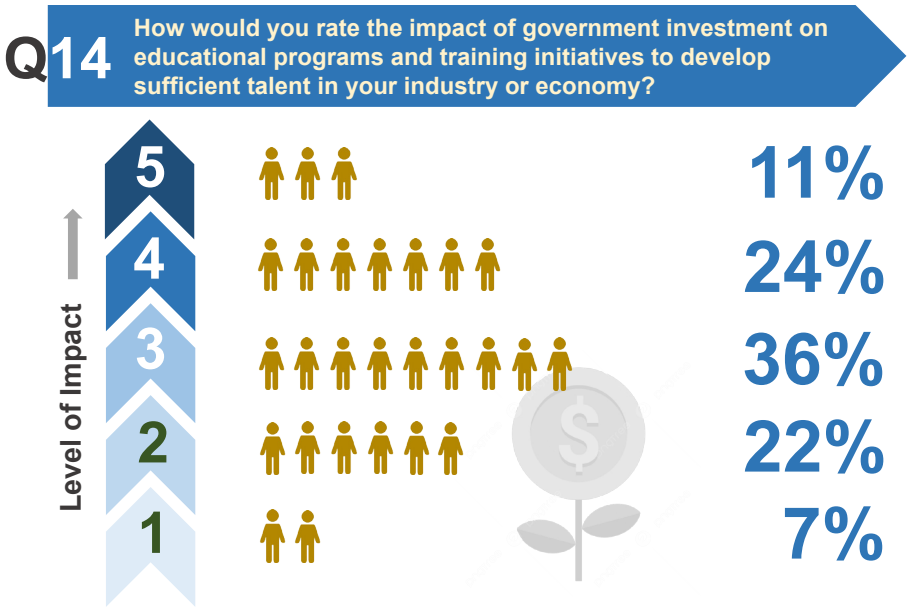
Mumbai, India. Photo courtesy of freepik.com



Governments contribute to talent nurturing through policies and programs

Overall, governments in the Asian-Oceanian region contribute towards talent development via policies and programs. A significant majority (7 in 10) respondents agree with the effectiveness of initiatives by their governments.

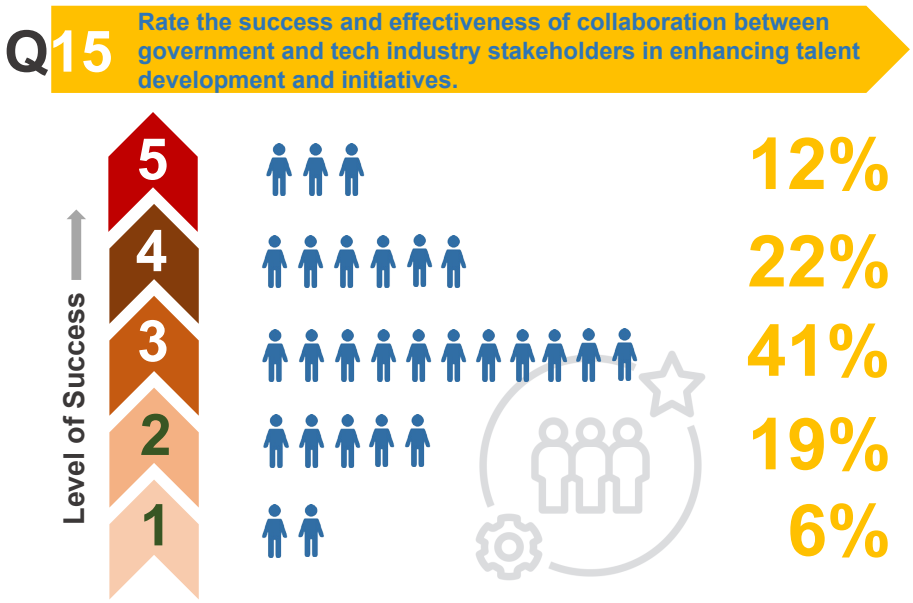
This confidence appears to be higher in nascent tech economies, followed closely by those in advanced economies. In comparison, companies in emerging tech economies are less convinced by the efforts of their respective governments, with 3 out of 5 giving a rating of below 3.



Government investment on education, training is key to tech talent pipeline

Survey participants are generally grateful for government investments in educational programs and training initiatives to churn out sufficient talent for the tech industry. Some 7 in 10 respondents rate the impact of investment at level 3 or higher.

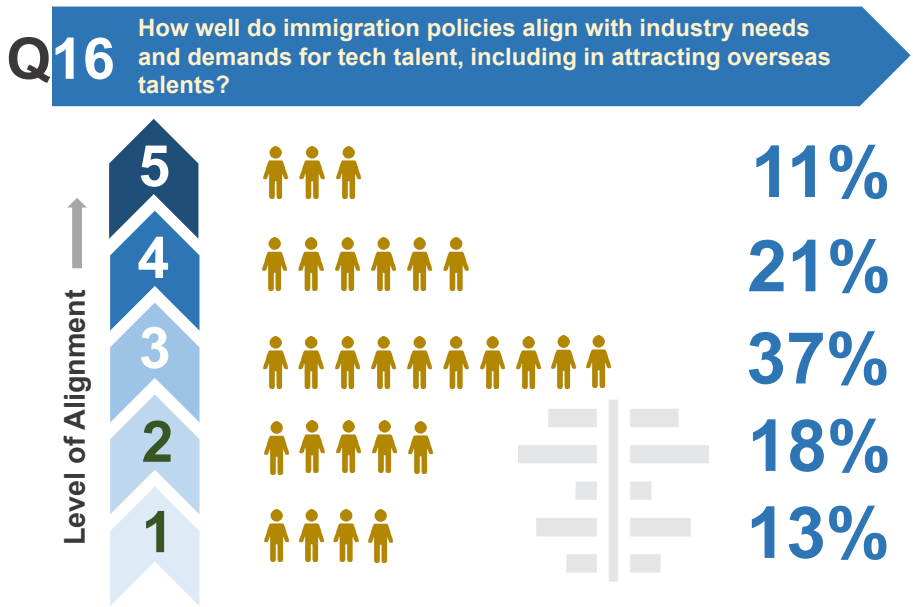
However, those in emerging tech economies are less assured over the effectiveness of such investments as compared to the advanced and nascent economies. This would appear to indicate that government investments in these areas may be focused on increasingly obsolete skill sets.



Collaboration between governments and tech industries are effective

Collaboration between governments and tech industries have been effective in improving talent development. Almost three quarters of respondents rate this effectiveness at level 3 or higher with a substantial portion perceiving the success rate as moderate.

Similar to the previous questions, companies in emerging tech economies seem to be less positive in their assessment of government-industry collaboration. Again, the likely cause of this lower confidence could be their perception that government efforts lag behind the pace of tech evolution.



Immigration policies need improvement to attract foreign talent

Survey participants were somewhat ambivalent as to the effectiveness of immigration policies in helping to attract foreign talents. Just as many respondents gave a score in the 'mildly' as the 'very' category.

Qualitative Perspectives

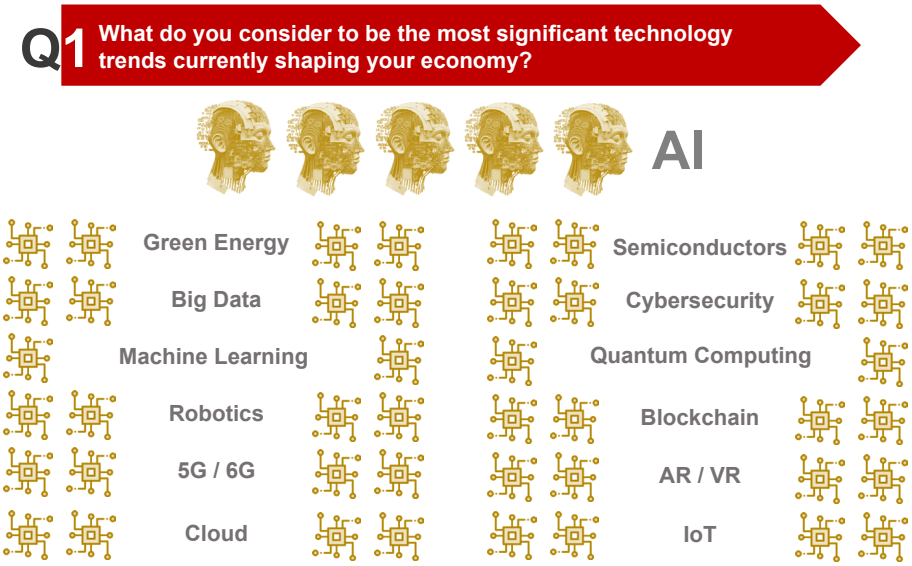
The growing demand for AI and data science competencies highlights a significant shift in workforce needs, making these skills increasingly sought after. Emerging technologies are not only enhancing but also expediting talent recruitment processes, allowing organizations to quickly identify and onboard skilled professionals.

In response to these changes, talent development and training programs are becoming more bespoke, tailored to the specific demands of the tech industry. Governments and the ICT sector are actively addressing skill gaps, recognizing that effective talent acquisition and development will increasingly be driven by AI.

To prepare for this evolving technological landscape, educational curricula are being modified to reflect the latest advancements. Universities are prioritizing learning through exposure to real-world industry experience, which enhances students' practical skills and readiness for the workforce.

Industry experts are playing a crucial role in shaping programs and mentoring emerging talents, while governmental strategies and funding are vital to support these initiatives. Despite these efforts, challenges persist in talent development across the region, underscoring the need for continued innovation and collaboration.

The following perspectives are is derived from written submissions by ASOCIO member economies to a set of 16 interview questions.



KOREA: "Artificial intelligence stands out as the most crucial technology. It is expected to rise as a core trend in industries and businesses through the development of integrated products and services incorporating AI as well as enhancements to corporate management and productivity using AI technologies."

All eyes are locked on AI

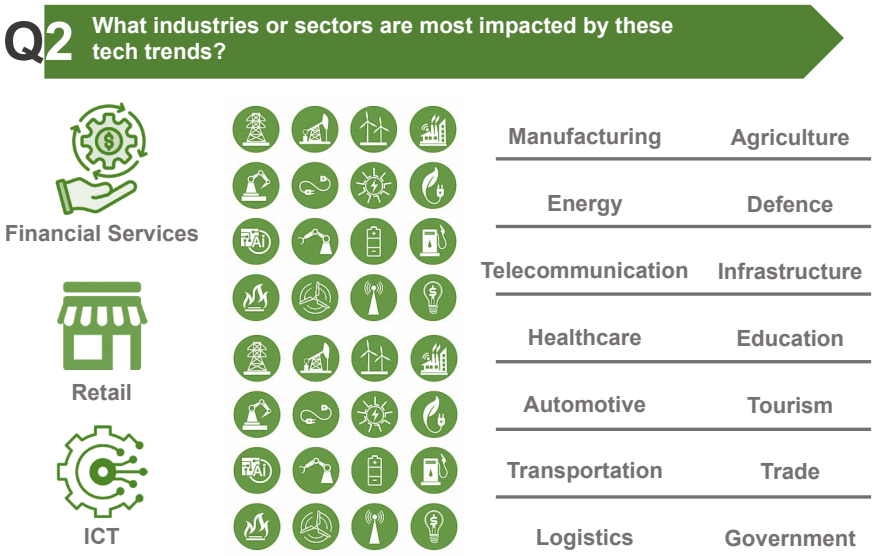
Not surprisingly, AI is on everyone's eyes and lips. Interview respondents universally cited AI as the defining tech that is already shaping most activities cutting across the business, industry, social and government sectors.

Related tech such as machine learning and robotics are also seen as game-changing technologies by ASOCIO members across the region, irrespective of the maturity of their tech industries and economies.

At the same time, the development of green energy including decarbonization technologies in response to the increasingly-urgent fight against climate change is poised to blossom, particularly among advanced and emerging tech economies.

AUSTRALIA: "Tech has a strong role in the decarbonization of the economy."

TAIWAN: "The tech trends are driving innovation and growth across a wide spectrum of industries in Taiwan, from traditional sectors like manufacturing to emerging fields like AI and green technology."

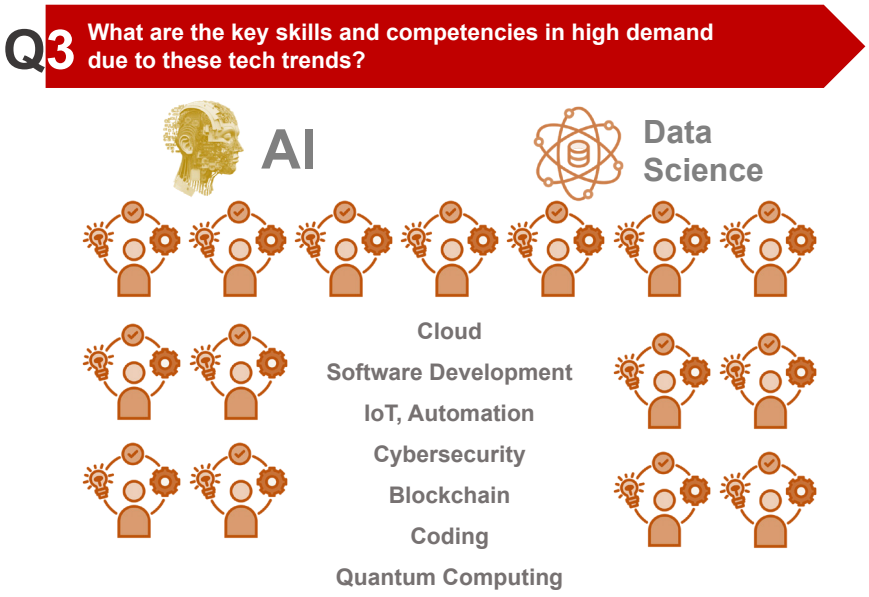


Emerging tech will impact all industries

While the latest technologies are already disrupting operations across all industries, they have the most profound impact on financial services, retail, and information & communication technologies (ICT), according to interview respondents.

Manufacturing-led economies are also pivoting towards AI-powered robotics and data-driven automation to improve productivity. The notable industry absentees include construction as well as oil & gas.

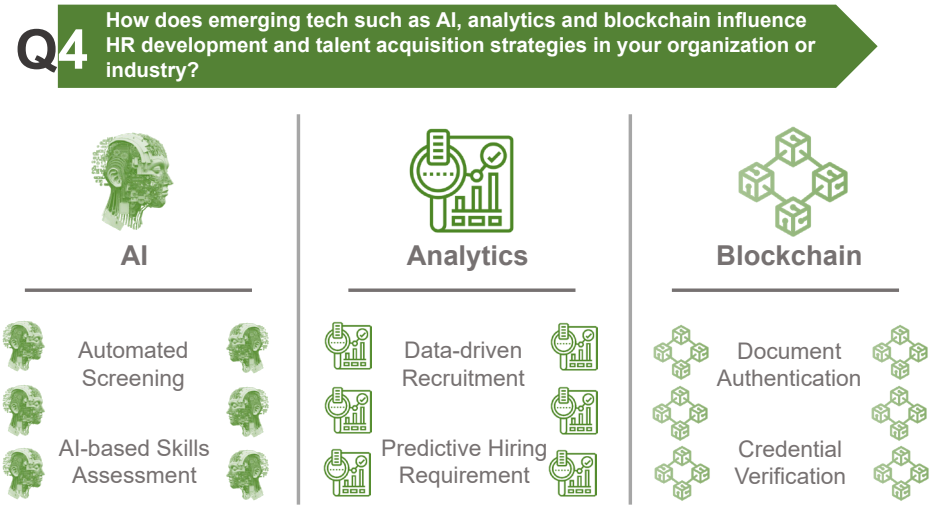
MALAYSIA: "Top of the list is AI. Talents skilled in AI have the opportunity to increase their salaries by more than 40%."



AI and data science competencies are greatly sought after

In tandem with the rise of AI as a principal enabler, employers are increasingly trolling for talents with competencies in AI and its precursor of data science. This demand is evident among interview respondents from all categories of tech economies.

Capabilities in quantum computing is also in demand, particularly among advanced tech economies while skills in blockchain and automation appear to be just as desired as more conventional digital competencies such as software development, coding and cybersecurity.

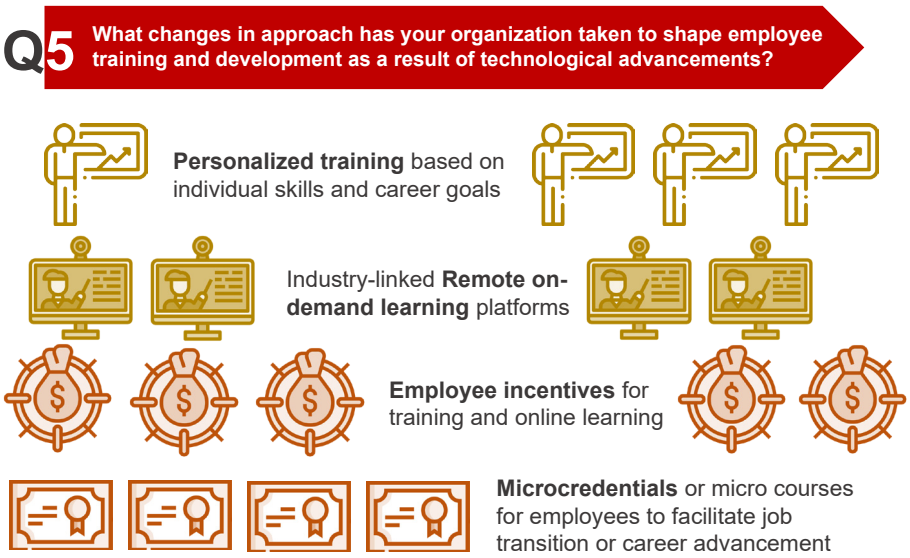


SRI LANKA: "Analytics are used to identify talent trends, streamline recruitment processes and improve candidate matching. This shortens the hiring process and raises the calibre of new personnel."

Emerging tech enhances and expedites talent recruitment

The incorporation and integration of AI, data analytics and blockchain to talent acquisition is raising the efficiency and effectiveness of companies to hire the right people with the requisite competencies for their jobs.

For example, AI can perform processes such as screening and assessments while analytics can outline the recruitment requirements and blockchain can conduct authentication and verification processes.



BHUTAN: "Companies are turning to Personalized Learning Paths, where employees are provided with different online training so that they can learn as per the requirements of their job scope."

Talent development and training are becoming bespoke

Instead of the previous 'one-size-fits-all' approach to talent development, companies are now personalizing training for their employees in response to job disruption and displacement caused by the deployment of emerging tech.

The majority of interview respondents suggest that bespoke training tailored to individual competencies and ambitions can also be facilitated via other tech-driven changes such as remote learning and microcredentials or micro courses.

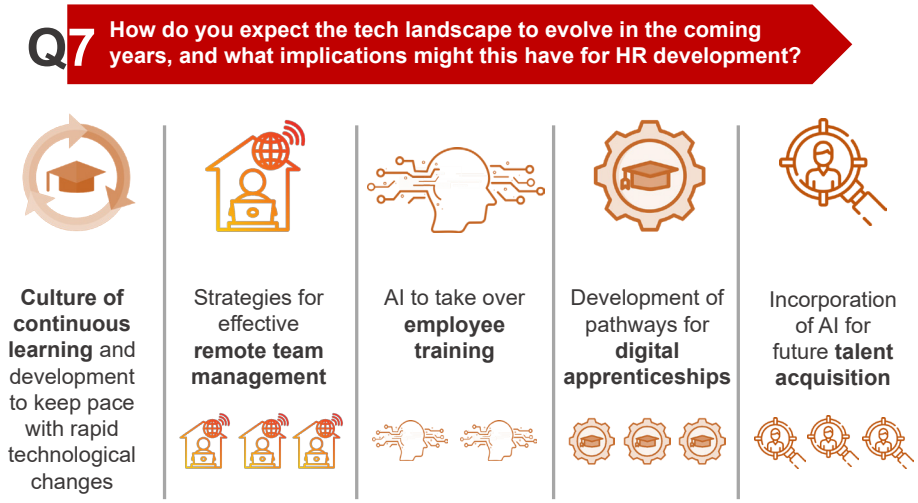
JAPAN: "With reskilling as one of the policy pillars, the government is offering numerous knowledge acquisition programs including ones aligned with current technological trends. JISA (Japan Information Industry Association) also provides those programs to member companies."

Governments and ICT industry are addressing skill gaps

Governments and industry associations are increasing the level of collaboration to reduce the competency void carved out by the latest tech trends such as AI, cloud computing and growing complexity of cybersecurity.

Actions and measures across the region include certification programs, industry workshops, mentoring by industry experts as well as an infusion of funding for training coupled with activities to attract new talents via events such as hackathons.

TAIWAN: "HR will need to foster a culture of continuous learning and development to keep pace with rapid technological changes. This includes providing access to ongoing training and upskilling opportunities."



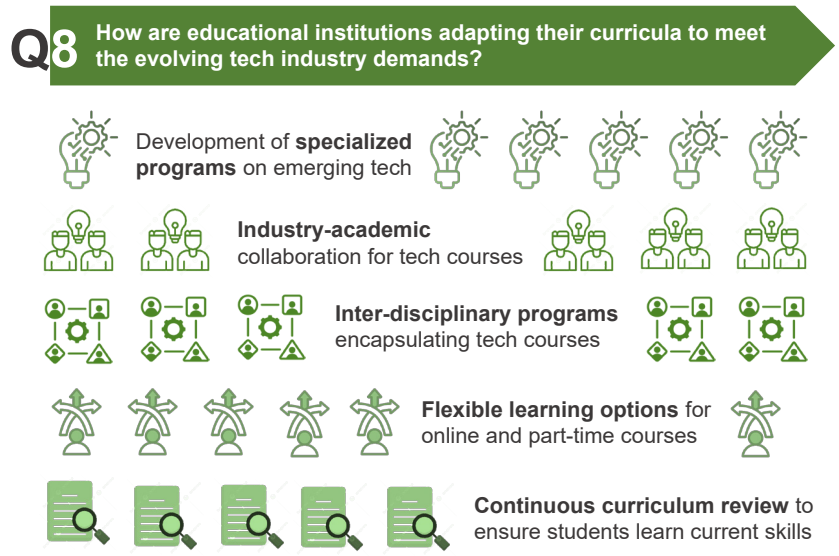
Talent acquisition and development will be driven by AI

Interview respondents expect technologies such as AI to progressively perform various functions for talent acquisition and development. They forsee AI to carry out tasks such as evaluation of prospective candidates for talent acquisition and to develop suitable training courses for employees.

Other changes catalyzed by the latest tech trends include the need for remote management strategies and the emergence of pathways for digital apprenticeships.

Phnom Penh, Cambodia. Photo courtesy of freepik.com

Seoul, Korea. Photo courtesy of freepik.com

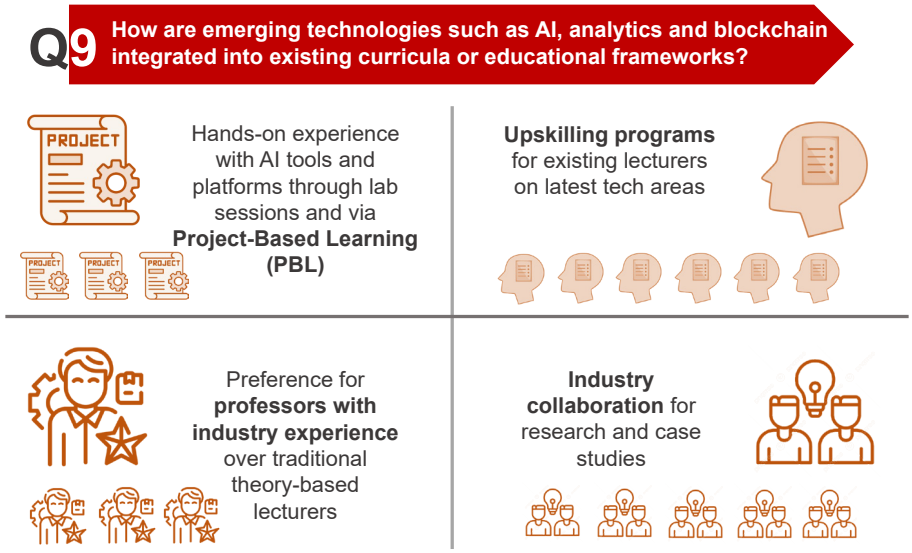


Education curricula are being modified to respond to evolving tech

While educational institutions in advanced tech economies have responded swiftly to rapid changes in the tech landscape, their counterparts in emerging and nascent economies appear to have lagged in reaction.

Nevertheless, higher learning establishments across the region are now moving to review the relevancy of their curricula on a consistent basis and where deemed necessary, introduce new and specialized programs through flexible online or part-time courses.

JAPAN: "At the university level, programs directly connected to current business needs are being created through collaboration with companies to develop immediately-deployable talent."



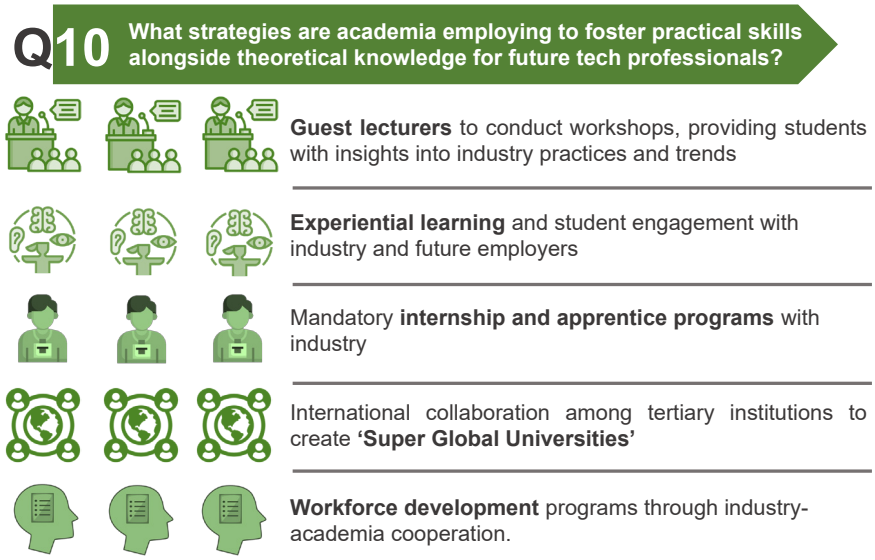
Universities are prioritizing learning through exposure to industry experience

Emerging tech are increasingly integrated into existing education curricula through various innovative approaches. Many institutions now offer hands-on experience with AI tools and platforms during lab sessions and cultivate practical skills through Project-Based Learning (PBL).

In addition, there is a growing preference for professors who have industry experience as their insights provide a more relevant and applied understanding of these technologies compared to traditional theory-based teaching. To support this transition, many institutions are implementing upskilling programs for existing lecturers.

KOREA: "In rapidly evolving fields such as AI and blockchain research, there is an increasing trend of appointing professors who have worked in industries rather than following the traditional path of appointing professors with a doctoral degree. This new cohort of young professors develop curricula that reflect practical experiences from the industry."

SRI LANKA: "Some universities and colleges are implementing peer review systems where students assess each other's work and provide practical feedback. They also offer virtual labs where students can conduct experiments and practice skills remotely."



Educational institutions use a broad-based approach to nurture practical skills

Educational institutions, particularly in advanced tech economies, are employing a variety of strategies to nurture practical skills alongside theoretical knowledge for future tech professionals, according to interview respondents.

They include guest lecturers to conduct workshops, offering students valuable insights into current industry practices and trends. Meanwhile, experiential learning opportunities are provided to encourage student engagement with industry and future employers.

Some institutions in emerging tech economies are implementing mandatory internship and apprenticeship programs, ensuring students gain hands-on experience while building professional networks.

THAILAND: "Chulalongkorn University and others have developed sandbox programs that involve collaboration in terms of teaching and internship."

AUSTRALIA: "AIIA (Australian Information Industry Association) has partnered with Queensland State Government to develop and deliver over 2,600 course placements for microcredentials over the last 18 months."

Academia is ramping up collaboration with industry for talent development

Collaborations between educational institutions and tech industries are increasingly focused on talent development through a variety of innovative partnerships. One prominent approach is joint research projects, where universities and tech companies collaborate on cutting-edge technologies, providing students with hands-on experience in real-world innovations.

Additionally, many tech companies have structured internship and co-op programs in partnership with schools, enabling students to gain practical experience while earning academic credit. These initiatives exemplify efforts to bridge the gap between academia and industry.

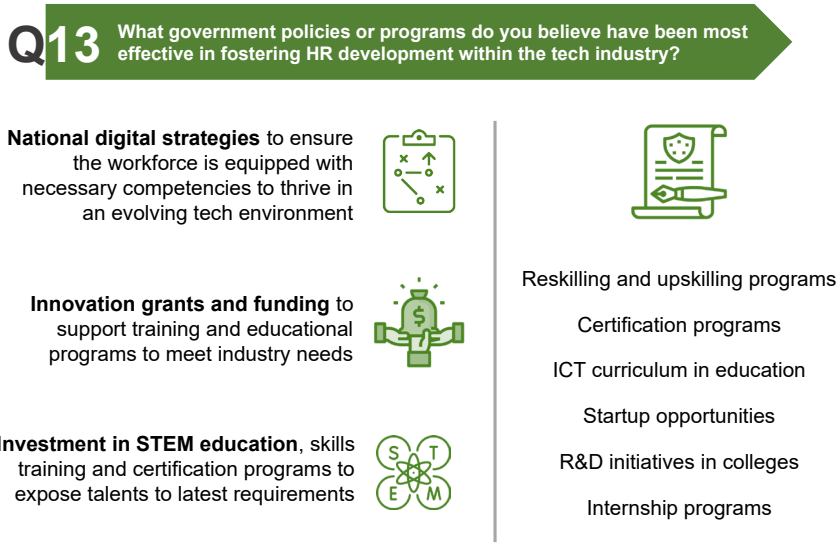
Similarly, partnerships with major corporations have led to the establishment of specialized contract departments at various universities, which helps ensure that students receive targeted training aligned with industry needs.

TAIWAN: "Industry experts design and deliver professional development programs and certification courses, ensuring that the content is up-to-date with industry standards and practices."

Industry experts play a role in developing programs and mentoring talents

Industry experts, especially in advanced and emerging tech economies, play a crucial role in shaping and influencing educational programs to align with the current and future needs of the tech workforce, according to interview respondents.

They contribute to the design and development of professional programs and certification courses, ensuring that curricula reflect the latest industry trends, standards and practices. Through mentoring initiatives, these experts also guide and inspire students, helping to cultivate the next generation of core technology talents.



MALAYSIA: "We have the HRD (Human Resource Development) program, where employers contribute to the fund, and in return, they can send their employees for these programs."

JAPAN: "The government is currently implementing various programs aimed at achieving the goal of developing 2.3 million digital promotion talents over five years."

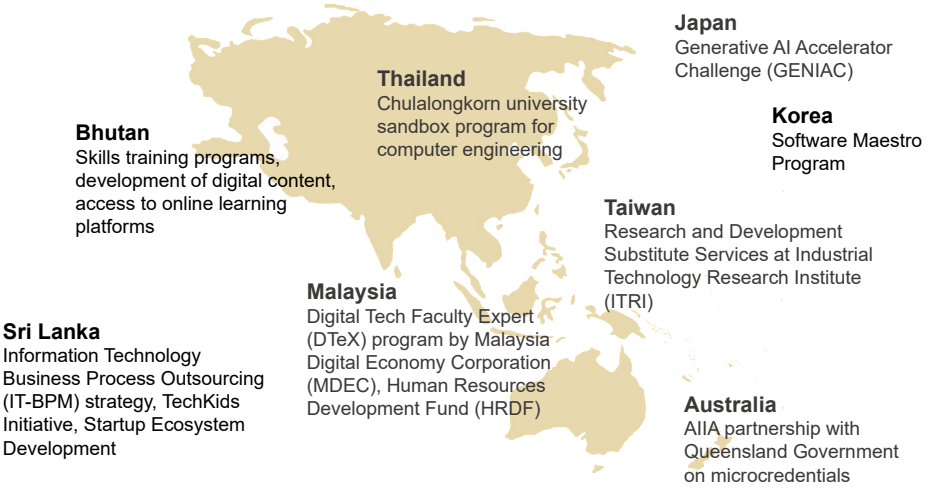
Governmental strategies and funding are key to efforts on talent development

Several government policies and programs have proven effective in talent development across the region. National digital strategies play a pivotal role by ensuring the workforce is equipped with the necessary competencies to thrive in an ever-evolving tech landscape.

At the same time, innovation grants and funding support targeted training and educational programs, aligning skill development with industry needs. Additionally, significant investments in STEM education, skills training and certification programs expose emerging talents to the latest technological requirements.

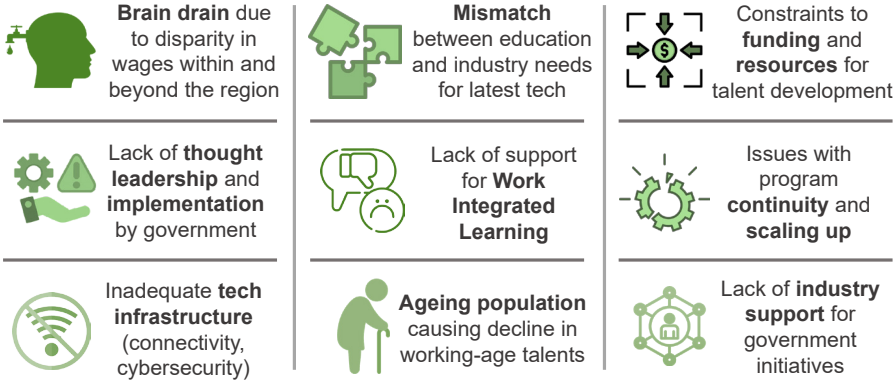
A quicktake of successful government-industry collaboration in Asia-Oceania

Q14 Share examples of successful collaborations (initiatives and investment between the government and tech industry stakeholders) to enhance HR development.



KOREA: "In critical fields like AI, there is significant emigration of advanced talents to countries such as the United States, making it challenging even to secure professors capable of teaching advanced technologies within Korea."

Q15 What are the key challenges or limitations hindering government initiatives aimed at promoting HR development in the tech industry?



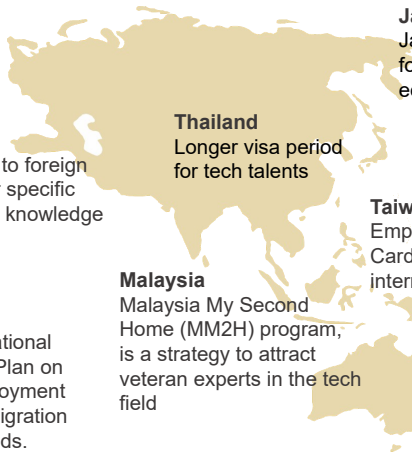
Challenges continue to hamper talent development in the region

Key challenges and limitations hindering government initiatives aimed at promoting talent development in the tech industry include a significant brain drain, where professionals seek better wages and opportunities outside their home economy. While this phenomenon is more prevalent in emerging tech economies, the issue is also faced by some advanced tech economies.

In addition, there is often a mismatch between educational offerings and the evolving needs of the industry, particularly regarding the latest technological skills. Constraints in funding and resources further complicate talent development efforts, limiting the scope and reach of programs. Further, a lack of thought leadership and effective implementation by government bodies can lead to fragmented initiatives that fail to make a lasting impact.

Immigration policies at a glance

Q16 What are your current immigration policies regarding the tech labour force and what additions or amendments do you propose to attract overseas talent?



Japan
Japan's strict immigration limits foreign workers, affecting economic growth potential

Thailand
Longer visa period for tech talents

Bhutan
Invitations to foreign experts for specific projects or knowledge transfer.

Korea
A pilot program, 'Digital Nomad Visa' allows professionals to travel and work remotely

Taiwan
Employment Gold Card to attract the international talents

Malaysia
Malaysia My Second Home (MM2H) program, is a strategy to attract veteran experts in the tech field

Sri Lanka
The 2023-2027 National Policy and Action Plan on Migration for Employment addresses labor migration and workforce needs.

Australia
Reducing international students will harm Australia's tech workforce, increasing offshoring

Sindh, Pakistan. Photo courtesy of freepik.com

TECH DEVELOPMENT: **Comparative Landscape Study**

Introduction

The Asia-Oceania region is home to diverse economies with rapidly evolving technology sectors. ASOCIO represents a spectrum of countries, each with unique strengths and challenges in the tech industry.

This chapter delves into the comparative analysis of 23 ASOCIO member economies based on their tech industry criteria. It highlights their respective industry maturities and explores opportunities for collaboration.

The assessment of each member economy according to their tech industry capabilities is based on desktop research. By understanding each economy's strengths and challenges, the study serves to identify areas where collaboration and collective efforts can enhance regional tech innovation and competitiveness. In addition, we have outlined proposed strategies to leverage regional synergies in order to foster growth and sustainability in the tech sector across the region.

This comparative analysis evaluates the tech industries of member economies based on several criteria including digital infrastructure, government support for innovation, industry maturity, talent pool and educational systems. The study categorizes these economies into tiers based on their tech industry maturity, ranging from leaders with advanced ecosystems to emerging markets with growth potential.

Collaboration Opportunities

Despite their diversity, Asia-Oceania economies share common opportunities for collaboration in tech development:

Knowledge Sharing and Best Practices

Leading economies such as Singapore, South Korea and Japan can share best practices in fostering innovation ecosystems, supporting startups and developing digital infrastructure. This knowledge exchange can benefit emerging markets looking to strengthen their tech industries.

Regional Integration

Initiatives to harmonize regulations, standards and digital policies can facilitate smoother cross-border operations for tech firms and startups. Platforms for regional collaboration such as joint research projects and tech summits can enhance networking and business opportunities.

Talent Development

Collaborative efforts in promoting STEM education, upskilling programs and cross-border talent exchanges can address skill shortages and enhance the regional talent pool. This includes initiatives to support diversity and inclusion in the tech workforce across the region.

Investment and Trade

Facilitating investment flows and promoting trade partnerships within ASOCIO can stimulate growth in tech sectors such as fintech, e-commerce and cybersecurity. Enhanced market access and reduced trade barriers can encourage tech startups to scale regionally.

Infrastructure Development

Collaborative projects to improve digital infrastructure including broadband connectivity and 5G networks can benefit all member economies. Infrastructure sharing agreements and joint investments in tech parks or innovation hubs can lower costs and foster innovation.

Singapore. Photo courtesy of freepik.com

Tech Landscape in ASOCIO Member Economies

The following member economies are ranked based on the tech industry criteria:

SINGAPORE
Singapore ranks highest due to its advanced digital infrastructure, strong government support for innovation, mature tech industry and robust talent pool. The country's strategic location, business-friendly environment and well-developed education system contribute to its leadership in the tech sector.

SOUTH KOREA
South Korea is known for its highly skilled workforce, particularly in areas like semiconductor manufacturing, electronics and telecommunications. The government invests heavily in R&D and provides support for tech startups and innovation hubs.

JAPAN
Japan has a mature tech industry with strengths in electronics, automotive technology, robotics and advanced manufacturing. The country's strong academic institutions, innovation culture and government initiatives support technological advancements and talent development.

TAIWAN
Taiwan is a global leader in semiconductor manufacturing, electronics and ICT hardware. The country's robust tech ecosystem, government support for innovation, and collaboration between industry and academia contribute to its competitiveness in the tech industry.

AUSTRALIA
Australia has a growing tech industry with strengths in sectors such as cybersecurity, fintech and advanced manufacturing. The country's research capabilities, supportive government policies and quality of life attract talent and investment in the tech sector.

NEW ZEALAND
New Zealand ranks high in the region for its innovation-driven tech industry, supportive government policies and high quality of life. The country's strengths lie in areas such as agritech, biotech and software development, supported by a culture of innovation and entrepreneurship.

MALAYSIA
Malaysia has a fast-growing tech industry with growth potential in areas such as IT services, electronics manufacturing, Global Business Service (GBS) and fintech. The government's Digital Malaysia initiative and efforts to enhance STEM education aim to support the development of the tech sector.

HONG KONG
Hong Kong has a mature tech industry with strengths in fintech, telecommunications and software development. The government's support for innovation and entrepreneurship, coupled with its strategic location and business-friendly environment, contribute to the growth of the tech sector.

MACAO
Although Macao has a small tech industry, its business activities are powered by advanced digital tech. Beyond usage and application, Macao is also developing a high-tech industry and become an international innovation and technology hub.

THAILAND
Thailand's tech industry is evolving, with a focus on digital transformation, e-commerce and automotive technology. The government promotes innovation through initiatives like the Thailand 4.0 policy and investment in tech infrastructure.

VIETNAM
Vietnam's tech industry is growing rapidly, driven by a young and tech-savvy population and government support for startups and investment in tech infrastructure. The country's focus on software development, outsourcing and electronics manufacturing contributes to its emergence as a tech hub in Southeast Asia.

INDIA
India has a massive talent pool and a strong presence in software development, IT services and outsourcing.
However, challenges such as infrastructure gaps, regulatory complexities and skill mismatches impact the maturity of the tech industry.

INDONESIA
Indonesia has a large and diverse tech market, with opportunities in e-commerce, fintech and digital services. The government's initiatives to enhance digital infrastructure and promote entrepreneurship are driving the expansion of the tech industry.

PHILIPPINES
The Philippines has a growing tech industry, particularly in business process outsourcing (BPO), software development and gaming. The government's efforts to enhance ICT education and upgrade digital infrastructure are designed to foster the growth of the tech sector.

SRI LANKA
Sri Lanka's tech industry has potential in areas such as software development, IT services and outsourcing. The government's initiatives to promote ICT education and support startups contribute to the growth of the tech sector, but challenges such as brain drain and political instability is affecting industry maturity.

BANGLADESH
Bangladesh's tech industry is in its early stages of development, with a focus on software development, outsourcing and IT services. The government's Digital Bangladesh initiative aims to promote digital inclusion and support the growth of the tech sector.

PAKISTAN
Pakistan's tech industry is growing, with strengths in software development, IT services and outsourcing. While the government's initiatives to enhance digital infrastructure and promote entrepreneurship are driving growth in the tech sector, challenges like political instability and security concerns hinder the industry's maturity.

CAMBODIA, LAOS, MYANMAR, NEPAL, MONGOLIA
These countries have nascent tech industries with growth potential, but face challenges such as limited infrastructure, talent shortages and regulatory barriers. Efforts to improve digital infrastructure, invest in education and attract investment will be crucial for their tech sectors to develop further.

BHUTAN
Bhutan has a smaller tech industry compared to other economies in the region, having limited infrastructure and talent pools. While they may have niche opportunities in certain sectors, they rank lower overall in terms of tech industry maturity and government support.

Summing up, ASOCIO member economies exhibit a spectrum of tech industry maturity levels and face diverse challenges. However, by capitalizing on their respective strengths and leveraging regional collaboration opportunities, these economies can collectively enhance their global competitiveness in the tech sector.

A concerted effort towards knowledge sharing, talent development, infrastructure improvement and policy alignment will be instrumental in cultivating a thriving tech ecosystem across Asia-Oceania.

This chapter sets the stage for deeper exploration into specific strategies and initiatives that can propel ASOCIO member economies towards sustainable tech-driven growth, ensuring they remain at the forefront of global innovation in the years to come.

Sydney, Australia. Photo courtesy of freepik.com

TACTICAL PLANS

Based on the comparative tech landscape study of ASOCIO member economies and the identified collaboration opportunities, the following presents the proposed tactical action plans that ASOCIO can deploy in the short and medium terms:

Short-Term Plans

Knowledge Sharing Initiatives

Action Plan
- Facilitate virtual workshops, webinars and forums where leading economies (Singapore, South Korea, Japan) share best practices in fostering innovation ecosystems and supporting startups.

Objective
- Enable emerging markets to learn and adopt effective strategies quickly, accelerating their tech industry maturity.

Regional Integration Platforms

Action Plan
- Organize regional tech summits and conferences focused on harmonizing regulations and digital policies.

Objective
- Foster collaboration and networking among tech firms, policymakers and regulators to streamline cross-border operations and reduce barriers to market entry.

Talent Development Programs:

Action Plan
- Establish a cross-border talent exchange program within ASOCIO member economies.

Objective
- Promote STEM education and upskilling initiatives, facilitating the development of a diverse and skilled tech workforce across the region.

Investment Facilitation

Action Plan
- Develop an online platform or directory showcasing investment opportunities in tech sectors across ASOCIO economies.

Objective
- Attract investors and promote trade partnerships, particularly in fintech, e-commerce and cybersecurity, to stimulate growth and innovation.

Infrastructure Enhancement Projects

Action Plan
- Facilitate joint projects for improving digital infrastructure, such as broadband connectivity and 5G networks.

Objective
- Lower infrastructure costs and create a conducive environment for tech startups and innovation hubs to thrive.

Medium-Term Plans

Policy Alignment Initiatives

Action Plan
- Establish a task force or working group focused on aligning digital policies and regulations across ASOCIO member economies.

Objective
- Develop standardized frameworks that promote innovation, data privacy and cybersecurity while ensuring regulatory compliance across borders.

Collaborative R&D

Action Plan
- Launch joint R&D projects in emerging tech fields (AI, IoT, blockchain) involving multiple ASOCIO countries.

Objective
- Drive breakthrough innovations and enhance the global competitiveness of the region in cutting-edge technologies.

Tech Diplomacy and External Relations

Action Plan
- Strengthen partnerships with international tech organizations and alliances outside the ASOCIO region.

Objective
- Leverage global networks to attract global tech giants, promote cross-regional collaborations and enhance the influence of ASOCIO on the global tech stage.

Sustainability and Inclusion Initiatives

Action Plan
- Launch initiatives promoting sustainable tech practices and diversity in tech workplaces across ASOCIO member economies.

Objective
- Ensure long-term growth by integrating environmental sustainability and inclusive practices into the regional tech ecosystem.

Evaluation and Feedback Mechanisms

Action Plan
- Implement regular surveys and feedback mechanisms among ASOCIO members to assess the impact of collaborative initiatives.

Objective
- Continuously refine strategies based on data-driven insights and member feedback to optimize outcomes and address emerging challenges.

By strategically implementing these short and medium-term action plans, ASOCIO can effectively harness the identified collaboration opportunities to catalyze sustainable tech-driven growth across Asia-Oceania. These initiatives aim to capitalize on regional strengths, address common challenges and enhance collective competitiveness in the global tech landscape.

Taipei, Taiwan. Photo courtesy of freepik.com

Thimphu, Bhutan. Photo courtesy of freepik.com

IMPLEMENTATION PLANS

Based on the proposed tactical plan, the following provide greater insights on how the proposed plan can be executed. For practicality, these plans are categorized into short and medium plans.

Short-Term Plans

Knowledge Sharing Initiatives

Activities
- Organize virtual workshops, webinars and forums involving leading economies such as Singapore, South Korea and Japan.
- Invite experts to share best practices in fostering innovation ecosystems and supporting startups.

Implementation Steps
- Identify key topics and speakers for initial workshops/webinars.
- Set up an online platform for registration and session management.
- Promote events through ASOCIO channels and member networks.

Timeline
- Initiate within two months; conduct sessions quarterly.

Regional Integration Platforms

Activities
- Plan and execute regional tech summits and conferences focusing on harmonizing regulations and digital policies.
- Invite participation from tech firms, policymakers and regulators across ASOCIO member economies.

Implementation Steps:
- Form a planning committee to outline event agendas and speakers.
- Secure venues and logistical support for physical and virtual attendees.
- Develop post-event reports and recommendations for policy harmonization.

Timeline
- Begin planning immediately; first summit within six months.

Talent Development Programs

Activities
- Launch a cross-border talent exchange program within ASOCIO.
- Facilitate STEM education initiatives and upskilling programs.

Implementation Steps
- Establish partnerships with educational institutions and industry stakeholders.
- Define eligibility criteria and application processes for participants.
- Monitor program effectiveness and gather feedback for continuous improvement.

Timeline
- Program development within three months; pilot launch within one year.

Investment Facilitation

Activities
- Develop an online platform showcasing tech investment opportunities across ASOCIO economies.
- Promote sectors like fintech, e-commerce and cybersecurity to potential investors.

Implementation Steps
- Design and launch the investment platform with searchable features.
- Conduct outreach campaigns targeting global investors and venture capitalists.
- Monitor platform usage and update content regularly to reflect current opportunities.

Timeline
- Platform development within four months; ongoing updates as needed.

Infrastructure Enhancement Projects

Activities
- Initiate joint projects to improve digital infrastructure such as broadband and 5G networks.
- Foster an environment conducive to tech startups and innovation hubs.

Implementation Steps
- Identify priority areas for infrastructure improvement based on member economies' needs.
- Facilitate collaborations between private sector firms and government bodies.
- Monitor project milestones and impact on local tech ecosystems.

Timeline
- Project planning within three months; initial rollout within nine months.

Medium-Term Plans

Policy Alignment Initiatives

Activities
- Form a task force or working group to align digital policies and regulations across ASOCIO countries.
- Develop standardized frameworks for innovation, data privacy and cybersecurity.

Implementation Steps
- Establish a timeline for policy review and framework development.
- Engage legal experts and policymakers to draft harmonized policies.
- Conduct workshops and consultations to gather stakeholder feedback.

Timeline
- Task force establishment within six months; framework proposal within 1.5 years.

Collaborative R&D

Activities
- Launch joint R&D projects in emerging technologies like AI, IoT and blockchain.
- Involve multiple ASOCIO countries to drive innovation and competitiveness.

Implementation Steps
- Identify R&D focus areas and funding mechanisms.
- Facilitate partnerships between research institutions and tech companies.
- Monitor project outcomes and facilitate knowledge sharing among participants.

Timeline
- Project initiation within eight months; ongoing projects with phased deliverables.

Tech Diplomacy and External Relations

Activities
- Strengthen partnerships with global tech organizations and alliances outside ASOCIO.
- Promote cross-regional collaborations and attract global tech giants.

Implementation Steps
- Identify strategic alliances and potential areas for collaboration.
- Initiate dialogue and partnership discussions with key stakeholders.
- Showcase ASOCIO's capabilities and contributions on global tech platforms.

Timeline
- Partnership outreach within six months; strategic alliances within one year.

Sustainability and Inclusion Initiatives

Activities
- Launch initiatives promoting sustainable tech practices and diversity in tech workplaces.

Implementation Steps
- Develop programs to educate and incentivize sustainable practices.
- Advocate for diversity and inclusion policies among member economies.
- Monitor progress through metrics such as participation rates and impact assessments.

Timeline
- Initiative launch within four months; ongoing programs with annual reviews.

Evaluation and Feedback Mechanisms

Activities
- Implement regular surveys and feedback mechanisms among ASOCIO members.
- Assess the impact of collaborative initiatives and refine strategies based on insights.

Implementation Steps
- Design survey instruments to capture quantitative and qualitative data.
- Analyze results and generate reports for leadership and stakeholders.
- Conduct periodic reviews to track progress and adapt strategies as needed.

Timeline
- Survey implementation within three months; bi-annual feedback cycles.

By systematically implementing these short and medium-term activities, ASOCIO can enhance collaboration among member economies, foster innovation and strengthen the collective competitiveness in the global tech landscape. Each plan is designed to address specific challenges and leverage regional strengths effectively.

Tokyo, Japan. Photo courtesy of freepik.com

REGIONAL BENCHMARKING: **Tech Industry Salaries by Economy**

Benchmarking technology salaries at all levels is a valuable tool for economies to remain competitive, foster innovation and make informed policy decisions in a rapidly-evolving digital landscape.

Understanding salary trends and patterns place a nation in a better position to attract and retain top tech talent. Competitive salaries are often a key factor for professionals when choosing where to work.

A nation's ability to compete in the global tech industry depends on its cost-effectiveness. Benchmarking salaries also helps assess how competitive a country is in terms of labor costs compared to other tech hubs.

Governments can use this data to formulate policies that are conducive and support their technology sectors. For example, they can offer tax incentives or grants to companies to bridge salary gaps.

Knowing the salary levels can influence educational tand training programs, governments can invest in areas where there is a shortage of skilled workers to meet industry demands.

Salary data can help and support broader economic planning. High-tech salaries can stimulate local economies and drive innovation, making them an essential part of economic development strategies.

By understanding how their tech salaries compare globally, economies can strategically position themselves to attract international tech companies and investors including in attracting foreign direct investments (FDI).

Methodology

For this report, we leveraged data on tech industry salaries in 19 economies from Payscale, which publishes earned salaries provided by employees or via surveys and management records.

We then curated salaries from 11 digital areas (See Box A), 61 digital jobs (Box B) and by three position levels (Box C). Box C provides the segmentation of 61 selected jobs into 34 technical jobs, 18 managerial positions and 9 C-Level positions. Box D provides overview of analytic framework.

Box A: Selection of Digital Aspect

Digital Aspect	No. of Jobs	Digital Aspect	No. of Jobs
Analytics	5	Programming	5
System Architecture	2	Quality Assurance	6
Data	6	Security	2
Database	2	Systems	2
Engineering	11	Technical Support	9
Managerial	11		

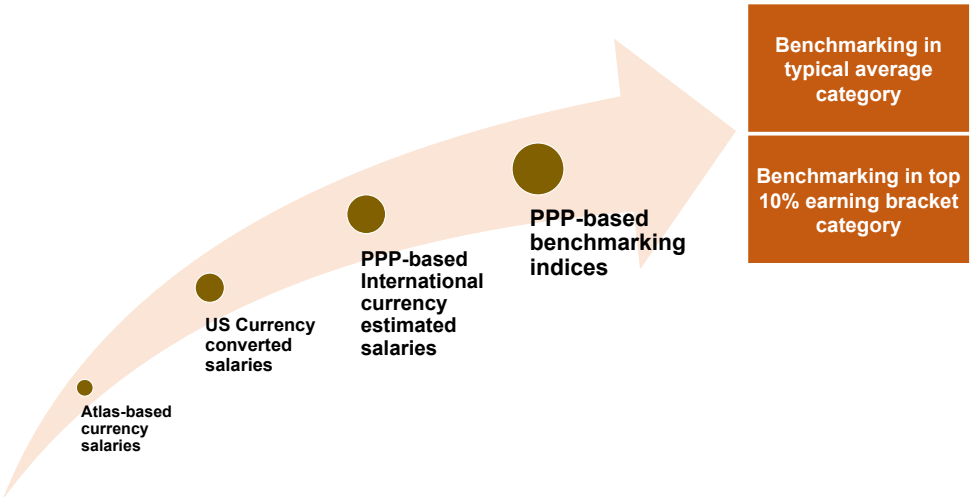
Box B: Selected Digital Jobs

TECHNICAL / OPERATIONAL POSITIONS		
.NET Software Developer / Programmer	Junior Software Engineer	Systems Administrator, Windows Server
Applications Engineer	Network Administrator	Systems Analyst
Business Analyst, IT	Network Engineer	Systems Engineer, IT
Business Intelligence (BI) Analyst	Network Technician	Technical Support Analyst IT
Support Technician Computer / Network / IT	Quality Assurance (QA) Engineer	Technical Support Specialist
Cybersecurity Analyst	Network Security Engineer	Test QA Engineer (Computer Software)
Data Engineer	Software Developer	Data Analyst
Data Scientist	Software Engineer	QA Analyst
Database Administrator (DBA)	Software Engineer / Developer / Programmer	QA Analyst Software
Development Operations (DevOps) Engineer	Solutions Architect	Web Developer
Help Desk Technician	Support Technician, IT	

MANAGERIAL / TACTICAL POSITIONS		
IT Consultant	Senior Business Analyst	Senior Systems Administrator
IT Manager	Senior Data Scientist	Senior Systems Analyst
Project Manager, IT	Senior DBA	Senior Systems Engineer
QA Manager	Senior Project Manager, IT	Senior Web Developer
Data Manager	Senior Software Engineer	Senior Software Engineer/Developer/Programmer
eCommerce Manager	Senior Solutions Architect	Software QA Manager
C-LEVEL / STRATEGIC POSITIONS		
Director of Analytics	Chief Technology Officer	Chief Executive Officer
IT Director	Chief Information Officer	Chief Information Security Officer
Vice President, IT	Chief Operating Officer	Chief Financial Officer

Box C: Three Levels of Positions

Box D: Overview of Analytics Framework



Payscale publishes salary data in Atlas currencies, which are in turn converted to US dollars (USD) and international currency ($PPP) to take into account purchasing power parity (PPP). For meaningful comparisons or benchmarking across economies, $PPP currency is preferred.

The currency exchange rates and conversion factors to $PPP for each of the economy is featured in the table on this page.

Currency Exchange Rates and Conversion Factors to $PPP

Country	Atlas Currency	Exchange Rates Per USD as of 31st August 2024	USD Conversion Factor To $PPP
UNITED STATES	USD	1.0000	1.0000
Singapore	SGD	1.31	0.6491
New Zealand	NZD	1.60	0.9285
Australia	AUD	1.48	1.0298
Hong Kong	HK$	7.80	0.7094
Bangladesh	BDT	119.48	0.3635
Taiwan	TWD	32.01	0.4657
Pakistan	PKR	278.58	0.2480
Malaysia	MYR	4.30	0.3581
Thailand	THB	33.55	0.3342
Indonesia	IDR	15,532.40	0.3268
Philippines	PHP	56.23	0.3453
Japan	JPY	146.21	0.7420
South Korea	KRW	1,337.57	0.6442
India	INR	83.89	0.2851
China	CNY	7.09	0.5923
Sri Lanka	LKR	299.19	0.2329
Vietnam	VND	24,874.94	0.2758
Nepal	NPR	134.17	0.2829

Source: World Bank and IMF

Table 1: **Average Annual Salaries of Tech Industry Professionals in $PPP Currency 2024**

TECHNICAL POSITION		MANAGERIAL POSITION		C-LEVEL POSITION		OVERALL POSITION	
ECONOMY	$PPP CURRENCY	ECONOMY	$PPP CURRENCY	ECONOMY	$PPP CURRENCY	ECONOMY	$PPP CURRENCY
UNITED STATES	76,538	Korea	123,841	Hong Kong	260,712	Korea	107,969
Korea	75,017	UNITED STATES	103,775	Thailand	256,027	Singapore	98,718
Singapore	62,220	Singapore	101,909	Singapore	233,214	Hong Kong	97,898
China	58,902	Thailand	99,190	China	227,503	UNITED STATES	96,481
Hong Kong	55,138	Hong Kong	97,324	Korea	205,304	Thailand	91,478
Australia	51,678	China	76,549	Malaysia	158,370	China	88,550
Taiwan	48,486	Australia	74,964	UNITED STATES	156,855	Australia	68,179
New Zealand	48,449	New Zealand	68,553	India	152,534	Taiwan	67,569
Thailand	43,669	Taiwan	67,278	Taiwan	140,437	New Zealand	62,484
Japan	40,652	Malaysia	65,905	Japan	118,675	Malaysia	61,330
Malaysia	33,271	Japan	65,823	Australia	116,609	Japan	59,577
India	25,426	India	58,257	Philippines	112,307	India	53,813
Philippines	24,215	Philippines	52,232	New Zealand	103,026	Philippines	45,473
Indonesia	18,269	Indonesia	37,114	Sri Lanka	64,905	Indonesia	28,941
Nepal	12,422	Pakistan	26,529	Pakistan	59,714	Pakistan	23,132
Pakistan	11,670	Sri Lanka	23,773	Indonesia	52,534	Sri Lanka	22,446
Sri Lanka	10,735	Nepal	22,328	Nepal	35,972	Nepal	18,797
Bangladesh	8,909	Bangladesh	20,426	Bangladesh	32,390	Bangladesh	15,716
Vietnam	3,120	Vietnam	5,734	Vietnam	10,174	Vietnam	4,924

Source: Payscale

Benchmarking of Average Salaries

Table 1 features the average annual salaries of tech jobs segmented into three categories of Technical, Managerial and C-Level to derive the Overall average, with the United States (US) highlighted as a reference point.

At the Overall level, Korea tops the list in 2024 with annual salaries 20 times more than Vietnam at the bottom. Expectedly, advanced tech economies from East Asia, Australasia and the United States (US) dominate the landscape for high-paying salaries.

Surprisingly, although Thailand is still considered an emerging tech economy, its overall average salaries exceed those in more advanced economies such as China, Australia, Taiwan and New Zealand.

Hong Kong's position in the top three economies for the Overall category results from considerably-higher salaries paid to C-Level executives in the special administrative region. Average salaries earned by top tier management in Hong Kong is estimated to be 66% higher than counterparts in the US.

Korea and the US heads the lists for Managerial and Technical job positions respectively, followed by mostly advanced tech economies as well as Thailand for Managerial positions.

As reference, Table 2 and Table 3 present the average salaries in USD and respective Atlas currencies.

Ulaanbaatar, Mongolia. Photo courtesy of freepik.com

Table 2: Average Annual Salaries of Tech Industry Professionals in USD 2024

TECHNICAL POSITION		MANAGERIAL POSITION		C-LEVEL POSITION		OVERALL POSITION	
ECONOMY	USD CURRENCY	ECONOMY	USD CURRENCY	ECONOMY	USD CURRENCY	ECONOMY	USD CURRENCY
UNITED STATES	76,538	UNITED STATES	103,775	Hong Kong	184,949	UNITED STATES	96,481
Australia	53,218	Korea	79,778	UNITED STATES	156,855	Australia	70,211
Korea	48,326	Australia	77,198	Singapore	151,390	Korea	69,553
New Zealand	44,983	Hong Kong	69,042	China	134,752	Hong Kong	69,449
Singapore	40,390	Singapore	66,153	Korea	132,255	Singapore	64,082
Hong Kong	39,115	New Zealand	63,649	Australia	120,084	New Zealand	58,014
China	34,888	Japan	48,841	New Zealand	95,656	China	52,449
Japan	30,164	China	45,341	Japan	88,058	Japan	44,207
Taiwan	22,580	Thailand	33,151	Thailand	85,568	Taiwan	31,467
Thailand	14,595	Taiwan	31,331	Taiwan	65,401	Thailand	30,574
Malaysia	11,914	Malaysia	23,599	Malaysia	56,709	Malaysia	21,961
Philippines	8,360	Philippines	18,033	India	43,483	Philippines	15,700
India	7,248	India	16,607	Philippines	38,774	India	15,341
Indonesia	5,970	Indonesia	12,127	Indonesia	17,166	Indonesia	9,457
Nepal	3,514	Bangladesh	7,425	Sri Lanka	15,114	Pakistan	5,738
Bangladesh	3,239	Pakistan	6,580	Pakistan	14,811	Bangladesh	5,713
Pakistan	2,895	Nepal	6,316	Bangladesh	11,775	Nepal	5,317
Sri Lanka	2,500	Sri Lanka	5,536	Nepal	10,175	Sri Lanka	5,227
Vietnam	861	Vietnam	1,582	Vietnam	2,806	Vietnam	1,358

Source: Payscale

Table 3: Average Annual Salaries of Tech Industry Professionals in Atlas Currency 2024

CURRENCY	TECHNICAL POSITION		MANAGERIAL POSITION		C-LEVEL POSITION		OVERALL POSITION	
	ECONOMY	ATLAS CURRENCY	ECONOMY	ATLAS CURRENCY	ECONOMY	ATLAS CURRENCY	ECONOMY	ATLAS CURRENCY
USD	UNITED STATES	76,639	UNITED STATES	103,775	UNITED STATES	156,855	UNITED STATES	96,481
SGD	Singapore	52,237	Singapore	86,661	Singapore	198,320	Singapore	83,948
NZD	New Zealand	72,107	New Zealand	101,839	New Zealand	153,049	New Zealand	92,823
AUD	Australia	78,898	Australia	114,253	Australia	177,724	Australia	103,912
HK$	Hong Kong	304,912	Hong Kong	538,526	Hong Kong	1,442,605	Hong Kong	541,704
BDT	Bangladesh	382,631	Bangladesh	887,196	Bangladesh	1,406,823	Bangladesh	682,629
TWD	Taiwan	722,025	Taiwan	1,002,917	Taiwan	2,093,497	Taiwan	1,007,259
PKR	Pakistan	805,042	Pakistan	1,833,138	Pakistan	4,126,128	Pakistan	1,598,411
MYR	Malaysia	51,151	Malaysia	101,478	Malaysia	243,850	Malaysia	94,433
THB	Thailand	491,562	Thailand	1,112,209	Thailand	2,870,823	Thailand	1,025,742
IDR	Indonesia	93,231,006	Indonesia	188,368,847	Indonesia	266,630,788	Indonesia	146,888,042
PHP	Philippines	469,863	Philippines	1,013,999	Philippines	2,180,282	Philippines	882,785
JPY	Japan	4,407,644	Japan	7,141,048	Japan	12,874,930	Japan	6,463,494
KRW	Korea	63,590,585	Korea	106,708,155	Korea	176,900,701	Korea	93,031,688
INR	India	605,724	India	1,393,201	India	3,647,769	India	1,286,921
CNY	China	244,083	China	321,465	China	955,393	China	371,864
LKR	Sri Lanka	731,796	Sri Lanka	1,656,245	Sri Lanka	4,521,813	Sri Lanka	1,563,767
VND	Vietnam	21,308,406	Vietnam	39,340,710	Vietnam	69,806,433	Vietnam	33,784,860
NPR	Nepal	469,915	Nepal	847,391	Nepal	1,365,191	Nepal	713,391

Source: Payscale

Table 4: Top 10% Salaries of Tech Industry Professionals in $PPP Currency 2024

TECHNICAL POSITION		MANAGERIAL POSITION		C-LEVEL POSITION		OVERALL POSITION	
ECONOMY	$PPP	ECONOMY	$PPP	ECONOMY	$PPP	ECONOMY	$PPP
Korea	112,581	Thailand	247,376	Thailand	552,544	Thailand	209,378
UNITED STATES	108,428	China	240,618	Hong Kong	476,061	China	191,287
Singapore	108,255	Singapore	165,800	China	427,671	Singapore	167,096
China	104,642	Hong Kong	149,858	Singapore	395,641	Hong Kong	166,657
Thailand	98,838	UNITED STATES	143,611	India	339,171	UNITED STATES	138,478
Hong Kong	91,422	Korea	127,261	Philippines	336,282	Korea	132,393
Taiwan	74,668	Malaysia	118,976	Taiwan	329,425	Taiwan	121,013
Australia	73,208	India	111,044	Malaysia	317,378	Malaysia	119,280
Malaysia	67,360	Japan	109,317	Japan	259,668	India	113,553
Japan	66,335	Philippines	108,077	Sri Lanka	259,106	Philippines	113,305
New Zealand	65,643	Taiwan	103,936	UNITED STATES	241,111	Japan	107,353
Philippines	57,217	Australia	102,319	Korea	214,281	Australia	99,118
India	55,563	New Zealand	90,876	Pakistan	197,612	New Zealand	86,065
Indonesia	42,354	Indonesia	85,344	Australia	190,203	Sri Lanka	78,632
Sri Lanka	37,546	Sri Lanka	67,371	New Zealand	152,362	Indonesia	70,331
Pakistan	33,789	Pakistan	57,144	Indonesia	147,111	Pakistan	64,772
Nepal	28,051	Nepal	52,752	Bangladesh	128,275	Bangladesh	45,646
Bangladesh	25,622	Bangladesh	42,272	Nepal	53,648	Nepal	38,912
Vietnam	5,504	Vietnam	8,776	Vietnam	14,692	Vietnam	7,783

Source: Payscale

Benchmarking of Top 10% Salaries

Table 4 features the average annual salaries in the top 10% salary brackets, again of jobs segmented into the three categories of Technical, Managerial and C-Level to produce the Overall average. The data is presented in $PPP currency equivalent.

Thailand sits at the pinnacle of the Overall list with average top 10% salaries almost 27 times more than Vietnam at the bottom. China, Singapore, Hong Kong and the US complete the top 5 entries while Japan at 11th position rounds off the list for salaries above $PPP100,000.

In terms of top 10% salaries for C-Level positions, Thailand again heads the list followed by Hong Kong, China, Singapore and India. Top tier management in the US is further down the list, perhaps highlighting the reasons why many senior tech professionals from America opt to become expatriates in Asia.

Thailand, China, Singapore, Hong Kong, the US and Korea dominate the rankings for the Managerial and Technical positions, with Thailand at the top in Managerial and Korea heading the list for Technical positions.

As reference, Table 5 and Table 6 below present the top 10% salaries in USD and respective Atlas currencies.

Vientiane, Laos. Photo courtesy of freepik.com

Table 5: Top 10% Salaries of Tech Industry Professionals in USD 2024

TECHNICAL POSITION		MANAGERIAL POSITION		C-LEVEL POSITION		OVERALL POSITION	
ECONOMY	USD	ECONOMY	USD	ECONOMY	USD	ECONOMY	USD
UNITED STATES	108,428	UNITED STATES	143,611	Hong Kong	337,718	UNITED STATES	138,478
Australia	75,389	China	142,520	Singapore	256,828	Hong Kong	118,226
Korea	72,524	Singapore	107,628	China	253,314	China	113,301
Singapore	70,273	Hong Kong	106,309	UNITED STATES	241,111	Singapore	108,469
Hong Kong	64,854	Australia	105,368	Australia	195,871	Australia	102,071
China	61,981	New Zealand	84,375	Japan	192,676	Korea	85,287
New Zealand	60,947	Thailand	82,677	Thailand	184,669	New Zealand	79,908
Japan	49,221	Korea	81,981	Taiwan	153,413	Japan	79,657
Taiwan	34,773	Japan	81,114	New Zealand	141,462	Thailand	69,977
Thailand	33,033	Taiwan	48,403	Korea	138,038	Taiwan	56,356
Malaysia	24,120	Malaysia	42,603	Philippines	116,102	Malaysia	42,712
Philippines	19,754	Philippines	37,314	Malaysia	113,647	Philippines	39,119
India	15,839	India	31,655	India	96,687	India	32,370
Indonesia	13,840	Indonesia	27,887	Sri Lanka	60,334	Indonesia	22,981
Bangladesh	9,314	Sri Lanka	15,688	Pakistan	49,015	Sri Lanka	18,310
Sri Lanka	8,743	Bangladesh	15,367	Indonesia	48,070	Bangladesh	16,593
Pakistan	8,381	Nepal	14,921	Bangladesh	46,631	Pakistan	16,066
Nepal	7,935	Pakistan	14,174	Nepal	15,175	Nepal	11,007
Vietnam	1,518	Vietnam	2,421	Vietnam	4,053	Vietnam	2,147

Source: Payscale

Table 6: Top 10% Salaries of Tech Industry Professionals in Atlas Currency 2024

Currency	TECHNICAL POSITION		MANAGERIAL POSITION		C-LEVEL POSITION		OVERALL POSITION	
	ECONOMY	ATLAS	ECONOMY	ATLAS	ECONOMY	ATLAS	ECONOMY	ATLAS
USD	UNITED STATES	108,592	UNITED STATES	143,611	UNITED STATES	241,111	UNITED STATES	138,478
SGD	Singapore	91,232	Singapore	140,993	Singapore	336,444	Singapore	142,095
NZD	New Zealand	98,000	New Zealand	135,000	New Zealand	226,340	New Zealand	127,853
AUD	Australia	111,735	Australia	155,944	Australia	289,889	Australia	151,066
HK$	Hong Kong	518,192	Hong Kong	829,211	Hong Kong	2,634,200	Hong Kong	922,166
BDT	Bangladesh	1,110,139	Bangladesh	1,836,061	Bangladesh	5,571,483	Bangladesh	1,982,577
TWD	Taiwan	1,116,321	Taiwan	1,549,377	Taiwan	4,910,762	Taiwan	1,803,944
PKR	Pakistan	2,546,005	Pakistan	3,948,577	Pakistan	13,654,709	Pakistan	4,475,627
MYR	Malaysia	103,167	Malaysia	183,193	Malaysia	488,683	Malaysia	183,661
THB	Thailand	1,124,352	Thailand	2,914,816	Thailand	6,195,650	Thailand	2,347,742
IDR	Indonesia	213,463,634	Indonesia	433,155,200	Indonesia	746,641,411	Indonesia	356,956,227
PHP	Philippines	1,107,529	Philippines	2,098,162	Philippines	6,528,419	Philippines	2,199,651
JPY	Japan	7,159,599	Japan	11,859,727	Japan	28,171,091	Japan	11,646,578
KRW	Korea	97,741,122	Korea	109,655,075	Korea	184,636,028	Korea	114,077,274
INR	India	1,319,088	India	2,655,556	India	8,111,111	India	2,715,557
CNY	China	430,860	China	1,010,470	China	1,795,993	China	803,306
LKR	Sri Lanka	2,609,396	Sri Lanka	4,776,954	Sri Lanka	18,051,472	Sri Lanka	5,478,162
VND	Vietnam	37,239,623	Vietnam	60,212,757	Vietnam	100,805,933	Vietnam	53,397,217
NPR	Nepal	1,050,631	Nepal	2,002,016	Nepal	2,036,034	Nepal	1,476,755

Source: Payscale

Table 7: Ratio of Salaries in Job Positions Against Technology Positions in $PPP 2024

Economy	TOP 10% in $PPP				Economy	AVERAGE in $PPP			
	TECHNICAL POSITIONS	MANAGERIAL POSITIONS	C-LEVEL POSITIONS	OVERALL POSITIONS		TECHNICAL POSITIONS	MANAGERIAL POSITIONS	C-LEVEL POSITIONS	OVERALL POSITIONS
United States	1.00	1.32	2.22	1.28	United States	1.00	1.38	2.07	1.27
Singapore	1.00	1.53	3.65	1.54	Singapore	1.00	1.64	3.75	1.59
New Zealand	1.00	1.38	2.32	1.31	New Zealand	1.00	1.44	2.14	1.30
Australia	1.00	1.40	2.60	1.35	Australia	1.00	1.45	2.26	1.32
Hong Kong	1.00	1.64	5.21	1.82	Hong Kong	1.00	1.77	4.73	1.78
Bangladesh	1.00	1.65	5.01	1.78	Bangladesh	1.00	1.82	2.68	1.49
Taiwan	1.00	1.39	4.41	1.62	Taiwan	1.00	1.39	2.90	1.39
Pakistan	1.00	1.69	5.85	1.92	Pakistan	1.00	2.13	4.80	1.89
Malaysia	1.00	1.77	4.71	1.77	Malaysia	1.00	1.98	4.76	1.84
Thailand	1.00	2.50	5.59	2.12	Thailand	1.00	2.44	6.00	2.17
Indonesia	1.00	2.02	3.47	1.66	Indonesia	1.00	1.69	2.98	1.50
Philippines	1.00	1.89	5.88	1.98	Philippines	1.00	2.16	4.64	1.88
Japan	1.00	1.65	3.91	1.62	Japan	1.00	1.62	2.92	1.47
Korea	1.00	1.13	1.90	1.18	Korea	1.00	1.28	2.12	1.24
India	1.00	2.00	6.10	2.04	India	1.00	2.31	6.05	2.13
China	1.00	2.30	4.09	1.83	China	1.00	1.30	3.86	1.50
Sri Lanka	1.00	1.79	6.90	2.09	Sri Lanka	1.00	2.21	6.05	2.09
Vietnam	1.00	1.59	2.67	1.41	Vietnam	1.00	1.59	3.28	1.51
Nepal	1.00	1.88	1.91	1.39	Nepal	1.00	1.80	2.97	1.52

Source: Payscale

Benchmarking between Job Positions and Salary Brackets

Apart from comparing salaries between economies, we also conducted two other types of benchmarking within each economy: the first to juxtapose salaries for Overall, C-level and Managerial against Technical positions to discern the disparity in wages between the various categories; and the second to gauge the difference between average salaries and wages in the top 10%.

Table 7 features the ratio of average annual salaries in $PPP for jobs in the Overall, C-level and Managerial job positions against the Technical category.

As expected, those considered as emerging and nascent tech economies have the widest margin in salaries with those in higher job positions earning considerably more than their colleagues at the lower levels.

For example, C-level tech executives in India earn six times more than those employed for Technical positions. At the other end of the scale, the top positions in the US only take home salaries that are on average, double that of employees in Technical jobs.

Table 8 displays the ratio difference between annual salaries in the top 10% bracket against average salaries for all 19 economies.

Table 8: Ratio of Top 10% Salaries Against Average Salaries in $PPP 2024

Economy	RATIO OF TOP 10% AGAINST AVERAGE SALARY			
	TECHNICAL POSITIONS	MANAGERIAL POSITIONS	C-LEVEL POSITIONS	OVERALL POSITIONS
United States	1.43	1.37	1.54	1.44
Singapore	1.74	1.63	1.70	1.69
New Zealand	1.36	1.31	1.48	1.38
Australia	1.42	1.36	1.63	1.45
Hong Kong	1.66	1.54	1.83	1.70
Bangladesh	2.14	1.94	4.00	2.57
Taiwan	1.54	1.54	2.35	1.79
Pakistan	2.72	2.15	3.31	2.75
Malaysia	2.02	1.81	2.00	1.94
Thailand	2.32	2.38	2.16	2.27
Indonesia	2.41	2.87	2.80	2.66
Philippines	2.36	2.07	2.99	2.49
Japan	1.63	1.66	2.19	1.80
Korea	1.66	1.46	1.49	1.57
India	2.20	1.91	2.22	2.11
China	1.78	3.14	1.88	2.16
Sri Lanka	3.50	2.83	3.99	3.50
Vietnam	1.77	1.77	1.44	1.66
Nepal	2.15	2.25	1.39	1.96

Source: Payscale

Yangon, Myanmar. Photo courtesy of freepik.com