Australia Vietnam
Policy Institute

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Australia Vietnam Policy Institute (AVPI) Summary Paper

Digital Cities: Leveraging Digital Transformation in Smart and Sustainable Urban Solutions

VICTORIA
State Government

The Australia Vietnam Policy Institute (AVPI) Digital Cities Roundtable was held in Melbourne on 16 May 2024 in collaboration with the Victorian Government.

The roundtable was facilitated by Louise Adams, Chief Operating Officer of Aurecon and Australia's Business Champion to Vietnam. The roundtable brought together leaders from the Ho Chi Minh City (HCMC) Government, the Victorian Government, AVPI, academics from the RMIT Centre for Urban Research and industry leaders across Victoria. It was delivered under the Victoria-Ho Chi Minh City Memorandum of Understanding and was a valuable session for knowledge exchange regarding digital cities, innovation, cybersecurity and technology solutions.

Presentations highlighted existing digital city transformation projects and current progress on digital transition. A general discussion on research centres and clusters, industry participation, and best practices followed. Industry leaders, such as those in the banking, advisory, and climate non-profit sectors, shared thoughts on digital transition pathways, and representatives from the HCMC Government highlighted areas where knowledge sharing and digital collaboration would provide significant benefits.

Australia Vietnam Policy Institute

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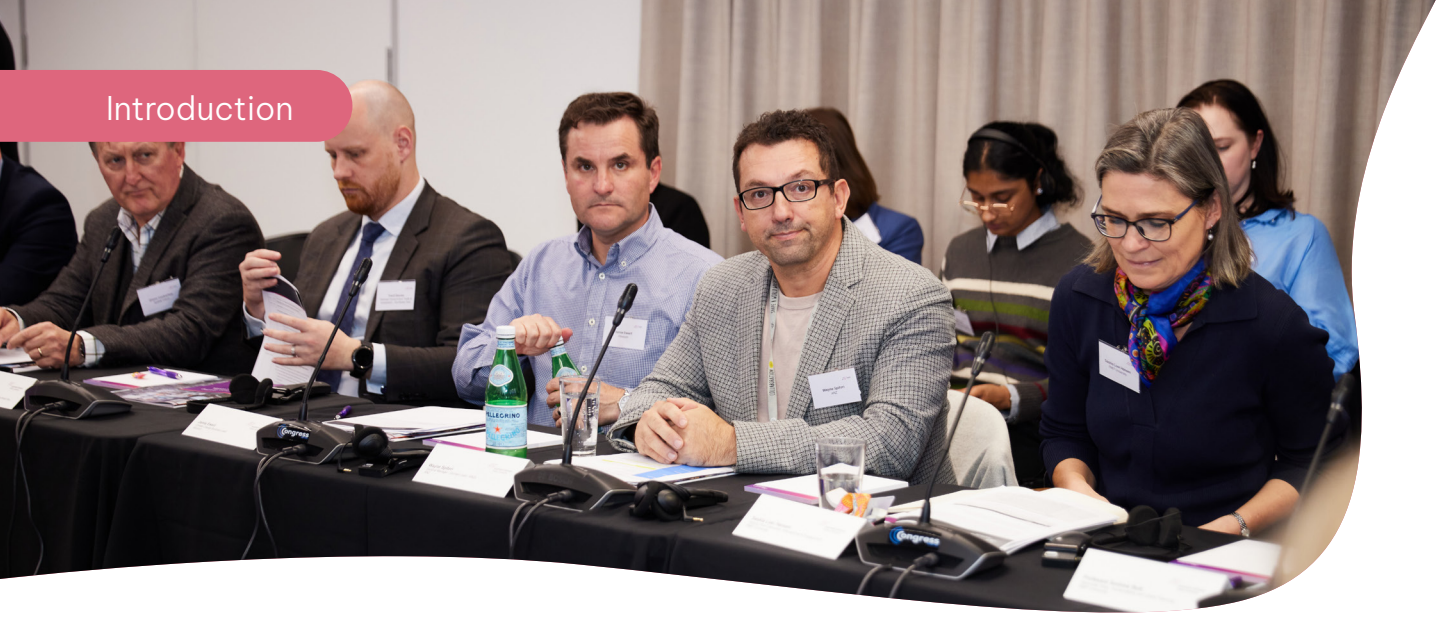
Australia Vietnam Policy Institute (AVPI)

The AVPI is the first policy institute focused on Australia's relationship with Vietnam, acting as a partnered public policy hub centred around engagement, collaboration, and impact. The AVPI enables and facilitates discussions on strategic and economic issues in the Australia-Vietnam relationship. Through disseminating the latest research, identifying upcoming trends, and sharing practical insights from people with on-the-ground experience, the AVPI helps to advance a cooperative and secure environment for two-way trade and investment.

Key Takeaways

1. The Victorian and Ho Chi Minh City Governments are actively engaged in ongoing digital transformation efforts. Technologies are continually evolving, necessitating the adaptation of existing practices and an openness to new applications. The pace of technological change, especially changes relating to increased data quantities and the integration of artificial intelligence, requires governments to create adaptive frameworks to ensure long-term benefits.
2. Effective digital transformation depends on strong government, industry, and university partnerships. Pilot programs and small-scale initiatives could be used to test solutions before wider implementation.
3. There is no universal model for implementing smart cities—what works in Melbourne will not necessarily work in Ho Chi Minh City. A tailored digital transformation approach is recommended based on unique challenges, priorities, and available technological infrastructure. Research centres and clusters can provide knowledge sharing between jurisdictions and assist in best practice recommendations where each can learn from unique rollout elements.
4. A recurring theme was the ongoing need to implement cyber security measures and privacy policies to enable the responsible collection and use of data. Data accumulation and utilisation were highlighted as critical for city operations and future planning, ensuring governments can continuously integrate new technologies to meet evolving needs.
5. Digital transformation is deeply tied to social and cultural change. Understanding user experience, training educators, and involving communities in the transformation process are critical for success and sustainable growth.



The AVPI roundtable discussion, held at the AVPI Front Door at RMIT University's Melbourne City Campus on 16 May 2024, highlighted a mutual interest in leveraging digital technologies, data, and collaborative frameworks to address urban challenges and propel sustainable development agendas in Victoria and Ho Chi Minh City (HCMC). There was a strong focus on the importance of interdisciplinary collaboration, innovation in digital technologies, and strategic partnerships to achieve inclusive and resilient urban environments.

Digitisation presents ongoing challenges and opportunities for both Victoria and HCMC. Although these are unique to each region, the roundtable discussion emphasised the value of collaboration, idea sharing, and the involvement of industry and research institutions, particularly universities, to address complex issues. This dialogue has opened doors for further information sharing and future partnerships to develop innovative solutions.

Building on this foundational understanding, the discussions also unpacked the critical role of enhancing digital literacy and proficiency, which is essential for driving transformative change and leadership in urban sustainability. The roundtable served as a forum to explore university-industry-government partnerships, or public-private partnerships (PPP), that could support the workforce to adapt and excel in a digitally driven environment. By focusing on these strategic areas, the participants acknowledged the potential for shared learning and the co-creation of knowledge. This could ultimately lead to more robust digital infrastructure and smarter, more sustainable city planning and management.

Digital Transformation

Government Leadership

Digital transformation involves multiple disciplines, bringing together many stakeholders across different sectors, such as law, transportation, health, cyber security, and data acquisition. Government plays a crucial role in facilitating information sharing and collaboration between industries by providing necessary policies to enable technological advances and protect its population.

The roundtable discussion underscored the role of government in advocating for and supporting digital transformation initiatives, including through enhancing economic ties. Victoria and Vietnam both developed digital strategies in 2020, focusing on digitising service delivery and creating sustainable urban solutions.

Three years into its digitisation strategy, as outlined in the Digital Strategy 2021-2026, Victoria has made significant strides toward achieving its key objectives, which include:

1. Better, fairer, more accessible services
2. A digital-ready public sector
3. A thriving digital economy

While Victoria's progress offers valuable insights and research findings, it also provides an opportunity for mutual learning and collaborative growth. By engaging with other cities, such as HCMC, Victoria can share its experiences and successes as part of an ongoing dialogue that recognises the unique challenges and strengths of each region.[1]

Vietnam's National Digital Transformation Program was approved in 2020, forming the basis of its digital transformation agenda. The program focuses on three strategic pillars: digital government, digital economy, and digital society.[2] More recently, the National Data Strategy to 2030 has been approved, where Vietnam also aims to digitalise 100% of the national database, serving as a foundation for the development of e-Government and connecting with general data at the National Data Centre and nationwide.[3]

1. A Future Ready Victoria, "Victorian Government Digital Strategy 2021-2026", accessed 7 June 2024, https://content.vic.gov.au/sites/default/files/2022-02/DPC_Vic%20Gov%20Digital%20Strategy%202021-26_Accessible_V11.1_updated%20Feb%208.pdf.
2. Open Development Mekong, "Vietnam Digital Transformation Agenda", accessed 6 June 2024, https://vietnam.opendevelopmentmekong.net/topics/vietnam-digital-transformation-agenda.
3. Open Development Mekong, "Vietnam Digital Transformation Agenda", accessed 6 June 2024, https://vietnam.opendevelopmentmekong.net/topics/vietnam-digital-transformation-agenda.

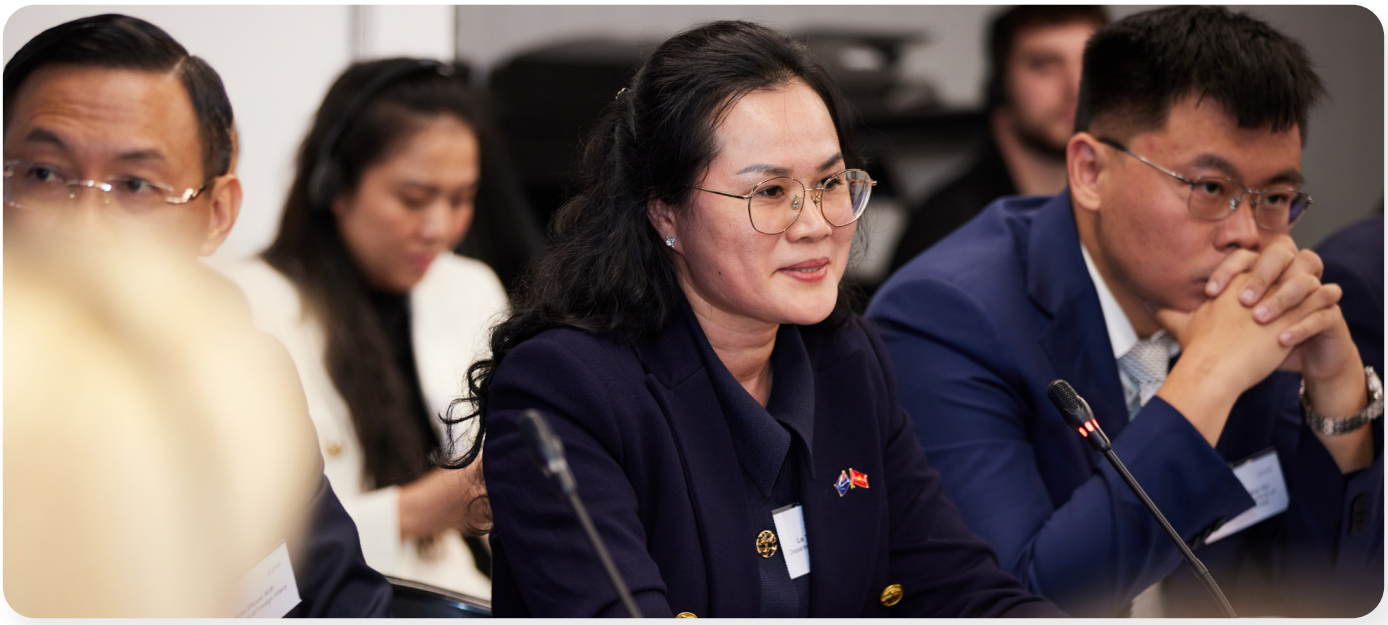
Capacity Building

As Vietnam progressed its strategy, HCMC looked to examples from Australia and Singapore to continue developing and refining its digital transformation strategy. In January 2024, it established a Centre for Digital Transformation (DXCentre) to better coordinate the program. The DXCentre "promotes digital transformation activities, supporting small and medium enterprises in planning and implementing digital transformation strategies to improve business performance".[4]

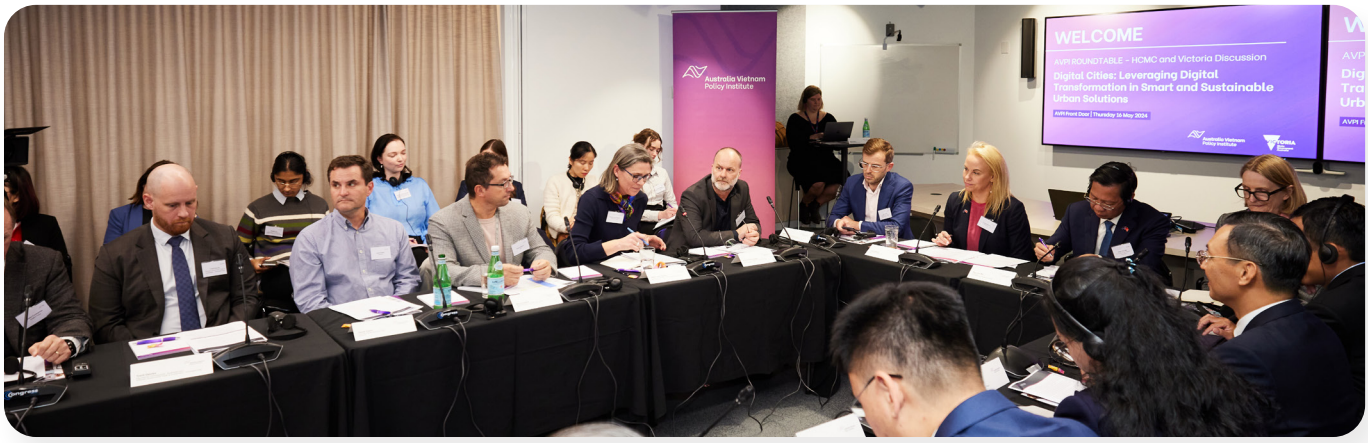
This centre is designed to serve as a hub for innovation and expertise, facilitating knowledge sharing and training. Creating capacity through digital skills and infrastructure is a key element of digital transformation. This is a priority for leaders at the policy-making level and those implementing programs on the ground. During the roundtable discussion, delegates from HCMC expressed a desire to learn about Victoria's digital implementation scheme, particularly as it relates to policy development, which could inform the activities of this centre and accelerate digital transformation implementation.

The discussion centred on how Australia's higher education sector, with its rich experience and expertise, stands as a robust resource for international collaboration. There is significant potential for HCMC to engage with Victoria's education and training ecosystem through partnership opportunities.

Sharing policy research findings and recommendations is particularly useful for assisting in digital transformation and seeing cross-country applications. However, it should be noted that there may not be direct implementation correlations between the two contexts, but rather principles and insights from the Victorian digital transformation experience that can be applied in HCMC.



4. Ho Chi Minh City Digital Transformation Consulting and Support Center, accessed 7 June 2024, https://dxcenter-org-vn.



Digital Competencies and Geospatial Ecosystems

Due to the rapid digitisation of our personal lives, everyday digital competencies are growing. As people become more adept at using technology in their daily routines, vast amounts of data are generated which, if harnessed appropriately and effectively, could lead to innovative applications and solutions. However, to fully capitalise on this potential, there is a pressing need to grow data-related research capabilities and to build community trust through enhanced data security measures.

Understanding geospatial ecosystems—how information from diverse sectors such as industry, academia, government, and communities can be integrated—holds substantial transformative potential. This integrated approach allows for a deeper understanding of spatial relationships and patterns that influence everything from traffic flow and environmental monitoring to public health and safety. One roundtable participant highlighted the role of geospatial data in urban planning and the management of cities. The integration of this data across multiple sectors facilitates a more cohesive approach to urban development. Collaborations between RMIT University and local Vietnamese institutions can serve as case studies for how Victoria and HCMC can leverage geospatial data to enhance urban sustainability and planning.

To support the expansion and increasing complexity of geospatial ecosystems, cities and jurisdictions become critically dependent on the presence of stable, robust digital infrastructure capable of managing large volumes of data securely and reliably. Access to such infrastructure remains a considerable challenge for both Victoria and HCMC. As digital demands continue to escalate, the need for advanced data centres, enhanced cybersecurity measures, and reliable network connections becomes more pronounced. Both regions must invest in scalable and secure technological frameworks to meet current needs and be adaptable to future technological advancements.

> *Transformation is not just about having more information or having more technology. It's actually about capacities within government, within communities and elsewhere to utilise that information.*
>
> **– Roundtable Participant**[5]

5. Roundtable participant in the Digital Cities roundtable, 16 May 2024.

Partnerships

Effective digital transformation relies heavily on strong partnerships among various stakeholders, including government, industry, and research institutions. By leveraging the strengths and expertise of each sector, these partnerships can drive innovation, streamline implementation processes, and ensure that technological solutions are aligned with the needs of the community. Collaborative efforts can lead to the development of scalable models for smart cities that are both innovative and practical.

> *We need to think about our learning, teaching and research as an integrated approach to how we address and solve challenges in society today, whether it's in Australia, in Vietnam or elsewhere.*
>
> **– Roundtable Participant[6]**

Research clusters accelerate the development and deployment of smart city solutions, ensuring that technological advancements are effectively translated into practical applications that benefit society.

An example of this was accomplished in June 2024, when a significant step was taken towards bolstering digital capacities within HCMC through the strategic partnership between the HCMC DXCentre and RMIT University Vietnam. This collaboration was aimed at enhancing the city's digital infrastructure and skills, essential for supporting its broader digital transformation goals. The partnership is a model of cooperative engagement between educational institutions and government bodies specifically tailored to address the unique needs and challenges faced by HCMC in the digital domain.

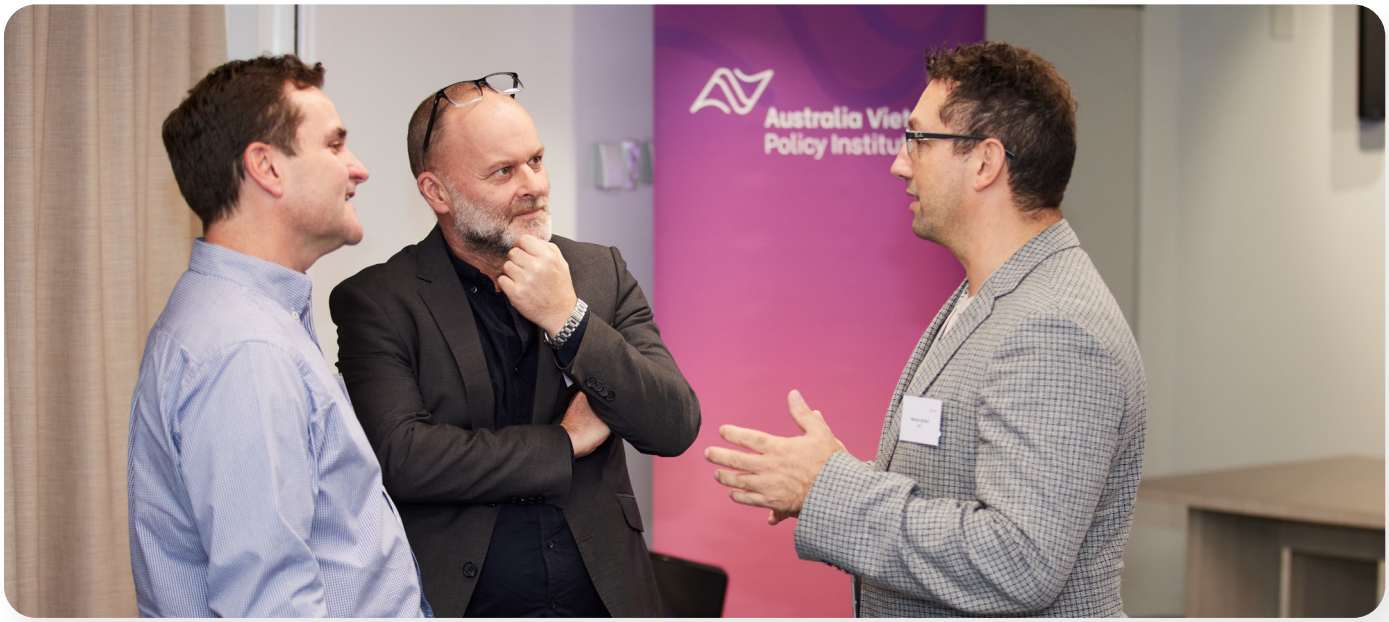
The initiatives developed through this partnership focus on various aspects of digital transformation, including developing digital skills among city administrators and the broader public, introducing new technologies to improve city services and infrastructure, and establishing a framework for ongoing digital innovation.

Looking ahead, this model of collaboration offers a scalable and replicable framework that can be extended to include partnerships with other sectors. Through such multi-sectoral partnerships, HCMC can accelerate its journey towards becoming a smart and sustainable city, setting a precedent for other cities in Vietnam.

6. Roundtable participant in the Digital Cities roundtable, 16 May 2024.
7. RMIT University Vietnam, "HCMC Digital Transformation Center and RMIT Sign MoU in Digital Capacity Building", accessed 7 June 2024, https://www.rmit.edu.vn/news/all-news/2024/jun/hcmc-digital-transformation-center-and-rmit-sign-mou-in-digital-capacity-building.

A potential area for valuable knowledge sharing between HCMC and Victoria is public-private partnerships (PPP), particularly in the context of digital transformation. Collaboration between public entities and private industry can significantly enhance the effectiveness and reach of digital initiatives. While PPPs are commonly associated with physical infrastructure projects, they can also be crucial in digital infrastructure and transformation projects, which require significant resources and collaborative efforts.

Participants underscored the importance of inter-country collaborations during the roundtable, particularly between HCMC and Victoria. Such partnerships can serve as a conduit for sharing best practices and lessons learned from pilot projects in digital technology, allowing both regions to refine their approaches based on a broader set of experiences and insights. This type of international cooperation drives technological innovation and facilitates cross-pollination of ideas, ensuring both partners benefit from digital infrastructure projects' latest advancements and knowledge.



Data and Cybersecurity

Data Collection and Application

Data collection and application are at the heart of digital transformation. However, as cities become more digitally interconnected, ensuring the security and privacy of data is paramount. Robust cybersecurity measures that inform and are informed by policy and governance must be implemented to protect sensitive information and maintain public trust. This includes developing secure data governance frameworks and investing in advanced cybersecurity technologies to safeguard urban digital infrastructure.

> *I think we've got some opportunities to think about how we share and manage data and how we create partnerships to do that. And, of course, that's always difficult because data is valuable. Data is about privacy.*
>
> **– Roundtable Participant**[8]

Vietnam's update of its data protection laws in 2023 signifies a proactive step to align with the rapid advancements in the digital landscape, ensuring that privacy standards and security measures are sufficiently robust and capable of handling increased data flows and new technological uses.[9] This legal update is crucial for fostering a secure digital environment, instilling public trust, and encouraging greater participation in the digital economy.

In contrast, Australia has historically applied a framework of pre-existing laws to manage emerging digital technologies. This approach, while providing an immediate governance structure, may not fully address the unique challenges posed by digital innovations, particularly in the rapidly evolving landscape of AI and the Internet of Things (IoT). Recognising this gap, Australia undertook a comprehensive review of its digital laws in 2023, with amendments expected to follow.[10] These anticipated changes are significant as they aim to tailor the legal framework more precisely to the nuances of digital technology, enhancing protection for users and businesses alike. In Victoria, a Protective Data Privacy Framework has been developed to monitor and assure the security of public sector information and information systems, across the Victorian Public Service.

8. Roundtable participant in the Digital Cities roundtable, 16 May 2024.
9. Vietnam Briefing, "Vietnam's Personal Data Protection Decree", accessed 6 June 2024, https://www.vietnam-briefing.com/news/vietnams-personal-data-protection-decree-a-quick-guide.html.
10. Australian Government Attorney-General's Department, "Government Response to the Privacy Act Review Report", accessed 7 June 2024, https://www.ag.gov.au/rights-and-protections/publications/government-response-privacy-act-review-report.

Industry Best Practice

Australian industries are undergoing significant digital transformations to enhance customer experiences and operational efficiency. Initiatives include leveraging AI and IoT for personalised banking services and advancing digital identity frameworks to streamline processes like home loans.

Roundtable participants from the banking sector shared their experience;

> *we are moving much more to a digital landscape, and people don't want to walk into branches. As much as it's painful to remove them, the industry is moving towards being completely digital.*
>
> **– Roundtable Participant**[11]

One roundtable participant shared insights into how digital tools are used to address urban environmental challenges, such as managing water resources more sustainably. The firm uses digital technologies to monitor and manage ecological assets, demonstrating an industry best practice by leveraging technology for environmental sustainability.

11. Roundtable participant in the Digital Cities roundtable, 16 May 2024.

Social and Cultural Factors

Cultivating Digital Skills for the Future

Investing in digital literacy enables communities to adapt to and thrive in a digitally transformed environment and is a core part of Vietnam's "digital society" pillar. Education and training programs should be designed to equip individuals with the necessary skills to use digital tools and technologies effectively. By enhancing digital literacy, cities can empower their residents to actively participate in the digital economy, improve their quality of life, and contribute to the overall resilience and sustainability of urban areas.

> *There's an intrinsic link between digital competence and human capital.*
>
> **– Roundtable Participant**[12]

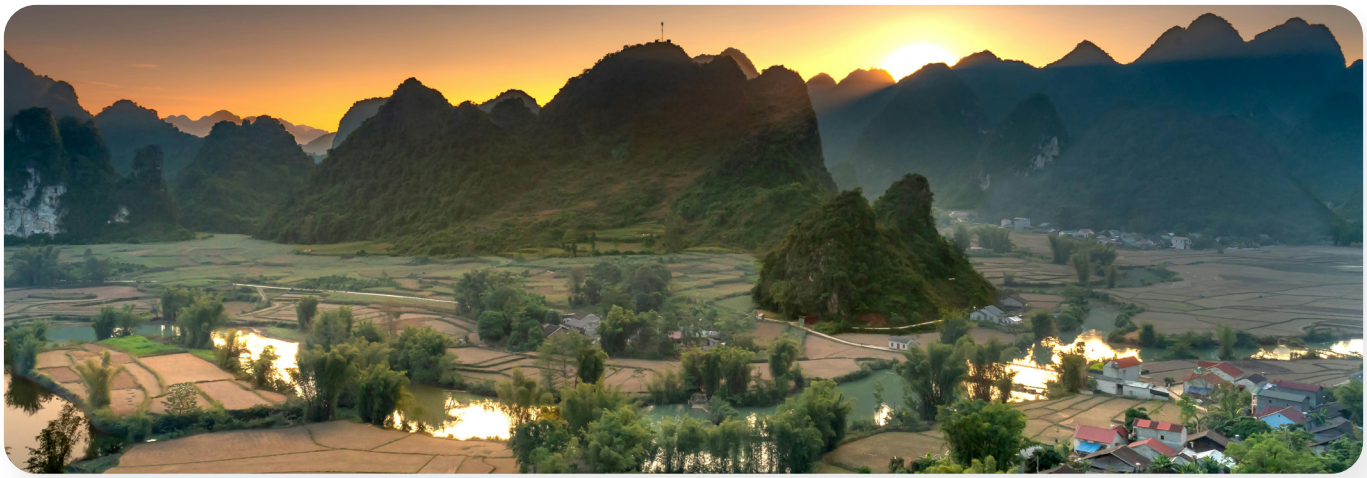
Through digitisation, there is an opportunity for collaboration, productivity, and new forms of employment that are not yet understood. There is a strong educational component to developing digital competencies for current and future digital needs. This ongoing learning involves not only formal education but also continuous training and upskilling.

Both HCMC and Victoria recognise the challenges and opportunities inherent in building digital capacities to meet their technological objectives. HCMC in particular has identified areas where capacity building can be enhanced, such as data collection and cyber security, and is actively seeking to foster greater collaboration with international partners, including Australian educators. This collaborative approach aims to leverage the expertise and educational models from Victoria to bolster HCMC's strategies in digital skills cultivation.

During the discussions, the role of vocational education emerged as a critical element in developing and upskilling the workforce needed to drive digital transformation. Both regions have emphasised the importance of vocational training programs and digital literacy campaigns tailored to the specific needs of their economies. These initiatives are designed to equip individuals with practical and applicable skills necessary for thriving in a digital economy.

Expanding on this, the roundtable discussion highlighted the success of vocational education programs in Victoria, which could serve as a model for similar initiatives in HCMC. By adopting and adapting these educational frameworks, HCMC can enhance its local educational institutions, making them more responsive to the demands of a rapidly evolving digital landscape. Such partnerships address the immediate skills gaps and foster long-term educational exchanges that benefit both regions.

12. Roundtable participant in the Digital Cities roundtable, 16 May 2024



Change Pathways

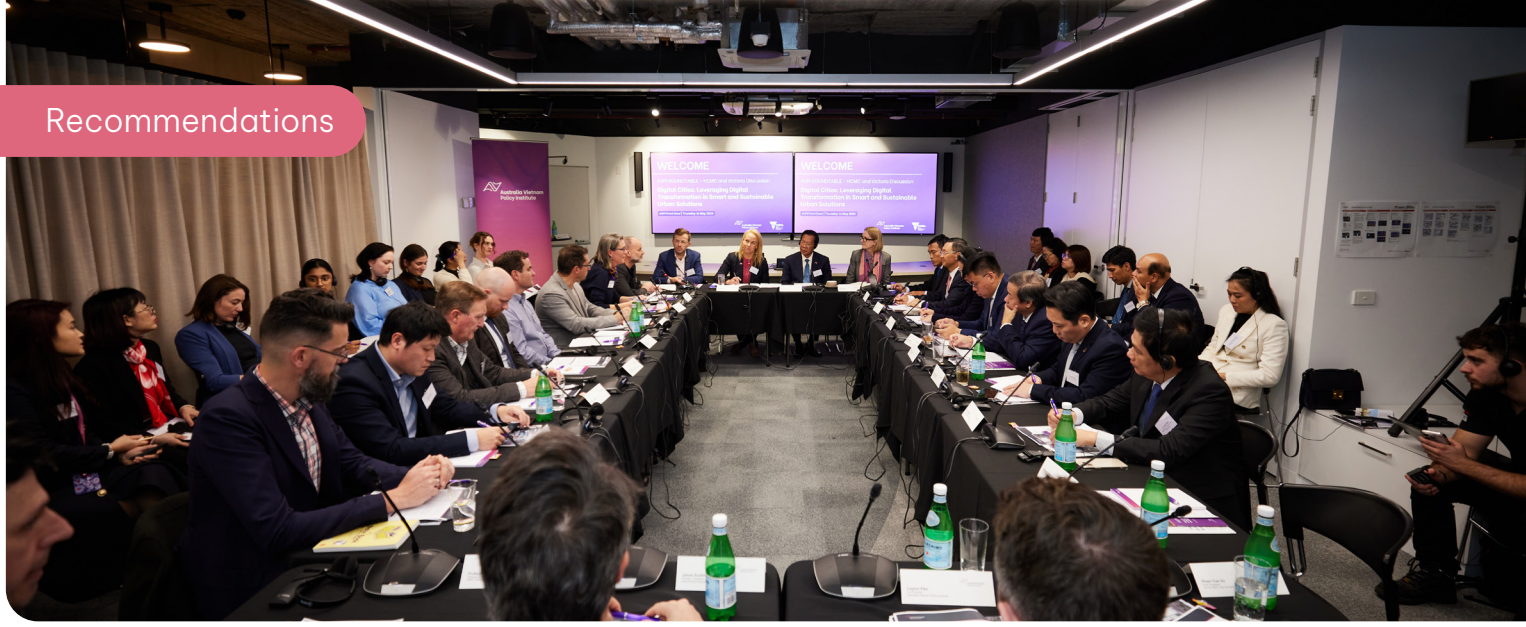
Digital transformation fundamentally reshapes social structures and cultural norms. As discussed during the roundtable, the success of digital initiatives hinges on both the technologies implemented and the broader societal acceptance and adaptation to these changes. For example, the discussion highlighted the importance of understanding user experiences—an essential factor in ensuring that digital solutions are both accessible and effective. This involves meticulous research and feedback mechanisms to tailor digital services to the needs and habits of the community.

The role of education, particularly in training educators who are on the frontline of nurturing the next generation of digitally adept citizens, cannot be understated. The roundtable pointed to initiatives where educators are being equipped with the tools and knowledge to integrate digital literacy into their curriculum effectively.

Another critical factor is involving communities in the transformation process. This includes ensuring that all segments of society are part of the conversation about digital transformation, from the planning stages through to implementation and evaluation. To be effective, policies must be dynamic, adapting to the evolving technological landscape and society's changing needs.

> *Digital transformation is a process – there's no end. We have to do it regularly, continuously, and we must be adaptive to the change of the technologies.*
>
> **– Roundtable Participant**[13]

13. Roundtable participant in the Digital Cities roundtable, 16 May 2024.



Recommendations for:

Victorian Government

1. Prioritise investments in digital skills training and education programs that equip the workforce with the necessary capabilities to support ongoing digital transformation initiatives. Collaborate with universities and vocational institutions to tailor programs that address the digital economy's and smart cities' specific needs. Continue investing in apprenticeship opportunities (e.g. vocational cyber hubs) to provide practical, hands-on experiences in digital technologies, further strengthening the job readiness of graduates.
2. Implement a continuous review and update of data and cyber-security frameworks to maintain high standards of data protection and cyber resilience. Focus on articulating these policies clearly to Victorian businesses and international investors to uphold confidence in the state's digital infrastructure, cyber resilience and investment climate.
3. Expand knowledge sharing and foster research clusters both within Victoria and with other digital urban centres, with an emphasis on collaborating on digital innovation.

HCMC Government

1. Partner with Victorian education providers to facilitate capacity building in digital technologies to keep pace with growing demand. Partnerships could extend to joint certification programs that validate and enhance the skills of HCMC workers, aligning them with international standards and the needs of the digital marketplace.
2. Continue to highlight digitisation objectives and international digital benchmarking by investing in the development of research hubs in HCMC, focusing on creating strategic alignment between government and businesses in key areas like smart city technology, data analytics, and cybersecurity. This will build local digital expertise and help to position HCMC as a centre of digital innovation, drawing more investment and talent.
3. Facilitate greater collaboration between Government and technology providers by promoting pilot projects and funding the scaling of innovative solutions for smart cities. These initiatives should also include mechanisms for sharing successes and challenges across projects, thereby creating a feedback loop that improves outcomes and accelerates the adoption of best practices.

Acknowledgements

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