LOWY INSTITUTE

AUS-PNG NETWORK

Building the Australia-PNG Digital Ecosystem

Outcomes from the 2022 Aus-PNG Network Emerging Leaders Dialogue

Contents

Executive summary

The Covid-19 pandemic was a catalyst for increased digital connectivity globally. In the Pacific, digital transformations are gaining momentum. From a very low base, internet access and mobile phone use is increasing at a steady pace, along with government digital transformation projects spanning health, education, and financial data. There is increasing commercial activity online. Social media is playing a greater role in elections and in keeping people informed of international developments.

Papua New Guinea (PNG) has a small, but rapidly growing digital footprint, with new mobile phone, internet, and social media users joining the digital realm every year. The PNG government has a Digital Transformation Policy, but it is still struggling to meet the digital infrastructure access needs and expectations of an increasingly digitally savvy youth. The country's digital development is lagging behind that of other Pacific countries.

Australia can play an important role in supporting digital connectivity in PNG through a range of initiatives that support greater investment, build capacity, create partnerships, provide technical assistance, and promote regional collaboration. There are growing digital connections between businesses in Australia and PNG, particularly in the areas of e-commerce and financial services. Australian businesses are increasingly looking to PNG as a market for digital products and services, while PNG businesses are looking to Australia for technology and expertise. A growing Pacific diaspora in Australia will accelerate digital economic and social links between Australia and the region.

Today's emerging leaders will play a crucial role in PNG's development. Access to education and economic opportunities through improved digital infrastructure is crucial to cultivating a new generation of PNG leaders who are globally connected and empowered to effect positive change in their communities. Supporting PNG's digital transformation will unleash the massive potential for positive economic and social change within PNG's youth sector.

Digital transformation in PNG will have to be equitable, recognising the gaps in access that currently impede opportunities for women to be equipped with the skills and knowledge to meaningfully engage in the digital space. There is a need to increase opportunities for women in IT education and careers and to enhance the integration of digital literacy skills into community development programs and other activities that target women and youth.

Key recommendations for the Papua New Guinea – Australia partnership:

1. Invest in digital infrastructure, including digital classrooms, for improved connectivity and access.

2. Provide digital skills training to all sectors of society, with a focus on women and girls.

3. Foster collaboration between government, business, and civil society.

4. Strengthen online safety and cybersecurity measures as the digital ecosystem evolves.

About the Emerging Leaders Dialogue

Twenty young and emerging leaders from Papua New Guinea (PNG) and Australia gathered at the Lowy Institute in Sydney from 5–9 December for the 2022 Australia-Papua New Guinea Emerging Leaders Dialogue.

The Dialogue is the annual flagship event of the Australia-Papua New Guinea Network, a Lowy Institute project supported by the Australian Department of Foreign Affairs and Trade, which aims to build links and understanding between Australia and PNG.

Over five days, participants explored the theme of digital connectivity and focused on critical development and human security issues relevant to PNG and Australia. Activities included site visits to Meta's Australian offices at Barangaroo and to Google's Australian regional headquarters at Pyrmont; a reception hosted at the Lowy Institute featuring a keynote address by PNG High Commissioner to Australia HE John Kali; and a panel discussion with rugby league stars to discuss the role of sport in building ties and supporting community development.

The group travelled to Canberra for meetings with Australian government officials and academics. It also attended a reception co-hosted with the Kokoda Track Foundation, before returning to Sydney for a focus on media skills development including a site visit to the ABC in Ultimo.

Participants considered how PNG can develop its digital sector and the role of partners such as the Australian government, businesses, and community organisations. Discussions explored the digital theme from the perspectives of accessibility, affordability, meaningful connectivity, digital literacy, online safety, cybersecurity, and gender. Participants developed recommendations for the Australian and PNG governments and the business community, with the goal of improving links between the two countries.

This outcomes report is a summary of the discussions held. All participants contributed to the compilation of this report. Notes have been provided on a non-attributable basis.

Mihai Sora, Project Director of the Australia-PNG Network and Dr Jessica Collins, Research Fellow in the Pacific Islands Program convened the Dialogue.

Economic development

> "The tools are there, but we need to increase awareness."

The importance of national digital literacy to PNG's future economic prosperity cannot be overstated. Digital technology can expand access to both domestic and global markets, facilitate education opportunities to build human capital, and improve economic policymaking through the timely provision of data.

Efforts to improve digital participation in domestic and global markets must be supported by a corresponding increase in physical connectivity — namely, investment in public infrastructure. This will help ensure that PNG goods get to market cheaply, quickly, and safely.

Digital payments can help to reduce the costs and risks associated with traditional cash payment methods. By adopting digital payment systems that work across Australia-PNG borders, businesses in PNG can improve their cash flow, reduce transaction costs and the time taken to transfer money, and expand their customer base. There are widely held concerns around the reliability of PNG infrastructure, particularly electricity, which serve as a deterrent to the adoption of digital payment systems for PNG citizens. Tight PNG foreign exchange controls continue to undercut the benefits of cross-border payment systems, and consideration should be given to loosening these controls.

Increased access to mobile banking could improve financial inclusion in PNG. Small-to-medium enterprises (SMEs) in PNG often struggle to obtain credit because of their lack of financial records. Digital education and products can help bridge knowledge gaps and encourage better financial recordkeeping. Mobile banking can improve access to mainstream financial services and reduce transaction costs, which can support SME growth. Improving affordability and access to digital infrastructure, such as broadband networks and datacentres, can increase uptake of digital services and support the growth of the digital economy in PNG.

Freely available digital business tools can be transformative for the SME sector in PNG. But the awareness of online training, guides, and business management software is low among vendors and entrepreneurs. The PNG government should partner with technology companies that have existing programs designed to support SMEs, such as Meta and Google. The aim should be to roll out nationwide awareness campaigns that help create an ecosystem that strengthens relationships between vendors in Australia and PNG, including through mentoring. Improving the sophistication of SMEs can increase the value of labour and outputs in PNG, ultimately contributing to improved standards of living and income per capita.

e-Government and community services

"Too much public policy data in PNG remains in paper format."

Government and business back-end processes in PNG continue to be transacted largely through analogue systems. This limits the ability to expand digital services and products. It affects the timeliness of national health, education, and economic reporting, diminishing its usefulness for short or long-term policymaking. A lack of data means that both successes and challenges in economic development, public policy, and social progress may not be visible until years after the fact. This makes it difficult for both government and businesses to make informed decisions.

PNG's e-government initiatives are focused on improving access to government services, promoting transparency and accountability, and increasing efficiency. Online portals

for paying taxes or applying for permits help streamline government processes and reduce the need for in-person interactions.

This can help to reduce corruption, while also improving access to services for people in remote or underserved areas. But there is significant scope to improve current projects related to the national identification system and the provision of online services such as business registration, land registration, and tax filing.

Pikinini Watch PNG

Pikinini Watch PNG is an NGO that specialises in implementing professional community-based child protection services and positive parenting for child development in PNG. Their aim is to shift mindsets and influence behavioural change to improve the protection and wellbeing of children in PNG.

The Parenting for Child Development (P4CD) program delivered in partnership with the UNICEF Spotlight Initiative supports parent education and skills development so parents can meet the needs of the growing child, and targets parents or primary caregivers of children between three and ten years of age. In 2023, the organisation looks forward to creating an app-based online positive parenting course for working parents, who can complete the modules at their own pace, with practical exercises to apply in their households.

Education

> "Focusing only on basic infrastructure short-changes the current and future generations of youth."

Young people in PNG are increasingly involved in innovation and entrepreneurship, particularly in the tech sector. They are starting businesses, developing new technologies, and driving innovation in areas such as e-commerce and mobile app development. But they need to be supported by expanding access to education.

Online learning platforms can provide people in PNG with access to education and training opportunities, regardless of their location or socioeconomic status. Online learning can support the development of digital skills, which improve workforce productivity and create new job opportunities.

Digital transformation should start in the villages and in the schools. The creation of a thriving digital banking sector will require better digital education in schools so that students can participate in the digital economy from the moment they enter the labour market. Digital classrooms, equipped with laptops and electricity, are key to this. The PNG government should build new educational infrastructure that prepares students for a globally connected world. It should not build a classroom unless it is digitally equipped.

The PNG government recognises the benefits of digital education initiatives. But their resourcing and implementation remains poor amid competing government service delivery priorities. To transform digital education in PNG, the sector needs increased material support from the government and international partners, including the business community.

LiteHaus International

LiteHaus International is an Australian NGO bridging the digital divide across Asia-Pacific. Since 2017, their Digital Infrastructure Program has installed 144 ground-breaking digital classrooms in Papua New Guinean primary schools with a further 160 scheduled for completion this year. These are the first of their kind anywhere across the 3500 primary schools in PNG and benefit approximately 95 000 students and teachers, 90 per cent of whom have never used a computer.

Beyond 15 desktop computers and operating software, the standard program output also includes an originally developed Digital Skills Passport, which provides vital digital competency training material for teachers.

Partnering with Niunet PNG, they also provide a unique offline e-library that offers beneficiaries access to 2.7 million pieces of educational content in a safe, curated learning environment. A quality education can only be digital in today's world and by installing a new computer lab every 48 hours, LiteHaus International is filling a critical resource gap in PNG's education sector.

Health

"Digitising medicine could be a game-changer for the health of remote communities."

PNG is drastically lacking in health infrastructure and resources, particularly in remote and rural areas. Digital tools have the potential to significantly improve the delivery of health services in PNG by improving access, reducing costs, and improving the quality of care.

Telemedicine uses digital tools such as video conferencing and mobile health apps to deliver medical consultations and health services remotely. In PNG, telemedicine could help to connect patients in remote and rural areas with medical specialists in urban areas, improving access to medical care and reducing the need for patients to travel long distances. It would also help clinicians in rural and remote locations to obtain support from specialists, improving their wellbeing and reducing burnout.

Electronic health records (EHRs) are digital records of patient health information that can be accessed and shared by healthcare providers. In PNG, EHRs could help to improve the quality of care by providing healthcare providers with timely access to patient information. EHRs reduce errors in medical treatment and improve the coordination of care across different healthcare providers, including by cutting down the duplication of treatments. EHRs would also support the cross-border treatment of complex cases between Australia and PNG.

Mobile health apps help to improve health outcomes by providing patients with access to health information and resources, such as educational materials and health tracking tools. They would also help to improve communication between patients and healthcare providers. Apps with offline functionality would provide the greatest benefit to users in remote areas.

Health information systems (HIS) are digital systems that capture, manage, and analyse health data. Having such data would generate valuable insights for PNG health authorities and policymakers. Greater uptake and use of the current HIS could improve the management of health services by providing healthcare providers and health policy researchers in PNG and Australia with timely and accurate information about patient outcomes. They could also help map the use of health services across PNG, which is important given how geographically dispersed the population is. Real-time data collection would also enable the identification of emerging trends, such as infectious disease outbreaks. This would improve both response times and the mobilisation of health resources, thereby reducing the overall impact on the health system.

Hospital information management systems (HIMS) provide the ability to track a patient's journey through a healthcare facility. HIMS facilitate the collection of information about patient presentations and identify areas for improvement in healthcare systems and facilities. The development of a common HIMS integrated with the broader HIS, as proposed in the National Health Plan, will be essential to improving the collection and analysis of accurate health data.

Culture and society

> "There is a great deal of interest in film in PNG, particularly among youth."

The arts and culture sectors in PNG can provide new opportunities for economic growth. Traditionally, this sector has been focused on the production of handicrafts. But the production of contemporary films, music, theatre, and fine arts that appeal to a global consumer market are an untapped resource for both cultural expression and economic development. Digital technology can help expand the sector by providing new opportunities for communication, collaboration, and community building.

Arts activism has a long history in PNG and has been used to address various social, political, and environmental issues such as domestic violence, gender and identity issues, deforestation and climate change, and the impacts of mining on local communities. Digital technology has become an increasingly important tool for arts activism in PNG. Platforms such as Facebook and Instagram are used to share images, videos, music, and key messages in activist campaigns.

Social media platforms allow and actively encourage members of the public to share their own stories and experiences, further contributing to arts activism campaigns and increasing their reach and impact while creating a sense of community and solidarity. By leveraging digital communications tools, PNG activists are able to reach global audiences and spread their messages beyond their local communities.

Communities can use technology to preserve their culture and protect PNG's rich diversity. Digital archives of cultural artifacts such as music, dance, art, and oral traditions can be shared widely and are accessible to future generations. Digital technologies can also be used to create online educational resources that teach people about PNG culture, language, and traditions. This can help young PNG people access this crucial knowledge and learn about their heritage even if they live far from their ancestral homes. It can also help improve understanding of PNG culture in Australian schools and communities.

Art Activism PNG

Art Activism PNG is a new youth-led movement using art as a vehicle to drive change in PNG. Founded in July 2022, Art Activism PNG provides a platform for more than one hundred young PNG art enthusiasts to address social issues in PNG. Its signature project, #ARTACTIVISMNIGHT, is a show that allows artists to dissect complex social matters such as gender and sorcery accusation-related violence, corruption, and LGBTQI+ issues through their specialised artistic disciplines. The project welcomed more than 600 residents in Port Moresby through its doors, keen to learn about important issues seldom discussed in public. Art Activism PNG launched three virtual projects in November

2022 to connect with people in other parts of PNG and around the world, including HEAR OUR VOICES, The Different Perspectives Project, and The Artist Feature Project.

Digital sports diplomacy

"Sport is a powerful vehicle for changing mindsets about gender roles in PNG."

Sport plays a powerful role in both diplomacy and development in PNG. When combined with digital tools, its impact can be further amplified. One element of improving Australia-PNG relations has been the use of digital technology and sport to promote mutual understanding, cultural exchange, and social development. Sport, particularly rugby league, is a shared passion for both countries and has been a unifying force for decades. It has also provided opportunities for presenting a more positive image of PNG in Australia and of encouraging greater cross-border media engagement.

Within PNG, digital technology has been used to amplify the positive influences of sporting role models when it comes to leadership, integrity, healthy lifestyles, and gender norms. When women and men stand on the same stage in sport, it improves perceptions of women as equal partners in other aspects of life such as politics, business, education, and in family dynamics.

Harnessing the passion that people have for sport and using that positive energy to motivate them in other fields has led to visible changes in social relations in PNG communities. Community sport programs have encouraged participants to take responsibility not just for their own actions but to play leadership roles on important social issues. This has empowered individuals who might otherwise have felt unable to effect change. These programs have helped to disseminate key messages, for example, in anti-violence initiatives.

Conference participants noted that there were many positive programs already in place in PNG, but these programs could benefit from greater community awareness. The main constraints for promoting stronger digital links in the sports sector remain low capacity on the PNG side, limited data flows, poor connectivity, and unaffordable access to digital devices.

Climate change and disaster response

> "Climate change is a lived experience for people in PNG. [Advocacy] is not always data-driven, particularly in areas where data collection is poor or non-existent."

More support is needed in PNG for field research into the effects of climate change. The information that is gathered needs to be standardised and digitally transmissible to contribute to regional research projects and policy advocacy. Improving data collection would strengthen advocacy on the environmental impact of projects in PNG's resource extraction sector.

PNG government agencies can partner with Australian counterparts and technology companies to use cloud computing facilities to store and share climate change and disaster-related data. This would allow authorities in both countries to collaborate and refine mitigation strategies. Cloud computing can support the development of climate change and disaster simulation models and the testing of response plans. This is particularly valuable as dramatic weather events become more damaging in line with the effects of global climate change.

Dedicated mobile apps and social media platforms can be used as part of early warning systems for natural disasters, providing real-time information to authorities and impacted communities, especially those in remote areas.

Apps can be used to provide critical information such as emergency contacts, shelter locations, and safety tips to people affected by disasters. They can help coordinate response efforts and mobilise volunteers and donations, while allowing authorities to track the needs of affected communities across remote areas from a central coordination centre.

Remote sensing technologies, such as satellite imagery and drones, can be used to assess the extent and impact of deforestation, sea level rise, changes in weather patterns, and natural disasters, and to identify areas in need of assistance. Remote sensing can be used to monitor the progress of disaster recovery efforts, supporting long-term planning and development.

Apps can be developed to help farmers optimise crop yields, while minimising environmental impact. These tools can provide information on soil quality, weather patterns, and crop growth, helping farmers to make informed decisions about when to plant, irrigate, and harvest their crops.

Elections

> "PNG's 2022 election was the first social media-heavy election. It won't be the last."

PNG's 2022 election suffered from incidents of community violence, allegations of fraud, and other irregularities. It also saw high levels of false or misleading election-related information proliferate on social media. Nevertheless, digital technology can play a significant positive role in PNG elections by improving the accuracy, efficiency, and transparency of the electoral process.

Digital technology can be used to create and maintain voter registration databases, allowing for more accurate and up-to-date electoral rolls. This can help to reduce the risk of voter fraud and improve the integrity of the electoral process. With a young population, it is also important that people can quickly and easily register to vote when they come of age.

Digital technology can be used to provide voter education materials, such as candidate profiles, issue summaries, and voter guides. Civil society and government authorities can also use digital platforms to progress women's political participation in PNG. These materials can be distributed via social media and other mobile apps, making them more accessible.

Safety and inclusion

"Governments have a responsibility to keep people safe online, but they can't do it alone."

New technology comes with new risks. PNG needs more support to establish a digital ecosystem that empowers safe, connected, and resilient communities. Digital connectivity requires meaningful communication between technology companies, government regulators, and users in the community.

Most communities in PNG currently do not have access to digital infrastructure such as broadband internet. But among those communities that do have access, not everyone has the skills and knowledge to use digital technologies effectively. This can create inequalities and limit the benefits of digital technology for communities in rural and poorer areas, creating a digital divide within PNG.

Digital technology can raise privacy concerns, particularly related to the collection and use of personal data. Data breaches are increasingly common globally, as is the use of personal data for marketing or other purposes without consent.

The spread of misinformation and disinformation online in PNG needs to be actively managed through collaboration with technology companies, law enforcement, and other government authorities. Regulators need to strike a balance between online safety and upholding democratic principles of freedom of expression. Allowing for informed political disagreement is a critical component of a thriving community and civil society.

The PNG government needs material, technical, and regulatory assistance from Australia and the business community to support its national cyber security capability. Malware, ransomware attacks, and phishing are becoming increasingly common in PNG. Cyber criminals are using these tactics to steal data, disrupt government and business systems, and extort money from individuals and organisations. Nationwide cyber resilience is vital for PNG's national security and for its regional and global connectivity ambitions.

The role of technology companies

"Don't think about the money, think about the goal of providing universal access."

Technology companies have a critical role to play in supporting PNG's digital transition by providing expertise, resources, and infrastructure to help the country develop its digital economy and improve access to digital services.

While PNG may not always present a lucrative market for the tech sector, it has a sizeable youth population keen to take up digital technology to meaningfully participate in the future economy. Despite uneven access across the country, digital technologies have permeated many aspects of political, economic, and social life in PNG communities. Digital technology will only become more ubiquitous in the PNG landscape over time, meaning that tech companies have a responsibility to ensure that their products are used safely.

Government agencies have a clear mandate to build safe and resilient digital communities but often lack the technical expertise to sufficiently link policy challenges with technological solutions. Technology companies do have some programs in place to build partnerships with government authorities, industry bodies, and civil society in PNG, but these efforts need to be expanded.

By virtue of their scale and community impact, technology companies play a critical role in the development of countries such as PNG. Corporate community outreach and social programs need to be resourced commensurate with this significant responsibility.

Tech companies boast an impressive suite of off-the-shelf user and small business support platforms. But these applications tend not to be tailored to a Pacific context, remain poorly understood locally, and can be difficult to access. This risks further increasing the digital divide between developing and developed economies, as the latter accelerate their digital transitions. For PNG, this will introduce new obstacles to its aspirations for prosperity and better global connectivity.

Technology companies should aim to provide training and education programs to help develop the digital skills of PNG's workforce in ways that suit local conditions. This can include programs to develop digital literacy, technical skills, and entrepreneurship skills. Technology companies can support innovation in PNG by partnering with local start-ups and entrepreneurs. This can help to develop new digital products and services that meet PNG's specific context.

Full list of recommendations

Data

1. The Australian and PNG governments should fund and support major organisations such as the PNG National Statistical Office, Bank of Papua New Guinea, and the Treasury to bring together and host key economic data in a single digital location, accessible to researchers and the public. Collaborations with the private sector, including banks and superannuation companies, should be encouraged to provide more timely data on the state of the economy.

2. Australia should support PNG government departments to digitise their data holdings to enable better collaboration with public policy research activities, leading to better cross-border policy design.

3. PNG government departments should actively work to break down information silos and institutionalise information and data sharing, ensuring better service delivery across all agencies, from law enforcement to health and education services.

4. The Australian and PNG governments should partner to provide data skills training for PNG public servants, policymakers and public policy researchers to enable better evidence-based policymaking.

5. The Australian government should support the rollout of database management skills and general internet skills training to PNG policy researchers and local community organisations.

6. The PNG government should prioritise electronic data collection and actively seek to build and connect public policy databases across all sectors, including health, education, employment, and public service management. It should ensure key indicators such as gender equality are included in the database. Online access to digital databases is vital to overcoming obstacles placed by difficult geography and limited field research resources.

7. The Australian government should improve the transparency of its development cooperation activities across the Pacific and provide more publicly available information about projects, such as the large-scale infrastructure Coral Sea Cable project.

8. PNG should digitise its electoral roll, and this should be publicly available so voters can check their details are correct.

Business

9. The business community should work directly with PNG power companies, government departments and local communities to contribute to PNG's electrification.

10. The Australian and PNG governments should partner with technology companies to roll out training on digital communications platforms to PNG communities to increase the public's understanding of the value of freely available digital tools and improve its ability to use them safely. The training should be contextualised to PNG and messages need to be locally relevant and ideally delivered by a local digital champion.

11. The Australian government should support the implementation of PNG's digital strategy by using its convening power to engage the Australian technology business sector to contribute to and help implement a detailed, actionable plan for a more digital PNG. The aim should be to expand the scope of the strategy beyond the digital delivery of government services, to business and the creative sector.

12. The business community should increase their community development contributions and provide more support to grassroots development organisations, especially those organisations that have a cross-border presence.

13. The Australian business community should mentor and champion the SME sector in PNG, supporting entities to increase their digital reach and market penetration.

14. The PNG government should establish full interoperability across all mobile phone carriers so users can retain their numbers when seeking better deals in the telecommunications marketplace.

15. Telecommunications companies should conduct community outreach to help unbanked or underbanked people access and use mobile wallet technology on feature or smart phones.

16. The PNG government should work with the business community to build a common understanding of cyber threats and provide coordinated support to the business sector.

17. The Australian government and business community should encourage and support programs that re-purpose used technology products for distribution in PNG, limiting e-waste in Australia and reducing device poverty in PNG.

18. Technology companies whose products are widely used across communities in PNG should have an in-country presence and establish strong in-person relationships with local universities and community organisations. This would improve companies' understanding of their operating environment and would facilitate greater uptake of their online courses and training resources, particularly through collaborations with local actors.

19. Australian labour mobility schemes should incorporate training on SME development and focus on the reintegration of workers upon their return to PNG.

20. The PNG government should work to improve the affordability of retail internet data prices, including by considering monitoring and regulatory mechanisms.

Health

21. The PNG government should ensure widespread implementation of an integrated HIS and HIMS in all health facilities across PNG to facilitate timely data collection and analysis, and to optimise resource allocation. This should be supported by paid administrative staff, training to use the systems, and access to stand-alone HIS devices with internet.

22. The Australian government should partner with technology companies to use digital platforms to deliver public health education, particularly on nutrition and vaccinations, to PNG communities and healthcare providers.

23. There should be digital hubs established in PNG hospitals and health centres to improve data collection. Data hubs would also enable access to current best practice guidelines and education tools, strengthening evidence-based practice. Hospitals should identify digital champions to lead data education and training.

24. The Australian government should partner with technology companies to support a transition to digital logistics systems for procurement in the health system.

Education

25. The education sector should be a priority target for digital connectivity activities, as the benefits of empowering students are generational and contribute to improved political, economic, and social indicators.

26. The Australian government should support more online education courses for PNG students, incorporating creative education scholarships.

27. Digital literacy should be integrated into all development cooperation activities.

28. Australian educational institutions should be encouraged to incorporate Pacific agriculture content into their courses, including a focus on digital tools for smallholder farmers to manage their crops. Institutions should also look for opportunities to provide in-country study and volunteer or work opportunities in the agriculture sector.

29. The Australian and PNG governments should strengthen their partnerships with technology companies to provide election education to young people in PNG as they come of voting age, noting their preference for learning via digital platforms.

30. Online education programs provided by Australia should be PNG-developed and led where possible. These programs should be available offline to mitigate connectivity problems.

31. Open access education and training available in Australia should be made available to communities in PNG.

32. Large scale development projects should have built-in succession planning and capacity building, prioritising uplifting PNG's long-term capabilities.

33. Microfinance projects should be paired with micro-credentials in finance and digital literacy.

Community and grassroots

34. The Australian government should work more closely with small-scale NGOs and grassroots organisations that work directly in communities, building local skillsets while achieving meaningful outcomes where they are needed most.

35. The Australian government should support a local PNG community organisation to develop a parenting mobile application with offline functionality that parents can use for advice on health and nutrition, education, and family issues.

36. The PNG government should establish digital public spaces in towns and urban centres that can act as information hubs, providing exposure and skills training on the use of this technology, as well as free wi-fi access to support uptake.

37. Noting the high interest among PNG's youth in digital connectivity, sports development ambassadors should focus their advocacy and outreach on digital platforms.

38. The Australian and PNG governments should encourage cross-border partnerships among NGOs and the community sector, enhancing mutual learning opportunities and building on people-to-people links.

39. Education, sports, and community associations in Australia should actively encourage members to volunteer in PNG or support development activities through their work. These links could initially be made through social media platforms, leading to in-person exchanges and activities.

40. The PNG government should support systems and programs for individuals from peripheral PNG communities to learn and earn in urban centres and take those learnings, skills, and technology back into their home communities to ensure the digital divide is addressed on local terms through local agency.

41. Digital platforms should provide safe spaces for hosting communities of interest for gender diversity and LGBTQI+ advocates, noting the difficult local conditions faced by actors in these spaces.

42. PNG should host a civil society and non-profit sector conference, with the participation of the public, media, and business sector, leading to a greater integration of diverse community development projects.

43. The Australian government should establish cloud-based templates for project proposals, implementation, and reporting that are widely accessible by grassroots organisations and improve transparency in the development sector.

Arts and culture

44. The Australian and PNG governments should provide more support to local creative industries, recognising the potential contribution this sector can make to trade, employment, and genuine community people-to-people links.

45. The Australian and PNG governments should encourage more professional partnerships between Australian and PNG media houses, amplifying reach and improving cross-cultural understanding.

46. The Australian and PNG governments should continue to support media linkages to bridge the information divide between both countries. Media organisations should continue to prioritise building a deeper understanding of developments in both countries.

e-Government

47. The PNG government should prioritise the rollout of digital identification for as many people in PNG as possible, improving access to the financial sector. Digital financial flows would be better regulated if there was better integration of customer data.

48. The Australian government should support PNG to digitise its passport application processes.

49. The PNG government, with support from the Australian government and private sector suppliers, should establish cloud-based standardised forward planning and project management timelines for use by

government departments in their service delivery. This would support open government objectives and provide transparency and accountability in project delivery, as well as improve consistency in approach and help break down information siloing.

Participant biographies

PNG participants

Ruben Enoch

Ruben, from the Nipa-Kutubu District in PNG's Southern Highlands Province, graduated from the University of Papua New Guinea with a Bachelor of Arts (social work and public policy). He started his career as Foreign Service Officer with Papua New Guinea's Department of Foreign Affairs. Over nine years, Ruben worked predominantly in the Asia Branch, as Policy Officer responsible for PNG-China relations and PNG-Indonesia relations, including PNG's engagement with the ASEAN Regional Forum (ARF).

Zohra Johnwell

Zohra is a professional social worker specialising in safeguarding. In 2014, she founded the home-grown civil society organisation Pikinini Watch PNG and continues to partner with the UNICEF Spotlight Initiative to champion positive parenting in Port Moresby's urban communities. Zohra has supported numerous Government of Papua New Guinea departments and agencies, mainline churches, faith-based organisations, NGOs, sports associations, and research and training institutions through her work with Abt. Associates. Zohra now works on child development, positive parenting, and children's online safety and is moving into the space of mental health. She is an advocate against all forms of violence against children. Zohra is a strong believer in social justice and Melanesian values. She is also a student at the University of Melbourne pursuing a Master of International Relations.

Jean Kirarock

Jean has been a Migration Officer at the PNG Immigration & Citizenship Authority for just over a decade, primarily in the Enforcement and Compliance space. The highlight of Jean's career was the appointment to a newly created Intelligence Analysis Branch six years ago. Starting with no experience in intelligence analysis, Jean made use of available resources and training opportunities, combined with her passion and zeal, to confidently enforce various instruments of migration legislation in the regulation of entry and stay of non-citizens in PNG. She meaningfully contributed to the communal protection of PNG's borders and sovereignty with partner agencies. In June 2022, Jean started a Combined Studies in Masters of Intelligence and Master of Security and Strategic Studies at Sydney's Macquarie University, under an Australia Awards scholarship.

Nelson Kokoa

Nelson is the founder and director of Art Activism PNG, a movement aiming to educate and provide awareness through art. Art Activism PNG provides a platform for thought-provoking conversations about pressing issues and topics restricted by cultural values, societal norms, and other belief systems in Papua New Guinea. Recognised as a Clean Generation Ambassador, Nelson worked with prominent youth NGO, The Voice Inc., to help young people reach their potential and equip them with the tools needed to positively impact their own lives and communities.

Thierry Lepani

Thierry is a political journalist working for the Post-Courier newspaper, a major PNG broadsheet. He has had the unique privilege of covering and reporting on a range of PNG's national challenges and achievements over the past two years. Being a political journalist, Thierry has a broad knowledge and understanding of the country's political landscape, government agenda, and the political struggles playing a key role in PNG's development.

Laurelle Pentanu

Laurelle is a technical consultant for the Centre for Humanitarian Dialogue and is currently working in Arawa to help shape post-referendum Bougainville. Laurelle is Chairlady for the Central Bougainville Tourism Association, which aims to prepare short-medium term industries for a long-term economic future. She is proprietor of Uruna Bay Retreat on Pokpok Island, Bougainville, established as a neutral platform for the Government of PNG and the Autonomous Bougainville Government to host consultative meetings. Laurelle has over seven years' experience in policy divisions of the PNG Department of Foreign Affairs and Trade.

Serah Pyawa

Serah currently works at FHI 360, a non-profit organisation striving to improve the health and wellbeing of people in Papua New Guinea. As Program Manager for USAID and Global Fund projects, Serah is helping to strengthen health information systems related to Covid-19 across 16 provinces. In another project, Serah is working on a Diagnostic Network Optimisation (NDO) exercise, which seeks to use national health data and geospatial modelling to inform a national health plan. Prior to this, she worked as an environmental scientist in PNG's oil, gas, and drilling exploration industry. Serah is passionate about her role with Eco Services Ltd (ESL) in which she serves as the HR chair and sits on the governance board. ESL is a nationally owned and operated social enterprise that trains young Papua New Guineans to work and gain relevant industry skills and technical experience.

Moses Sakai

Moses is a researcher and tutor at the University of Papua New Guinea's (UPNG) School of Business and Public Policy. He has published widely on PNG's issues including human rights, capital punishment, higher education programs, and mobile data prices, on The Interpreter (Lowy Institute), DevPolicy Blog (Australian National University), and Eleos Justice (Monash University). Moses' articles have been republished and featured in PNG's three major newspapers, PNG Report Magazine, and Fiji Times, and he has presented at conferences such as UPNG's and ANU's PNG Update. Moses spoke at the 8th World Congress Against the Death Penalty, Berlin, Germany, November 15-18, 2022. He holds a degree in Public Policy Management (UPNG) and completed a Master of Economics and Public Policy (UPNG) under a scholarship from the Development Policy Centre, ANU.

Luania Temu

Luania Temu is the General Manager of Savitec Limited, a PNG-owned and operated company involved in the print technology, networking, and communications sectors. She is the only female General Manager in the industry and has led the company to achieve Elite Dealer status for Ricoh Global. This achievement is the highest attainable level for any dealer worldwide and the first of its kind for PNG and the company. Luania is also an entrepreneur and no stranger to the fashion retail industry, with experience also as a business development adviser and consultant. She also sits on the steering committee for the PNG Business Advocacy Network and has represented the country at several global events to push forward the women's agenda. Luania is passionate about capacity building initiatives that upskill and mentor young Papua New Guineans and is a proud partner to the Royal Constabulary Family Sexual Violence Units (FSVU) teams in Port Moresby and Central Province. A frequent donor to charities, schools, community youth projects and churches, Luania is a firm believer in social philanthropy.

Methuselah Wabiria

Methuselah is an economist currently working as the Investor Relations Manager for BSP Financial Group. He previously worked in investment management, financial services, and the oil and gas industry. Methuselah hopes to contribute to the modernisation of PNG's economy, including shaping an equitable economic growth pathway. He is passionate about volunteering, with experience at Transparency International PNG, The Voice Inc., the Kokoda Track Foundation, and the Young Professionals Network. These organisations have helped Methuselah develop advocacy skills and an awareness of PNG's issues and its place among PNG's Pacific neighbours.

Australian participants

Clare Akauma

Clare is an Australian-Papua New Guinean women born and raised in Australia, with roots in Kairuku (Central Province), and Yule Island. Clare is currently employed at GrainCorp, which receives and stores grains and other commodities. For the 2022 summer gain harvest, Clare is working at the regional site, The Gums, in Queensland's Western Downs. After harvest, Clare will relocate to Brisbane and resume her position as Assistant Site Manager at the Fisherman Island Terminal, Port of Brisbane. Along with her agricultural pursuits, Clare represented Papua New Guinea in the 2020 National Women's Rugby XVs squad, the Cassowaries. Clare also played in PNG's National Women's Rugby 7s squad, the Palais, in 2019 and nearly represented PNG's Orchids at the 2022 Rugby League World Cup. Clare aims to reside in Brisbane to create more opportunities for PNG agricultural ambassadors and meaningfully contribute to Papua New Guinea's agricultural development.

Anneliese Austin

Anneliese is an early-career researcher from Southern Cross University, working as a gender equity and social inclusion advisor with Bees for Sustainable Livelihoods (B4SL). B4SL is an NGO supported by the Australian Centre for International Agricultural Research (ACIAR) working throughout the Pacific region to improve the productivity, sustainability, and technical capacity of honeybee value chains in Papua New Guinea and Fiji. She is currently conducting her PhD research on approaches to support the socio-economic empowerment of women beekeepers in the Pacific, targeting both the informal and formal structures which limit women's capacity to benefit from their participation in beekeeping and agricultural development.

Matthew Igo Ball

Matthew is a business leader, philanthropist, and storyteller. With a background in business operations, stakeholder engagement, management, and human resources, he is currently the Sales Manager for the world's largest air services provider, dnata. His role during Covid-19 was to diversify the business into new positive revenue streams while the aviation industry came to a halt. In his spare time, he is President of the not-for-profit, Project Yumi Inc., which distributes educational and medical equipment across PNG, including delivering youth education programs. Matthew holds a Master of Business Administration from QUT, where he was the youngest in his cohort to graduate. Matthew has a passion for giving back to his homeland and inspiring the next generation of leaders.

Sarah Bornstein

Sarah is an emergency nurse specialist based in Darwin. She has been supporting emergency care capacity development activities in PNG for the past four years. Most recently, Sarah acted on behalf of the Australasian College for Emergency Medicine (ACEM) as project lead for the Emergency Care Capacity Development Remote Training and Support Model Project. The project is part of a Clinical Support Program facilitated by Johnstaff International Development on behalf of the Australian Department of Foreign Affairs and Trade. This project resulted in the development and rollout of 'Kumul Helt Skul' – PNG's first digital learning program for emergency care clinicians. Sarah holds a Master of Clinical Nursing with emergency specialisation and is currently completing a Master of Global Health at the University of Sydney. She is passionate about systems strengthening and capacity building in global emergency care and was recently appointed co-chair of the Global Emergency Care Community of Practice through ACEM.

Jack Growden

Jack is the Founder and CEO of LiteHaus International, an Australian NGO which has provided 200,000 students in Papua New Guinea, Australia, and the Asia-Pacific region with digital learning tools and opportunities. An award-winning emerging philanthropist, Jack has been recognised as one of the top 20 social innovators under-35 in the Asia-Pacific region and was named as a Finalist in the 2022 Young Australian of the Year.

Manu Kailom

Manu (they/them) is an aspiring writer and community development practitioner who works as a Community Development Officer for Three For all Foundation. Three for All Foundation is a not-for-profit international development organisation working with LGBTQIA+ populations in Papua New Guinea, Australia, and Asia, and in refugee camps of East Africa. In PNG, Manu leads projects on capacity development, working with key populations including LGBT groups. In Australia, Manu leads the Queer Refugee Asylum Seeker Program at Many Coloured Sky, chairs the Queer Refugee and Asylum Seeker Services Network, and sits on the Board for the Council to Homeless Persons Victoria. Manu is also a successful recipient of the Community Research Fellowship from the Melbourne Social Equity Institute at Melbourne University, starting in 2023. Originally from Wewak in East Sepik Province of PNG, Manu worked in Tourism and Development in PNG, Bougainville, and Solomon Islands before moving to Australia.

Clancy Kees

Clancy is an energetic community-builder, educator, and human resources professional with global experience in stakeholder engagement and socioeconomic mobility programs. He graduated from the University of Sydney with first class honours in 2014, specialising in anthropology and Spanish and Latin American Studies, and has since been fortunate enough to forge a career combining his love of travel with his quest for community impact. Clancy has a deep appreciation for humanity's diversity and places a premium on accountability to people and promises. Clancy's time is spent between Australia and PNG, supporting the delivery of equity programs to marginalised communities. In his current role as a consultant, he oversees the program management of CareerTrackers PNG, a PNG-led non-profit social enterprise that leverages internships as a tool for human capital development. Clancy played a key role in establishing the program in country, connecting him irreversibly with PNG and the aspirations of its youth.

Alyssa Leng

Alyssa is a Research Officer at the Australian National University's Development Policy Centre under the ANU-UPNG Partnership. Alyssa provides research and analysis on Papua New Guinea's economy, is a member of PNG's Central Banking Act Review Secretariat and was seconded to the University of Papua New Guinea as project coordinator in 2022. She was previously a Research Fellow and Economist at the Lowy Institute.

Owen Strath

Owen is a founder and Executive Director of CTE Australia and CTE PNG, a specialist electrical and mechanical engineering, training, and consultancy firm. CTE's main objectives include supporting the PNG government's target of electrifying 70% of the country by 2030 through expanding power and energy infrastructure, the development of renewable energy projects, and providing technical training programs to upskill the local workforce to an international standard. Owen is a business professional with extensive strategic advisory, regulatory compliance, and project execution experience across a broad range of sectors in Australia, Papua New Guinea, Singapore, and Malaysia. With over 15 years' experience across oil and gas, mining and resources, and major energy infrastructure projects, Owen has a long-standing relationship and love of PNG, beginning in the early 90's when he moved to Tabubil, Western Province, with his family. He has a keen interest in strengthening and improving economic ties between Australia and PNG. He currently sits on the Australia-Papua New Guinea (APNG) Association Committee, which aims to develop trade between Australia and PNG.

Stefanie Vaccher

Stefanie is an epidemiologist. Her current work focuses on routine childhood immunisations and health system strengthening. She previously led the COVID-19 surveillance team at WHO PNG and has lived and travelled extensively in PNG for the last two years. Stefanie is passionate about building research skills and data analysis capacity to support evidence-based decision making and program implementation. She has a PhD in Public Health and a background in HIV prevention and sexual health.

Acknowledgments

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