

Internet Access Study Findings and Workshop

Unleashing business growth through digitalisation:

Market Survey on Internet Access and Affordability Cost for Businesses in PNG

Workshop, Stanley Hotel






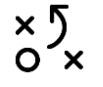
14th April 2026



**BUSINESS COUNCIL
OF PAPUA NEW GUINEA**
VOICE OF THE PRIVATE SECTOR

Workshop agenda



Session	Discussion points	Who	Time
 Welcome, introductions and workshop objectives	<ul style="list-style-type: none"> Welcome and opening remarks Brief the audience about the workshop and the objectives Overview of IAS context and purpose 	BCPNG	08:30-08:45
 Overview and key findings	<ul style="list-style-type: none"> Introduce the report including scope, context, methodology Provide perspectives on the opportunity for PNG, the key constraints for connectivity and affordability for enterprises and the implications 	Long Street Advisors	08:45-09:15
 Business internet and affordability insights	<ul style="list-style-type: none"> 20 key findings on PNG business use of the internet Learnings from the telecommunications industry on internet provision 	Long Street Advisors	09:15-10:05
<div style="border: 1px dashed gray; padding: 2px; display: inline-block;">Break</div>			
 Business and regional economic impact	<ul style="list-style-type: none"> Modelling the impacts at national and regional level Lever for scenario modelling and implications for policy and investment Outputs including economic estimates and provincial-level outputs 	Long Street Advisors	10:15-11:00
 Stakeholder feedback and action planning	<ul style="list-style-type: none"> BCPNG member reflections and additional stakeholder perspectives Questions and clarifications Use of findings for advocacy and engagement 	Attendees	11:00-11:45
 Close out and next steps	<ul style="list-style-type: none"> Summary of workshop discussion and follow-up engagement opportunities Dissemination and use of findings Closing remarks 	BCPNG/LSA	11:45-12:00

1.

Overview and key findings

Executive Summary



PNG has untapped opportunity for economic growth. Effective digitalisation of businesses is a key driver whose foundations are not yet established.

Current challenges	Complications	Implications	Opportunity
Unaffordable internet and coverage gaps	<ul style="list-style-type: none"> At around 30% internet penetration, PNG lags every ASEAN and Pacific neighbour Internet connectivity fit for a small business is unaffordable for over 80% of PNG earners Total Cost of Internet Ownership in PNG can be 1200% higher than expected in similar markets 	<ul style="list-style-type: none"> Despite price falls, unaffordability keeps the internet out of reach for thousands of PNG businesses Firms of all sizes are heavily burdened with the costs of internet and do not have money to invest in growth 	<p>Unleashing business internet across PNG could add K85 billion to the economy by 2035 and enable the growth rate to exceed the population growth rate (which is now 2.6%).</p> <p>Concerted action by government, industry and community groups is required. This can be grouped into three focus areas:</p> <ol style="list-style-type: none"> Achieve mass uptake of affordable, high-speed internet Fix network and power reliability Unleash PNG's digital potential for businesses
Unreliable power and connectivity networks	<ul style="list-style-type: none"> Businesses experience frequent internet outages, with the highest frequency among rural firms Businesses must invest in costly redundancies in order to continue business operations Mains power available for only 12% of PNG, and subject to frequent outages and surges Telecom operators face significant challenges 	<ul style="list-style-type: none"> Some businesses invest in 2 or 3 ISP contracts to mitigate the risk of disruption Lack of stable power inflates back up power supply costs and damages the online experience for users Significant connectivity industry reforms will be needed to address industry obstacles 	
A lack of meaningful adoption of digital business tools	<ul style="list-style-type: none"> Online activities remain limited to basic communications and search Cloud adoption is slow in PNG when compared to peer developing markets which are leapfrogging ahead Government digitalisation and digital literacy is slow to create change in PNG 	<ul style="list-style-type: none"> Fire-fighting connectivity distracts from an AI and digitally-enabled growth focus It is not financially or technically feasible or attractive for most businesses to transition to the cloud and adopt more advanced tech 	

This pack describes the state of business internet use and affordability in PNG today, provides insights from a market study on business internet access and key informant interviews (KIIs), and describes the upside opportunity across PNG and at a provincial level.

Contents

1. Internet use and affordability in PNG
2. Market study of business internet access
3. Industry challenges and the impact on internet costs
4. The growth opportunity from digitalisation
5. Province Fact Sheets
6. Next steps for unlocking growth potential



Over the next few years there is much work to be done to move PNG from the Taxiway to the Runway for digitalisation

Technological features of voice and basic internet era to digital ecosystem era



Taxi

- Basic web browsing, voice, text & email
- Standard definition video streaming
- Delays in coordination and business transactions
- Video calls with blurring, image loss and lag

2G, 3G and 4G

Voice and basic internet era

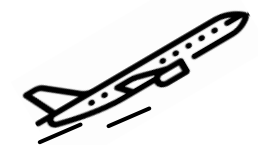


Runway

- Smooth web browsing, reliable broadband for daily business operations
- HD video streaming
- Real-time communication between branches and partners
- High speed data applications perform well

5G NSA, Fibre, LEO Sat

Video streaming era



Take Off

- Ultra-fast web browsing
- 4k/8k video streaming
- Cloud-native systems
- AI ready networks
- Massive machine-type communication
- Enhanced mobile broadband

5G SA, 6G and full fibre

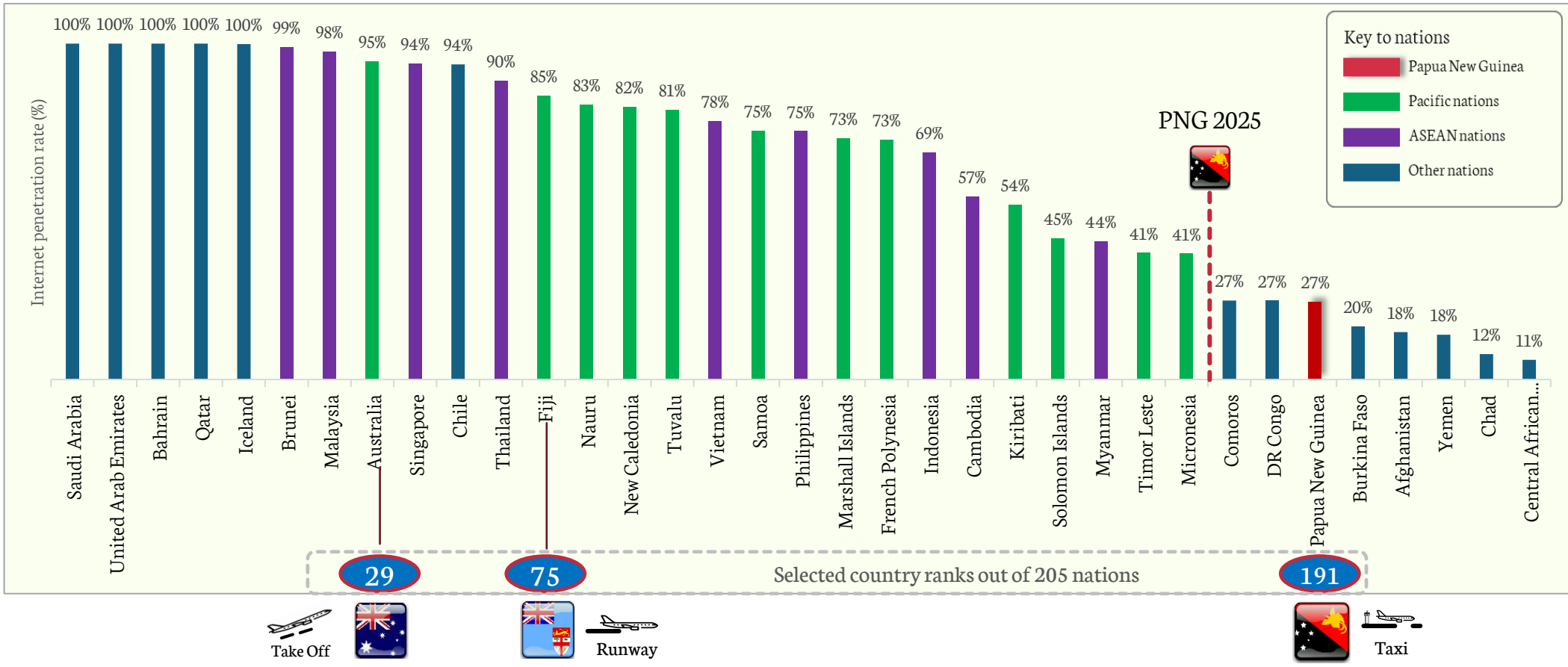
Digital ecosystem era



With around 30% internet penetration, PNG ranks behind every ASEAN and every Pacific neighbour



Internet penetration across selection of 205 countries (from 2017 to 2023; PNG's 2025 status is inserted; PNG was ranked 191st based on 2023 data)

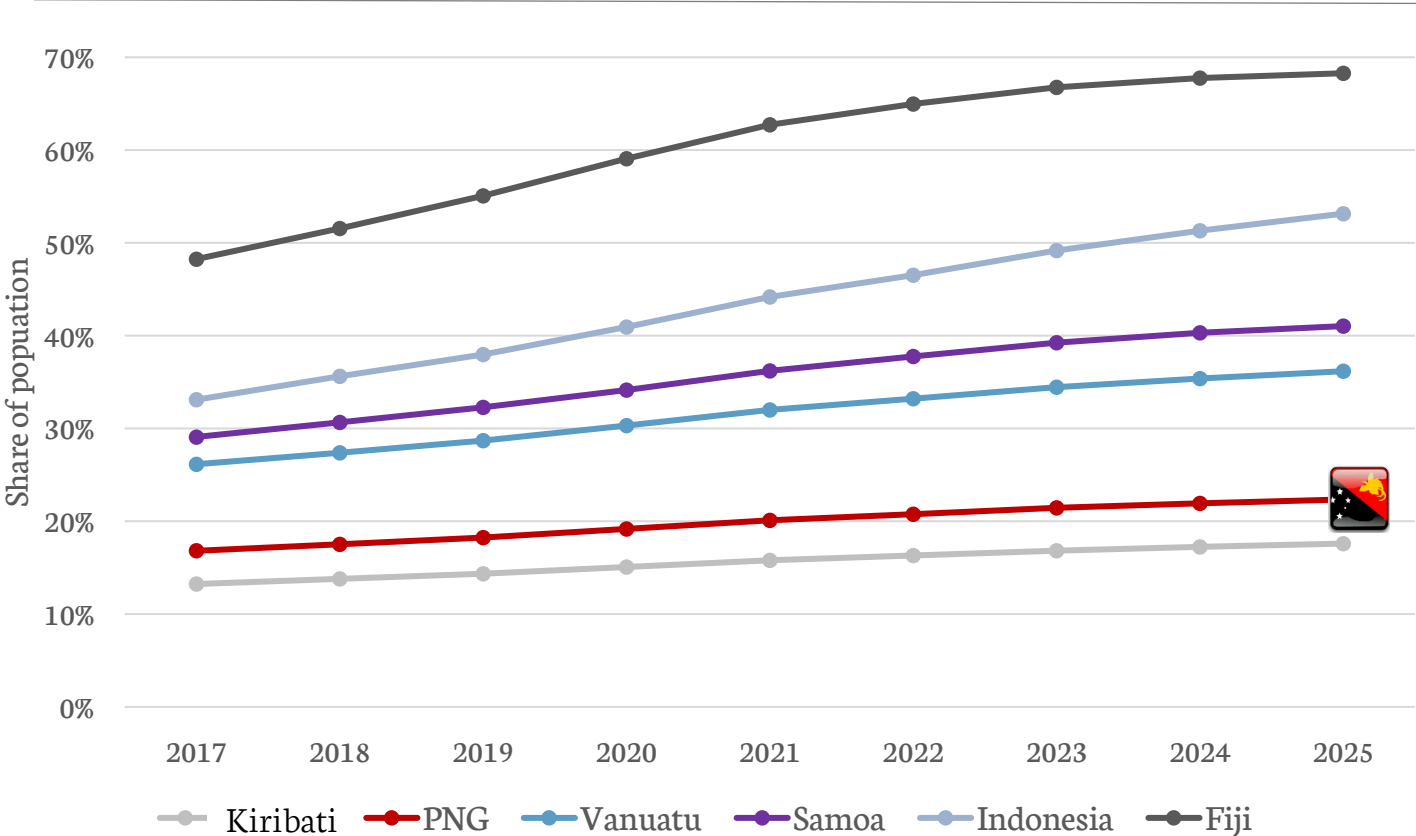


Note: Internet penetration is defined as population engaged in active internet use at least once in the past 90 days. World Bank definition and GSMA (next page) differ.
 Source: World Bank, Long Street Advisors analysis



The growth rate of mobile internet users has been flat in recent years, despite significant investments into the network

Mobile internet users as % of population, 2017-2025



Key observations

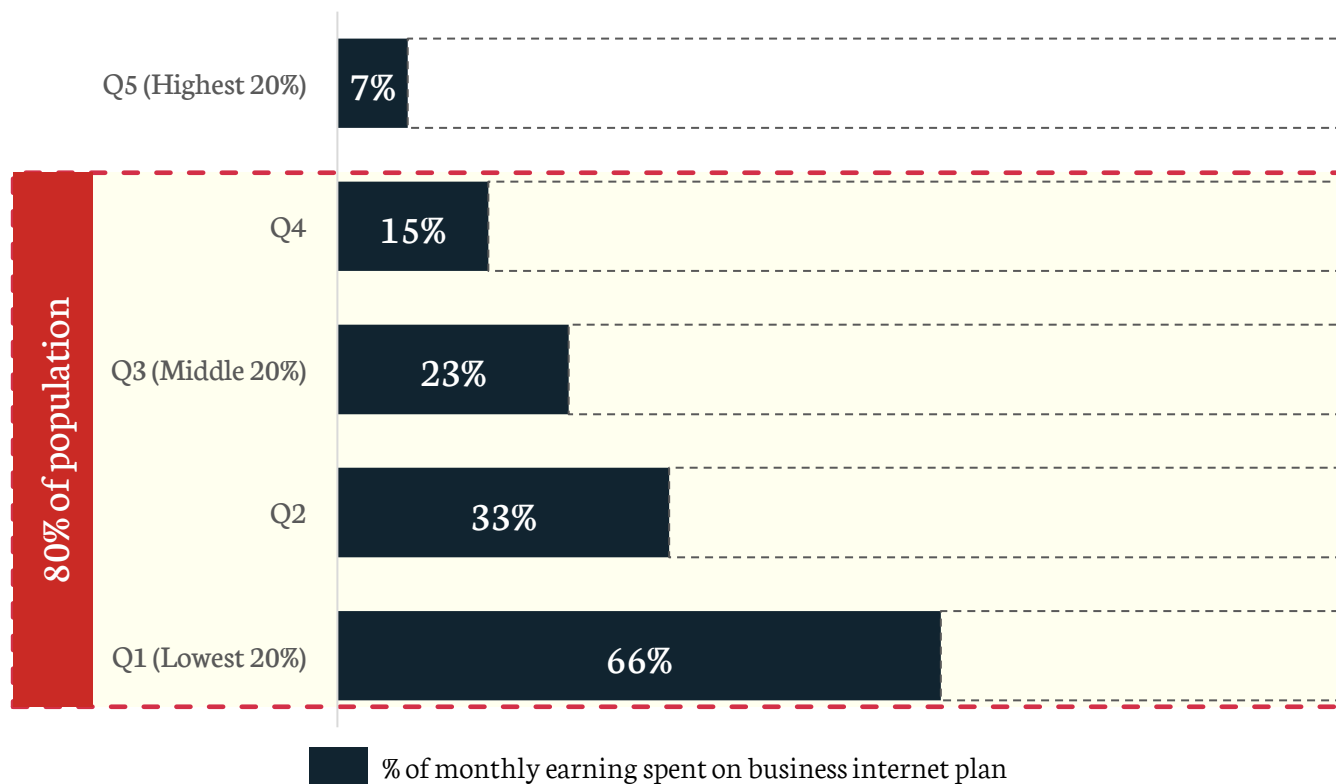
- PNG is one of only two Pacific nations with less than 30% mobile internet penetration alongside Kiribati
- PNG added only ~92,000 new internet users in 2024 (~8,000/month) -
- This shows that adoption growth is as low as around 6% per year, indicating a “plateauing” of internet growth
- High smartphone share (88%) as a % of all phones indicates that PNG’s handset owners are “internet-ready”

Source: GSMA; Long Street Advisors analysis. Note: definition of internet penetration differs between GSMA (above) and World Bank (previous page).

Mapped against monthly income, internet connectivity fit for a small business is unaffordable for over 80% of PNG earners



Monthly personal earning brackets (quintiles) vs monthly business digital basket, 2025 prices



Key observations

- The lowest 20% of earners would need to spend two-third of their income if they wanted to purchase a basic digital basket fit for business (see below)
- Even earners in the fourth quintile (Q4) would need to spend 15%, well above international norms
- This signals in PNG there are systemic barriers to business digital inclusion from pricing at its current levels

Internet package Voice and SMS bundle App access & add-ons

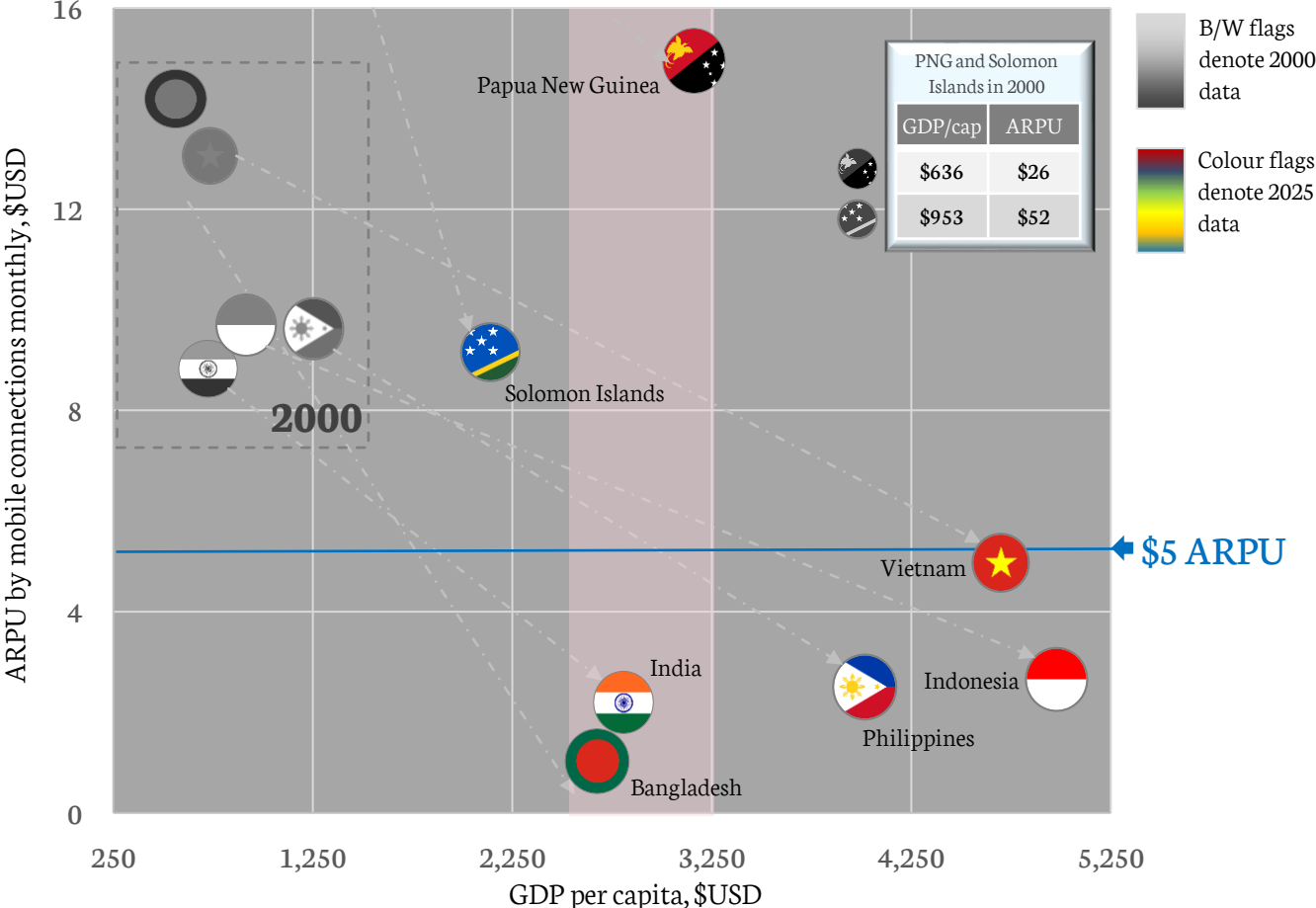
A monthly digital basket for business ~K150

Note: Income quintile and share data are based on the latest available World Bank figures from 2009. While the dataset is dated, the relative percentages are likely to remain broadly indicative of current patterns. Monthly digital basket cost based on Digicel rural PNG business internet (K500 for four staff, ~K125 each). Adding voice/SMS bundles and app-access add-ons from multiple providers lifts the estimate to ~K150 per person.

Source: IMF, Trading Economics, Vodafone, Digicel, Telikom, World Bank data, Long Street Advisors analysis

Peer nations to PNG have seen sharp improvements in high-speed internet affordability in recent years

Monthly average revenue per user (ARPU) and GDP/capita movement between 2000 and present day, selected countries



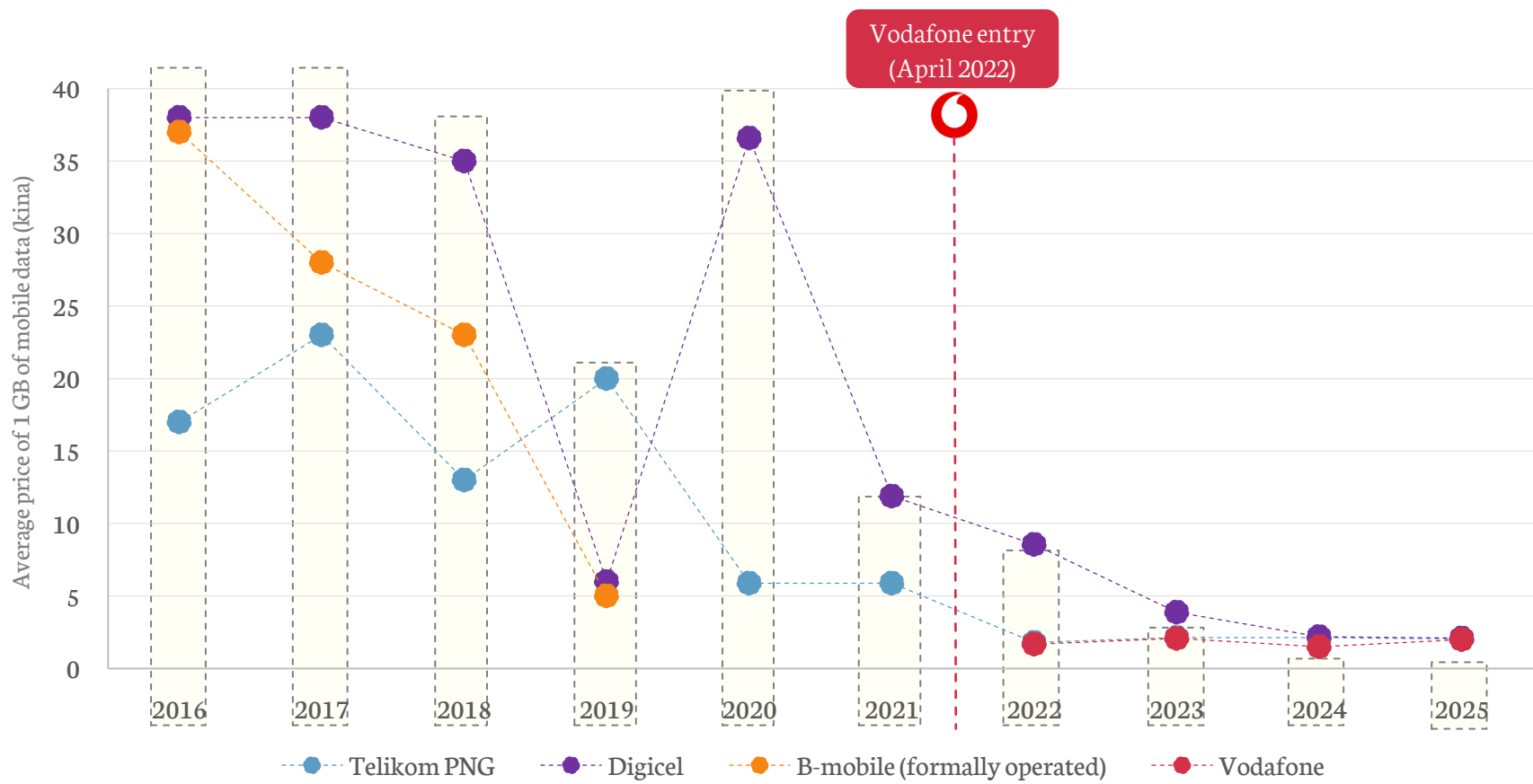
Key observations

- Prices relative to income in PNG are still 3-4x higher than peer Asian nations
- Asian peers provide significantly higher internet affordability than PNG:
 - India and Bangladesh have seen ARPU drop to sub US\$5, and have GDP/capita at PNG's level
 - Philippines, Indonesia and Vietnam also have sub US\$5 ARPU with incomes far higher than PNG

Unaffordability of internet in PNG persists, despite sharp price drops since the entry of Vodafone into the market in 2022



Average mobile data prices in PNG have dropped by over 90% since 2020



Price-led competition in PNG mobile, 2025
(Offer pages, Digicel, Telikom, Vodafone, 07.11.2025)

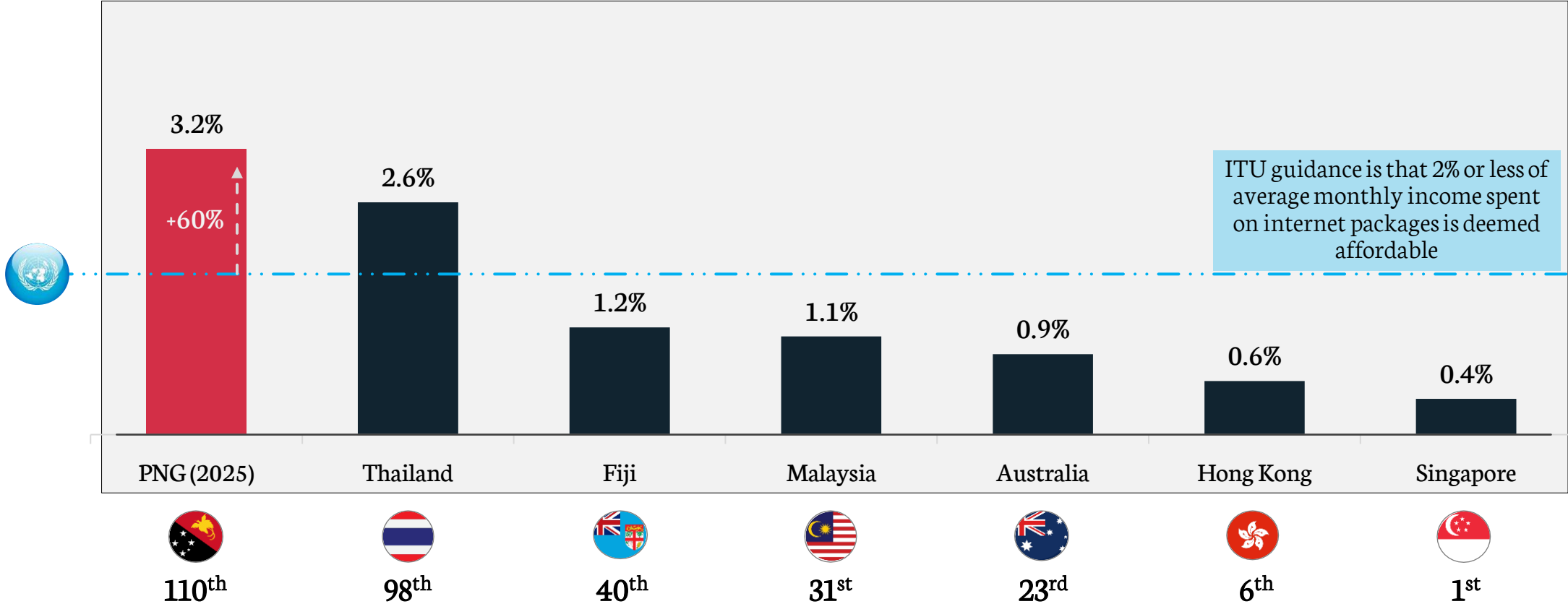


Source: Operator websites 07.11.2025 and historic, Long Street Advisors analysis



For businesses and consumers alike, PNG still has one of the least affordable telecom price levels globally, 60% higher than ITU guidance

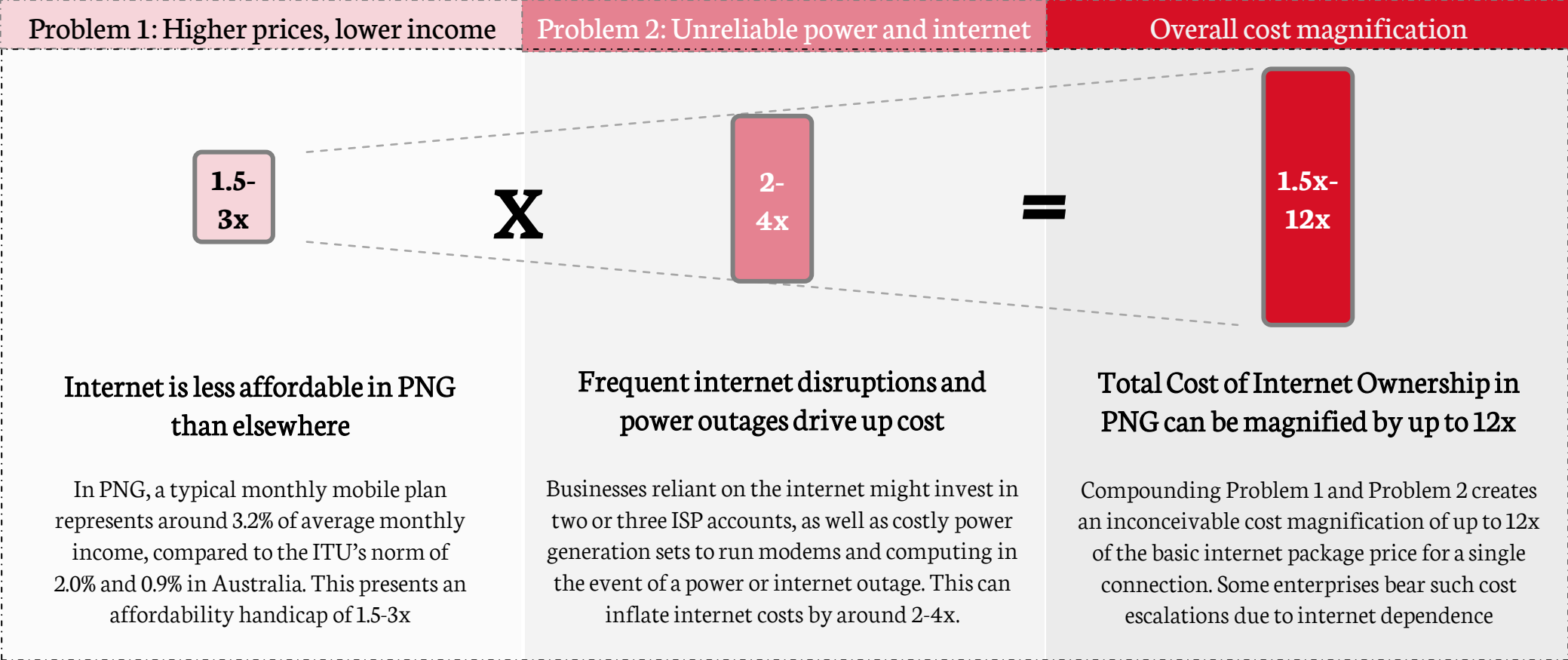
Average cost of a mobile monthly plan (10 GB basket used by consumers) against average income selected countries (PNG's 2025 price falls are reflected)



Note: PNG's 2024 ranking was 175th. For 2025, the percentage value has been estimated using current mobile monthly package plans from different telecom providers. On this basis, PNG's ranking is projected to improve to around 110th, assuming other countries' values remain unchanged.

Source: Broadband Genie, Vodafone, Telikom, Digicel, Long Street Advisors analysis

Total Cost of Internet Ownership in PNG can be up to 1200% higher than might normally be expected in competitive telecoms markets



Note: Total Cost of Internet Ownership (TCIO) is approximated below with service prices and power costs. A full TCIO would also include device and application costs. TCIO in PNG is almost certainly significantly elevated above any peer nation and would likely be among the highest anywhere in the world.

Source: Long Street Advisors analysis

2.


Business access and affordability insights

We commissioned 46 in-person interviews with businesses in 3 PNG regions, plus 9 digital responses, to understand their internet usage



Design parameters

- 55 responses
- Cover rural and urban
- Cover multiple locations
- Micro, small, medium and large firms
- Industry diversity
- Use a local survey firm - Asples Pacific Research



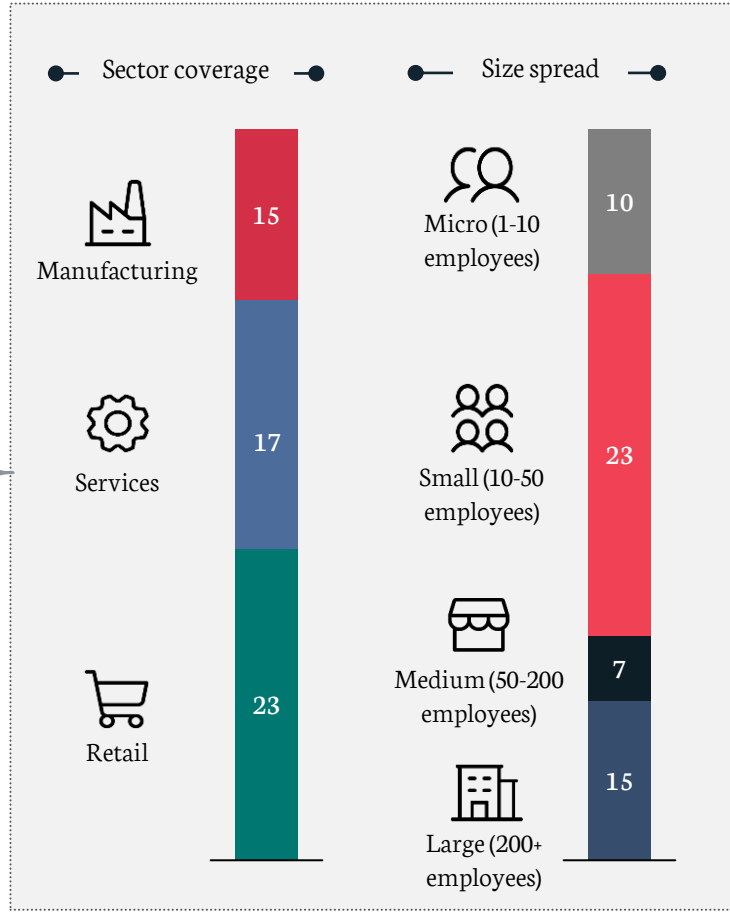
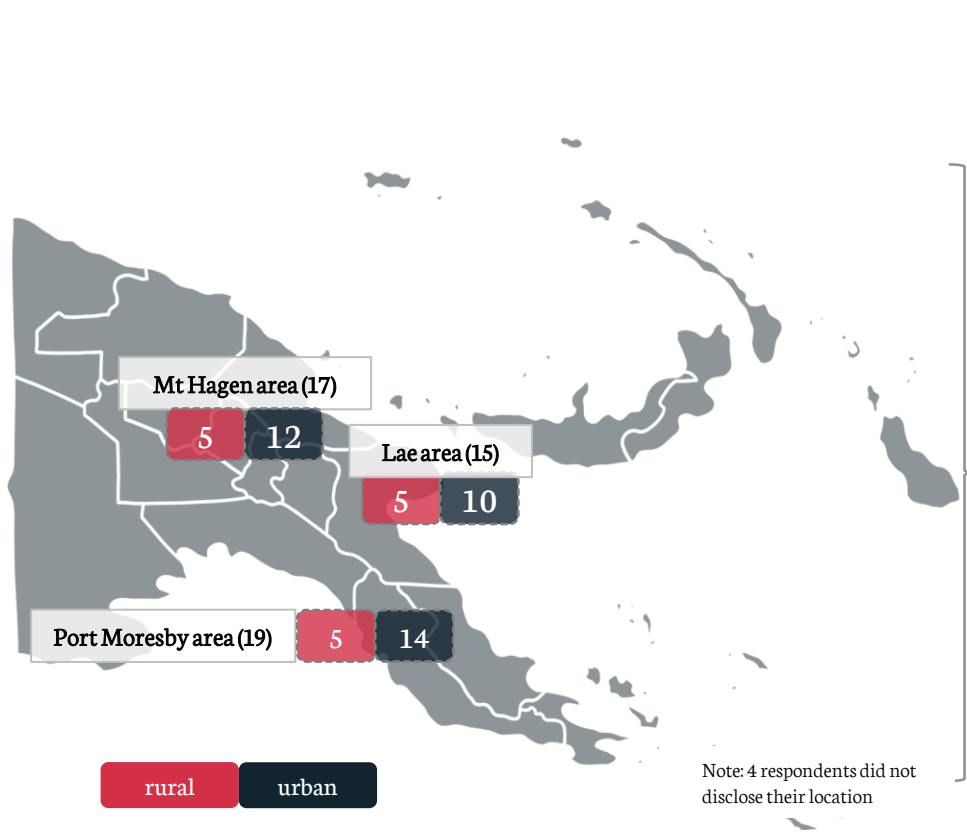
Pros and cons of survey

Pros

- In-depth insights gathered
- Covered businesses in cities and outside cities

Cons

- Not statistically significant samples
- Geographic coverage limited to three regions



Note: Cities identified on the map show are where the survey teams were based to conduct interviews in cities and surrounding areas

Additional insights

- 20+ key informant interviews with senior stakeholders
- 9 responses from digital survey
- Roundtable held at BCPNG and Lae Chamber of Commerce



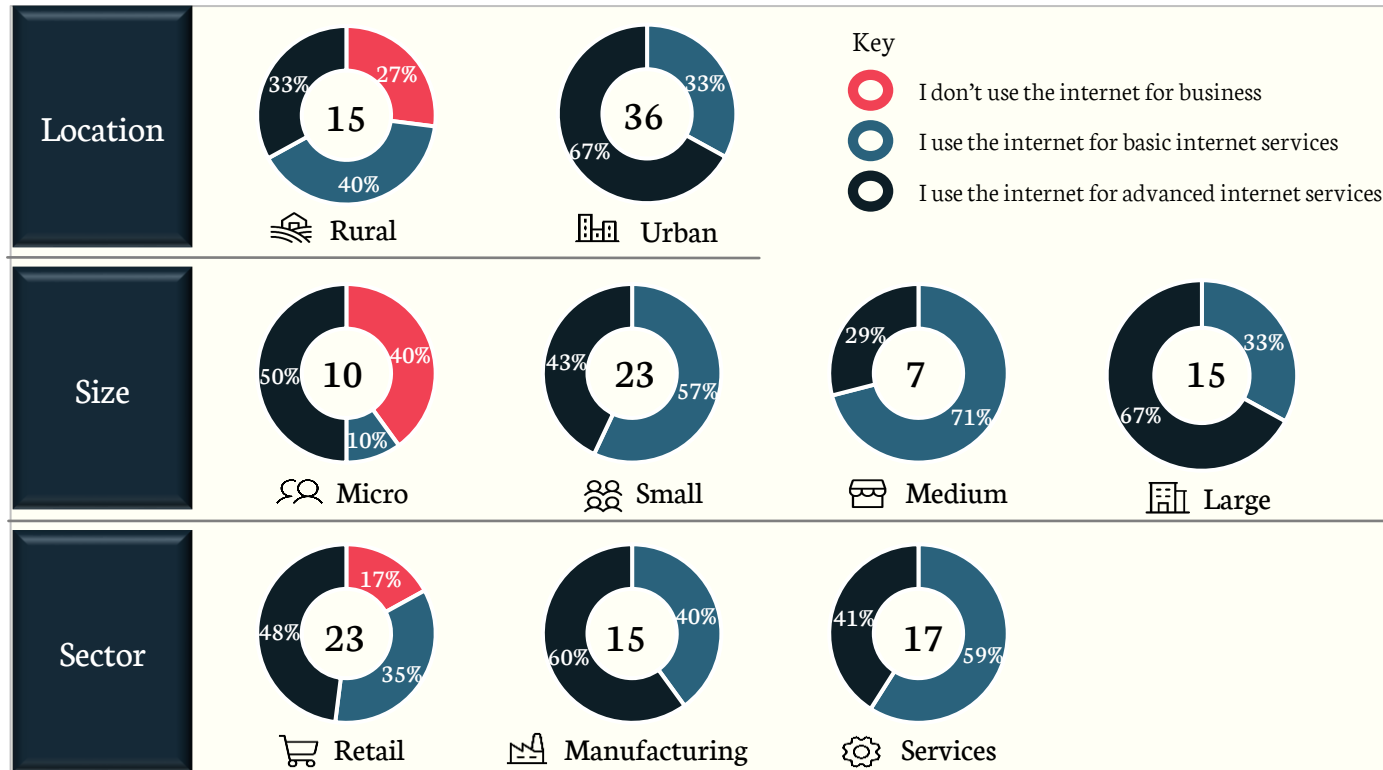
We present 20 charts from the market access survey grouped under usage, affordability, challenges and demand

Usage	Chart 1:	93% of the businesses we surveyed are reliant on the internet, regardless of location, size or industry background
	Chart 2:	The four respondents who do not use the internet were all rural, micro and retail businesses situated outside of Port Moresby surrounds
	Chart 3:	Non-internet users show an interest in expansion but there is variable understanding of the value of internet for business purposes
	Chart 4:	Internet use is widespread, but activities remain limited to basic communications and search for all business sizes
	Chart 5:	Cloud adoption is slow in PNG across firms of all sizes when compared to peer developing markets which are leapfrogging ahead
	Chart 6:	Micro-businesses and retailers report using mobile money services for performing financial transactions
	Chart 7:	The internet as a source of information and research appears to be important to businesses in rural areas as compared to urban areas
	Chart 8:	The use of advanced digital devices is significantly more concentrated in urban firms of all sizes except micro
	Chart 9:	AI use or intent to use is dominated by urban-based users in PNG are urban-based
Affordability	Chart 10:	Businesses facing regular outages invest in extra internet connections, multiplying the Total Cost of Internet Ownership by up to 300%
	Chart 11:	Most small and micro businesses think they spend between 10-20% of monthly revenue on internet costs
	Chart 12:	The median PNG small and micro business spends around double the share of turnover on internet compared to the global average
	Chart 13:	Large businesses can be spending 10-20% of monthly revenue on internet, around 5x the global average. Outliers are spending even more
	Chart 14:	80% of urban users say internet value is fair, while 45% of rural users say it's poor
	Chart 15:	Enterprises are spending 50-60% of their total ICT spend on telecommunications, squeezing their ability to spend on digital solutions
Challenges	Chart 16:	More than half of businesses experience regular or severe internet outages, with the highest frequency among rural firms
	Chart 17:	Advanced internet users switch to a back-up network when the internet fails: indicating they can't rely on a single connection staying up
	Chart 18:	Two thirds of basic internet users revert to phone calls or paperwork when the internet fails, limiting growth and reducing productivity
Demand	Chart 19:	PNG businesses want the internet: 80% say being online regularly with reliable access would help them grow or run their business
	Chart 20:	Micro and small firms prefer to use cheaper and reliable internet to seek growth, whereas large firms would prioritise efficiency and cost reduction

93% of the businesses we surveyed are reliant on the internet, regardless of location, size or industry background



Coverage: Entire survey
 Number of responses: 55
 Responder type: all respondents



Survey observations

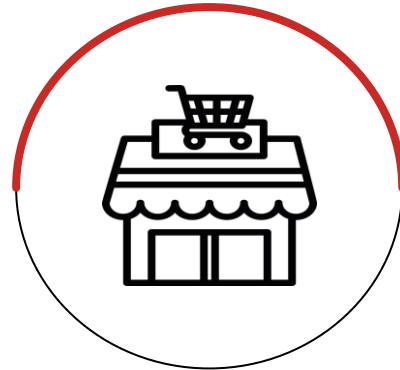
- All known urban businesses surveyed use the internet
- 73% of rural businesses surveyed use the internet
- 40% of micro businesses surveyed do not use the internet, all of which are rural

4 respondents stated they do not use the internet: all are rural, micro and retail businesses situated in areas outside Lae or Mt Hagen urban centres



Business 1

- Based in Lae surrounds
- Do not use the internet due to the risk of hackers and network unreliability due to weather
- Have used the internet in the past but stopped
- Reliant on paper records and phone calls



Business 2

- Based in Mt Hagen surrounds
- Do not trust the internet for business purposes and do not know how to use it
- Have never used the internet
- Reliant on phone calls and in person services



Business 3

- Based in Mt Hagen surrounds
- Do not see the relevance of the internet for a small business and do not deal with suppliers directly
- Have never used the internet
- Reliant on phone calls and in person services



Business 4

- Based in Mt Hagen surrounds
- Do not see the relevance of the internet for business
- Have never used the internet
- Reliant on phone calls, in person services and paper records

Our survey was focused on firms that do use the internet, to understand usage patterns and affordability issues. These four provide a snapshot for those firms who are not internet users. Most businesses in PNG do not use the internet, as indicated by affordability and uptake data.



Non-internet users want to grow their business, but have a varied understanding of the value of internet connectivity

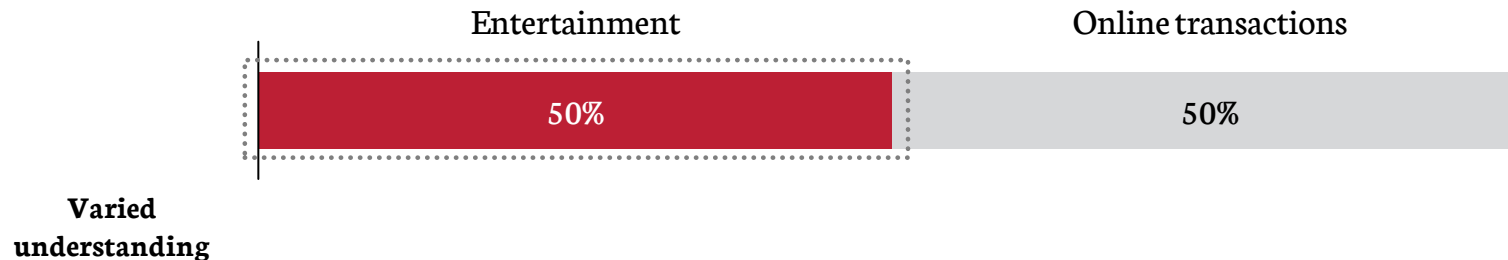
Q: 29, Q: 41, Q: 44, Q: 45

Number of responses: 4

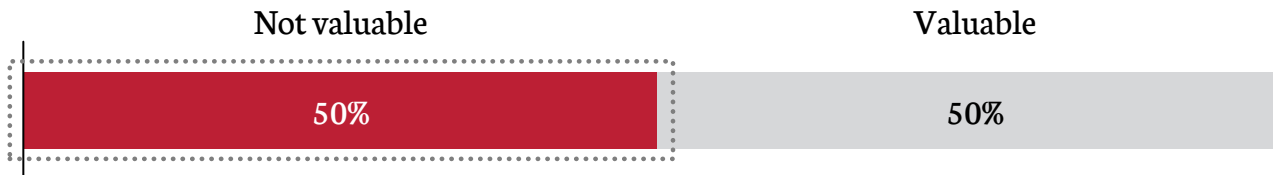
Responder type: Non-internet users



Q: If you were to use the internet, what online activity would interest you the most?



Q: If you were able to make/receive payments securely online, how valuable would that be?



Survey observations

- 3 of the 4 non-internet users we surveyed stated they are interested in growing their business
- However, there was varied understanding on the value of internet for running or growing a business, for example in attitudes toward online payments

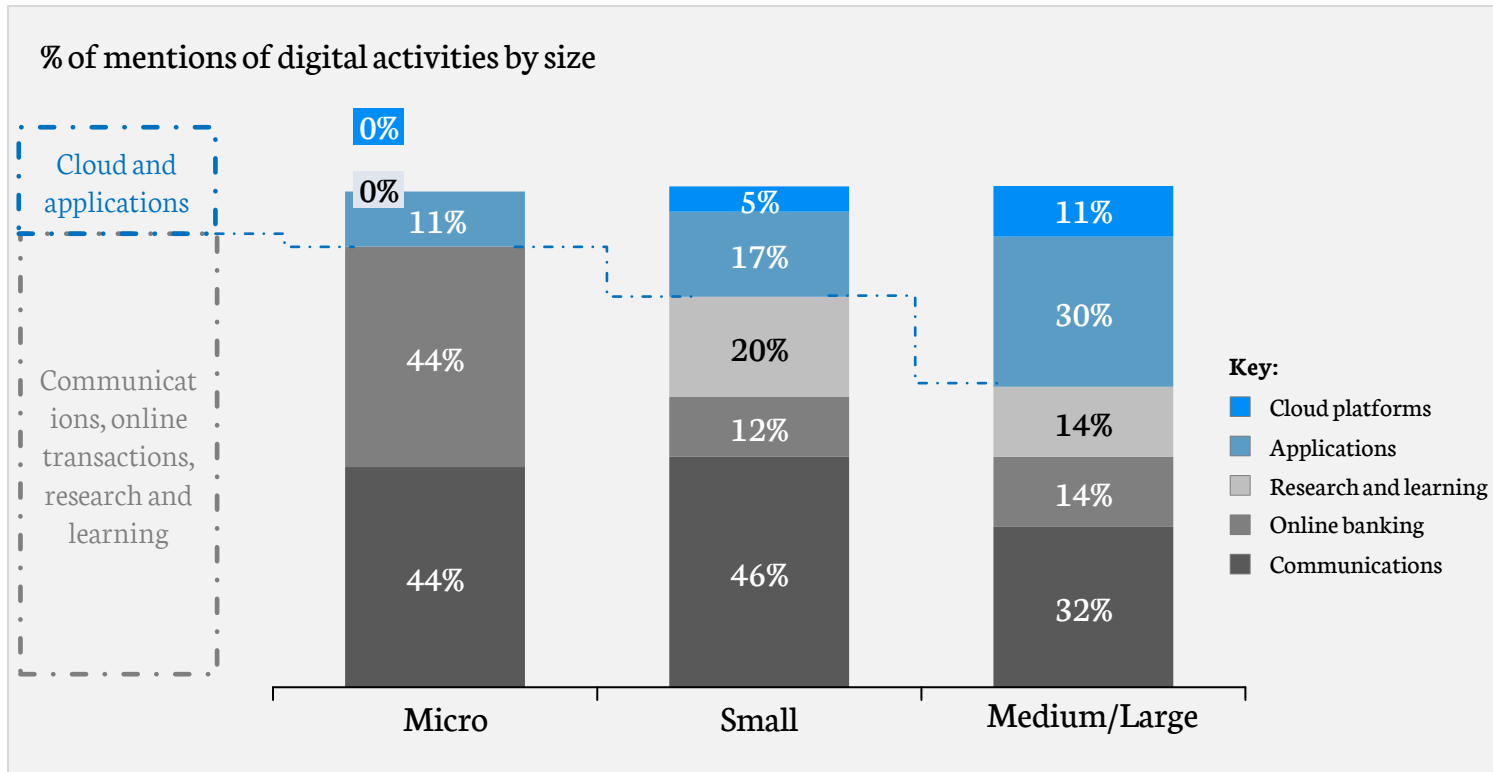


Internet use is widespread, but activities remain limited to basic communications and search for all business sizes

Q8 and Q19: "What do you use the internet for in your business?"

Number of responses: 44

Responder type: Micro, small, medium and large businesses



Survey observations

- Micro businesses rely on the internet for mobile financial services
- Business apps and cloud use is concentrated in medium and large firms
- No micro businesses use the cloud

Insight

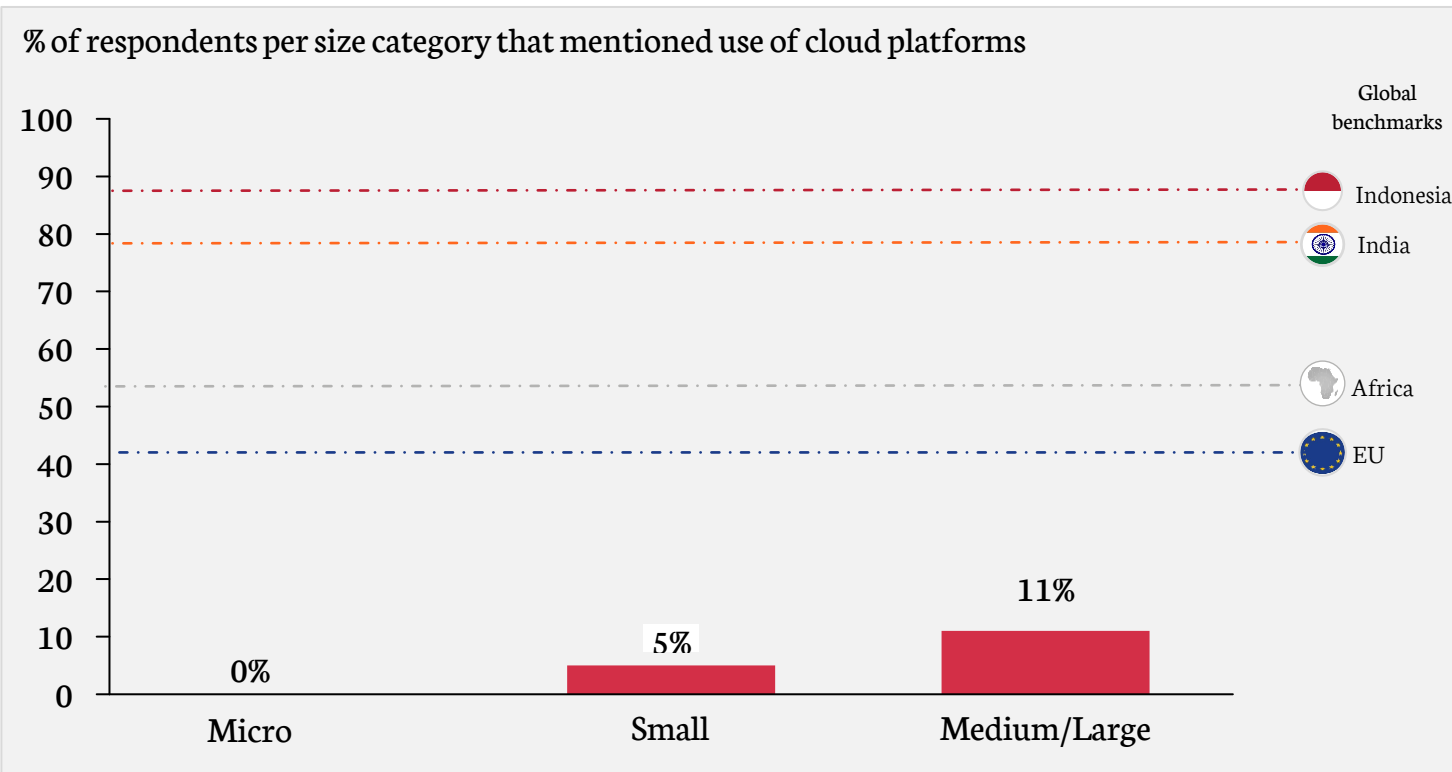
- Reliable and affordable internet is critical in regions, where micro businesses are prevalent

Cloud adoption is slow in PNG across firms of all sizes when compared to peer developing markets which are leapfrogging ahead

Q8 and Q19: "What do you use the internet for in your business?"

Number of responses: 44

Responder type: Micro, small, medium and large businesses



Survey observations

- All respondents on the cloud explained that they:
 - Have stable power for internet
 - Plan on increasing internet use
- No micro businesses are on the cloud

Insight

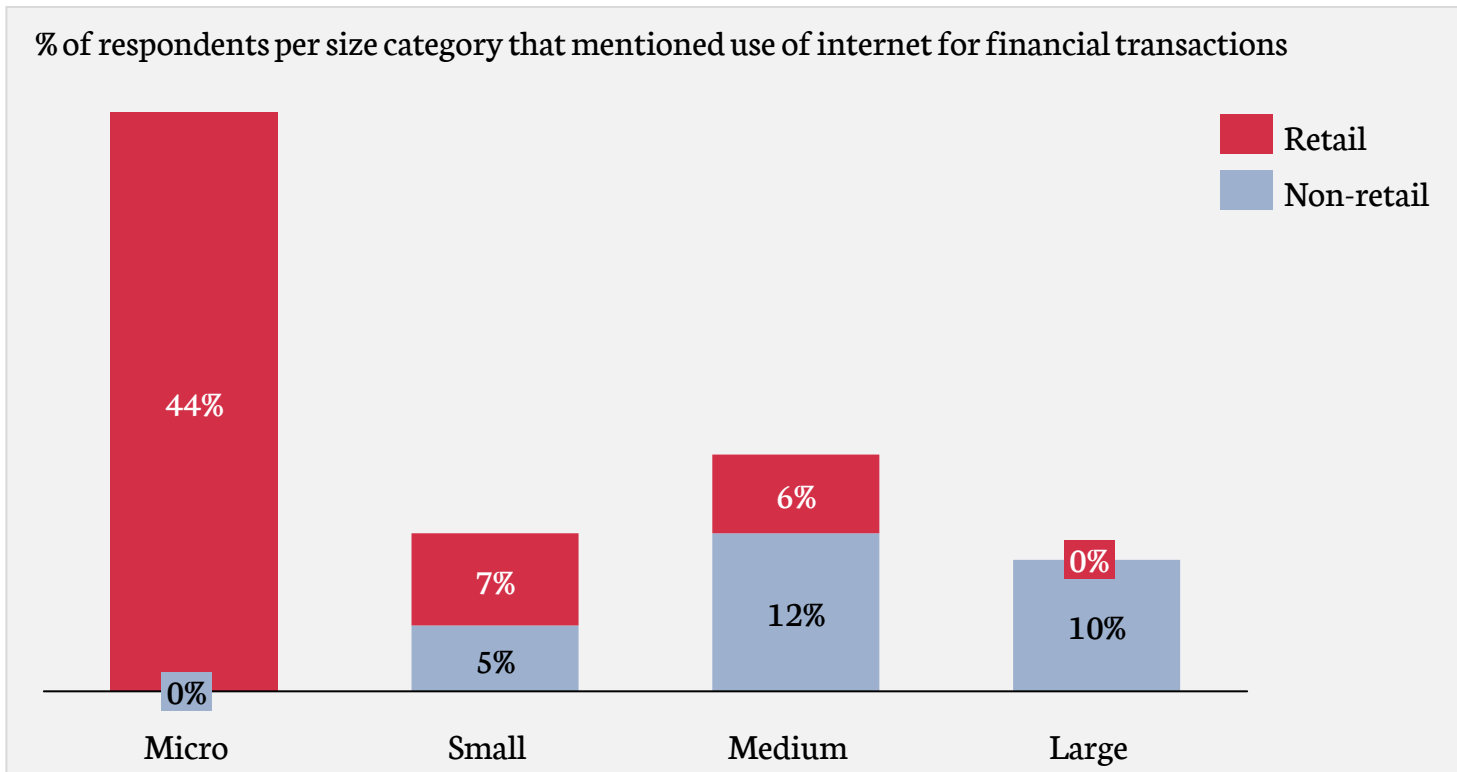
- Developing markets are leapfrogging advanced (e.g. EU) markets in cloud, likely due to the lack of "on prem" storage to transition

Micro-businesses and retailers report using mobile money services for performing financial transactions

Q8 and Q19: "What do you use the internet for in your business?"

Number of responses: 44

Responder type: Micro, small, medium and large businesses



Survey observations

- Retail businesses across PNG are the biggest users of mobile money services by industry
- Use spans micro, small and medium sized businesses
- Micro businesses appear most dependent on mobile money

Insight

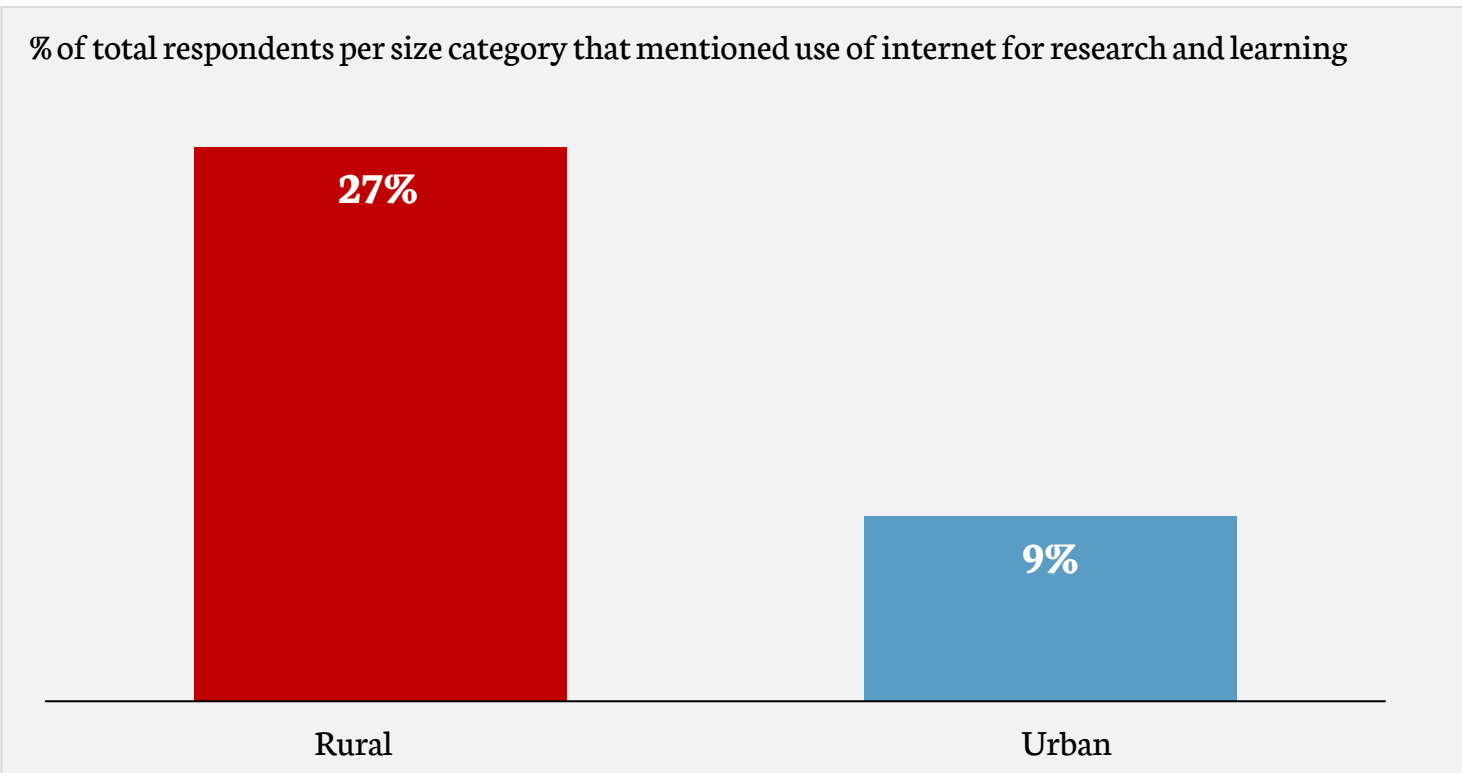
- Better internet for micro businesses might support digitally-enabled growth
- Large businesses likely consider online financial systems the standard and therefore did not report on it

The internet as a source of information and research appears to be important to businesses in rural areas

Q8 and Q19: "What do you use the internet for in your business?"

Number of responses: 44

Responder type: Micro, small, medium and large businesses



Key observations

- 3 times as many rural businesses use the internet for learning and research compared to urban businesses

Insight

- Businesses which are geographically isolated are more dependent on the internet for information than urban counterparts





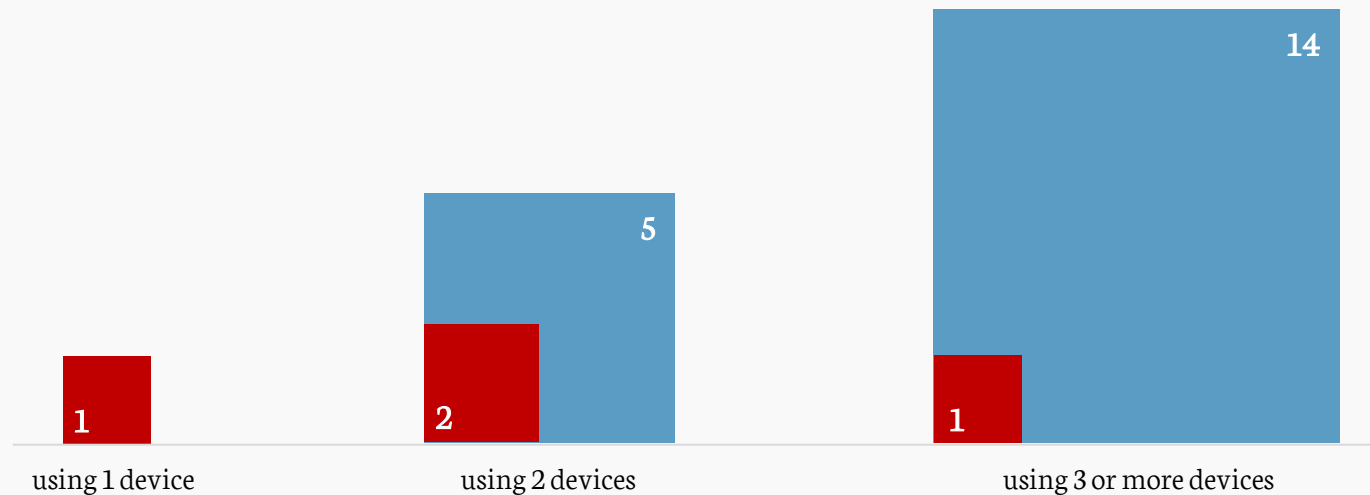
The use of advanced digital devices remains relatively restricted to urban areas in PNG

Q9: "What devices do you use to access the internet?"

Number of responses: 25

Responder type: Advanced internet users

Businesses use of sophisticated devices to access the internet (smartphone, laptop, desktop) by location
Respondent numbers in each box



Survey observation

- Advanced device use in urban areas was evenly spread between large, medium and small businesses

Insight

- Sophisticated device use tends to be associated with greater connectivity affordability, better internet coverage and speeds
- PNG appears to have significant scope to upgrade device use in rural areas and with micro firms

Note: Based on survey results for device use, narrowed down to responses for using one, two or more devices.

Source: Survey data, Long Street Advisors analysis



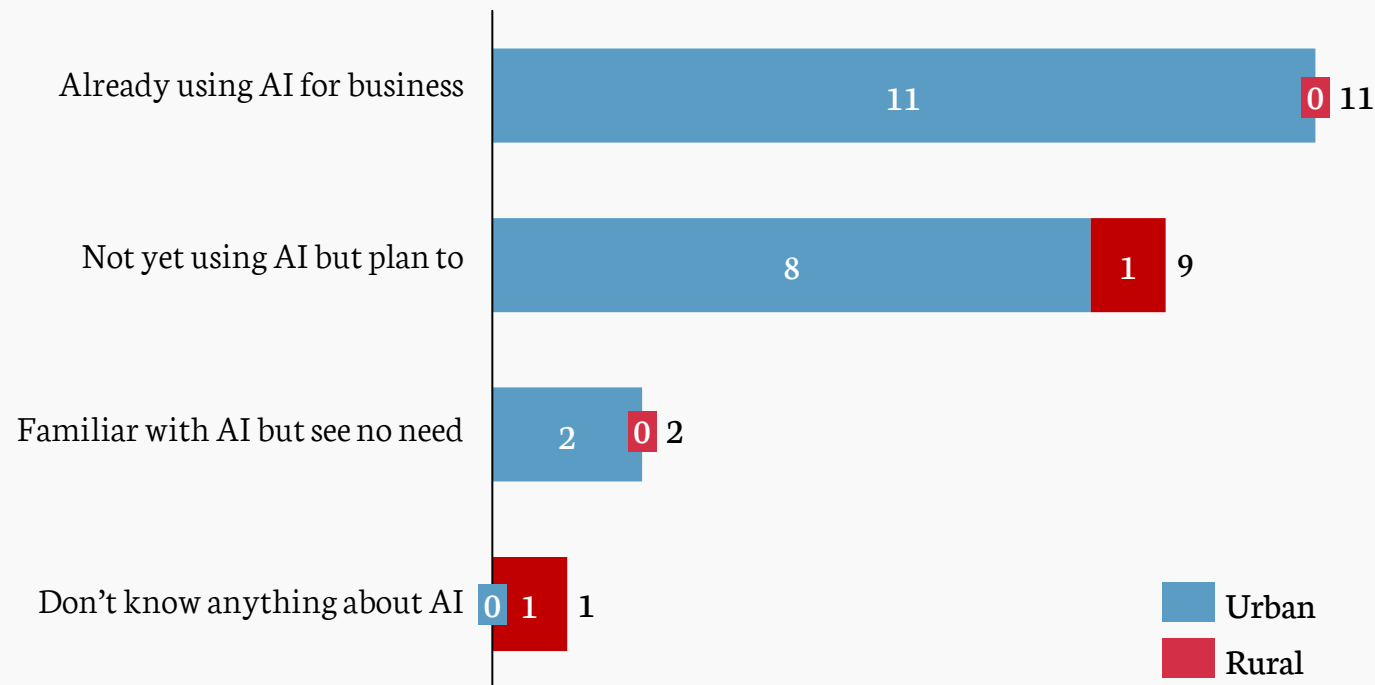
Artificial Intelligence (AI) use or intent to use is dominated by urban-based users in PNG

Q16: "How would you describe your awareness and use of Artificial Intelligence (AI) for business?"

Number of responses: 24

Responder type: Advanced internet users

Businesses awareness, use of and plans to use AI



Survey observations

- 67% of businesses that plan to use AI for business are small or micro

Insight

- There is a significant opportunity to raise AI adoption in small and micro businesses

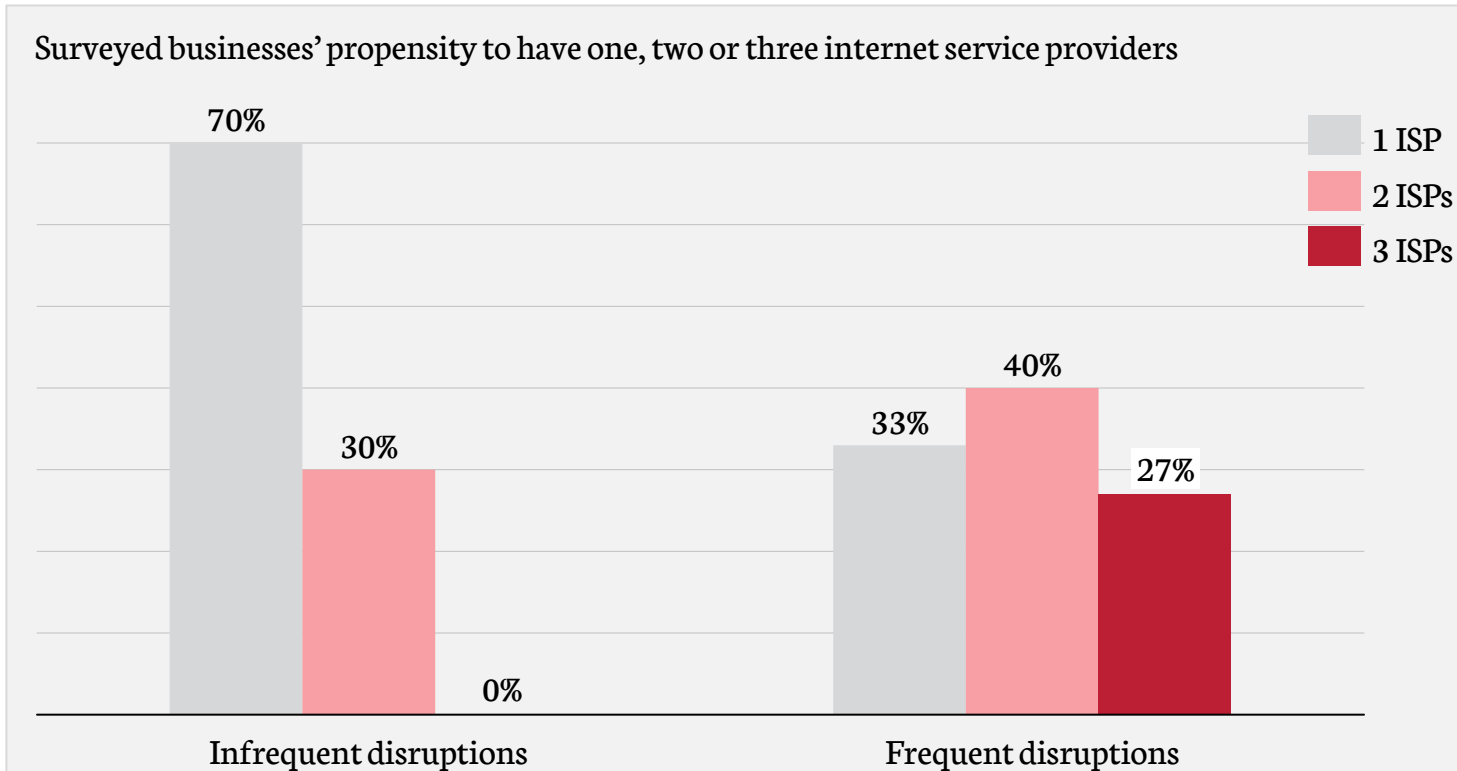


Businesses facing frequent outages invest in extra internet connections (ISPs), driving up connectivity expenditure

Q14: “How often to you experience internet disruptions that impact business?” and Q11: “Who is your internet provider”

Number of responses: 25

Responder type: Micro, small, medium and large internet users



Survey observations

- 40% of businesses experiencing frequent disruptions are investing in 2 providers, doubling their internet costs
- 27% of businesses experiencing frequent disruptions are investing in 3 providers therefore tripling their internet costs
- 47% of businesses experiencing frequent disruptions are small or micro and 86% of these businesses pay for two providers



Most micro, small and large businesses think they spend between 10-20% of monthly revenue on internet costs

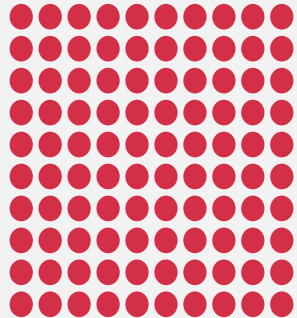
Q31: "What percentage of monthly revenue goes to internet costs?"

Number of responses: 24

Responder type: Micro, small, medium and large internet users

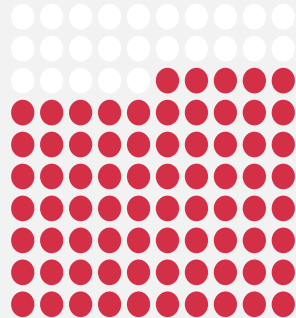
% of respondents in each size category reporting that they spend 10-20% of monthly revenue on internet costs

100%



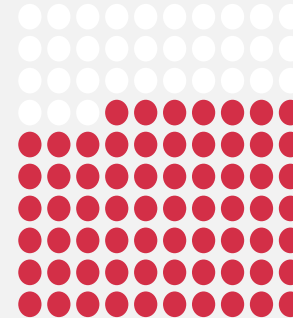
Micro

75%



Small

67%



Large

Survey observations

- All sizes of firms appear to be heavily burdened with internet costs

Insight

- Heavy internet cost appears to be made up of three elements:
 - High internet prices
 - Having more than 1 ISP
- Back up costs (e.g. power) are likely to be inflating internet costs even more

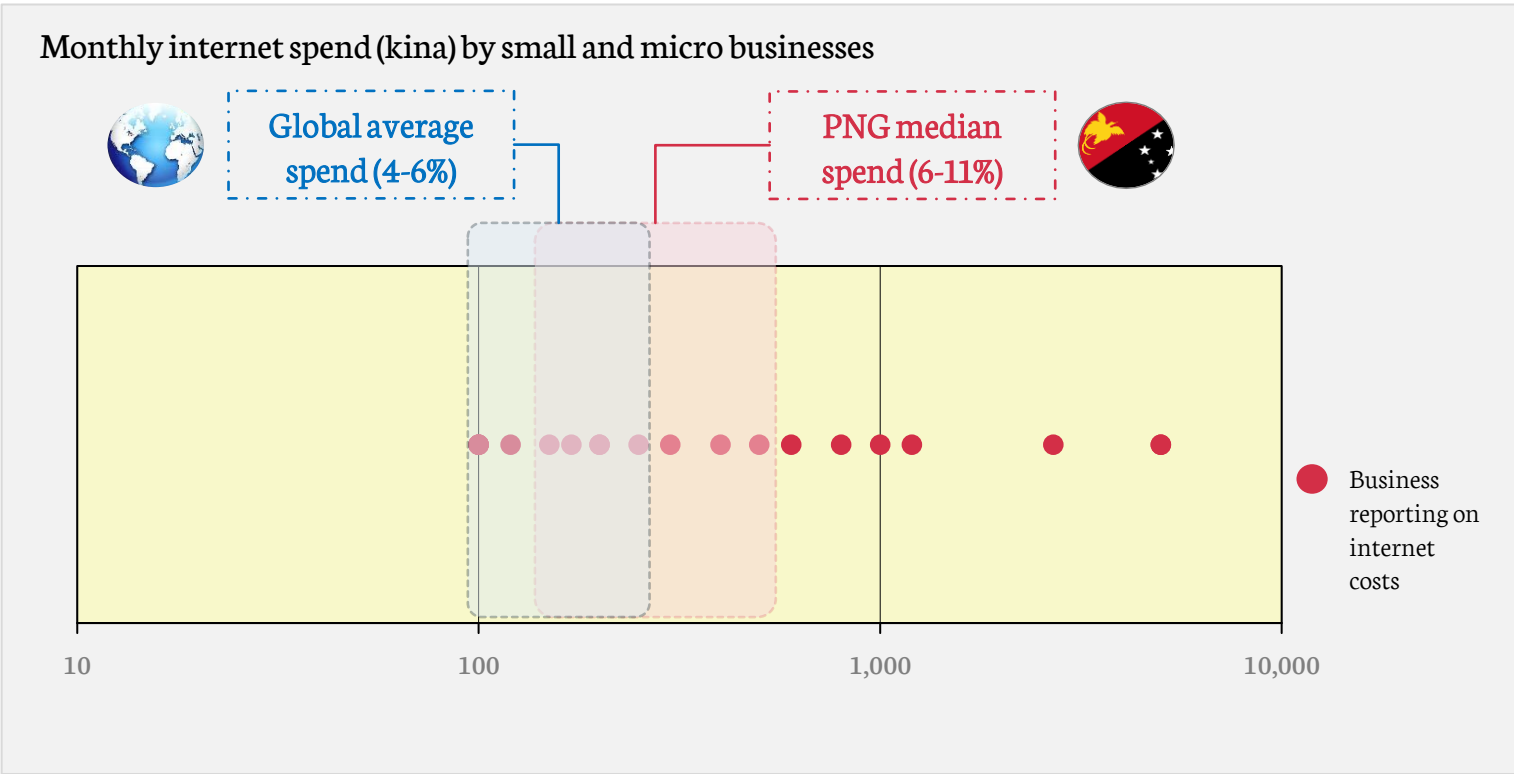
PNG small and micro businesses spend around double the share of turnover on internet compared to the global average



Q13: "How much do you spend per month on internet?(numerical)"

Number of responses: 20

Responder type: Small and micro businesses



Key observations

- 275 kina is the median spend for a small or micro business on monthly internet

Insight

- The median spend on internet for small and micro businesses in PNG is around 2x the global average

Note: These proportions were estimated using turnover figures from the Tebbutt report assuming an average turnover range of about K 5,000- K 2,500 per month for SME and informal businesses

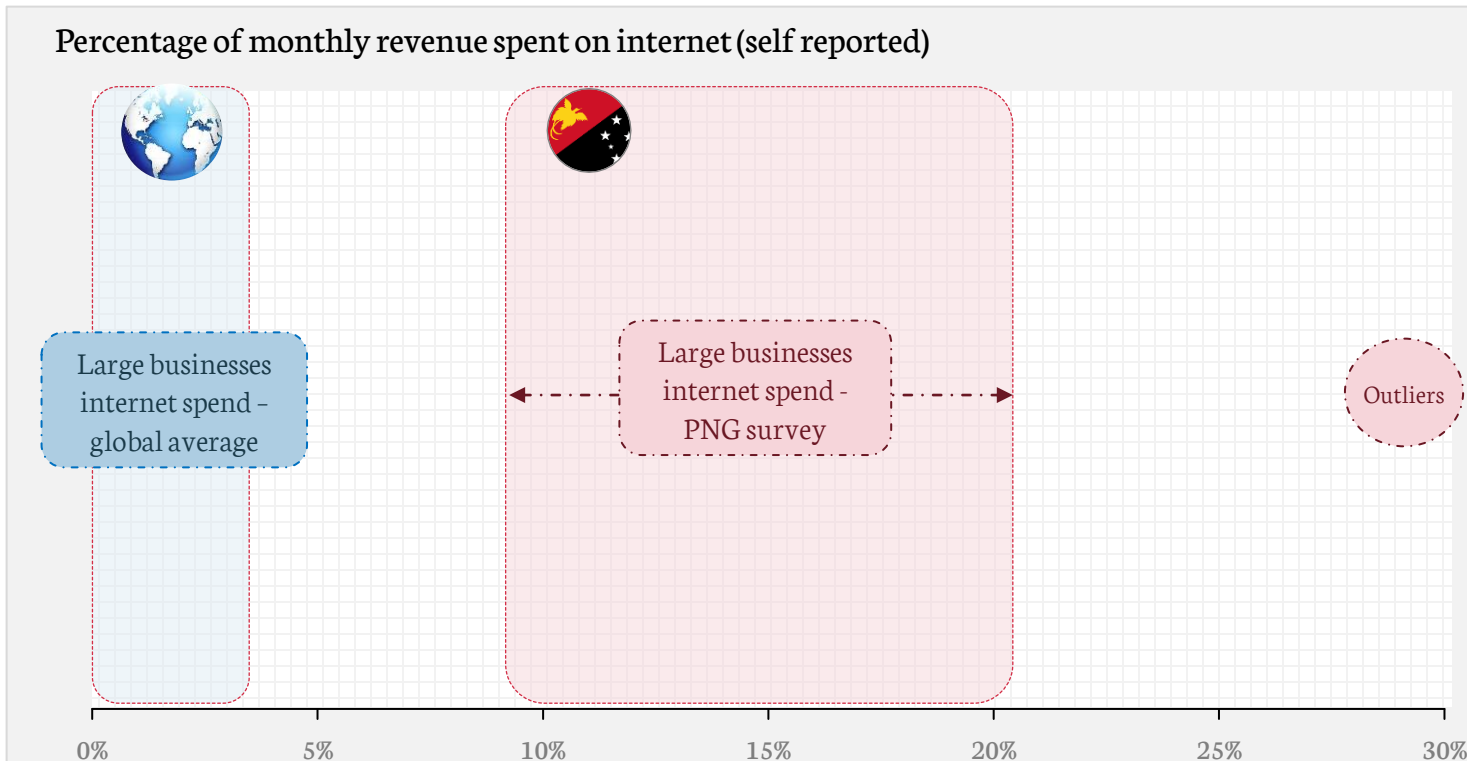
Source: Tebbutt, Computer Care, Survey data, Long Street Advisors analysis

Large businesses spending 10-20% of monthly revenue on internet are spending around 5x the global average. Outliers are spending even more.

Q31: "What percentage of your monthly revenue goes to internet costs?" Q30: "How much do you spend monthly on IT beyond connectivity?"

Number of responses: 10

Responder type: Large businesses



Survey observations

- 100% of large businesses reported spending over 5001 kina per month on non-connectivity IT

Insight

- Businesses spending such a high proportion of revenue on the internet suggests large businesses are dependent on the internet and cannot function without it

Note: There were quite significant gaps in data on this which may point to hesitations to disclose spend or an unawareness around the cost of internet by the respondent.

Source: Survey data, Techvera, Gartner, Spiceworks Ziff Davis, CompTIA, Computer Care, Long Street Advisors analysis

80% of urban users say internet value is fair, while 45% of rural users say it's poor



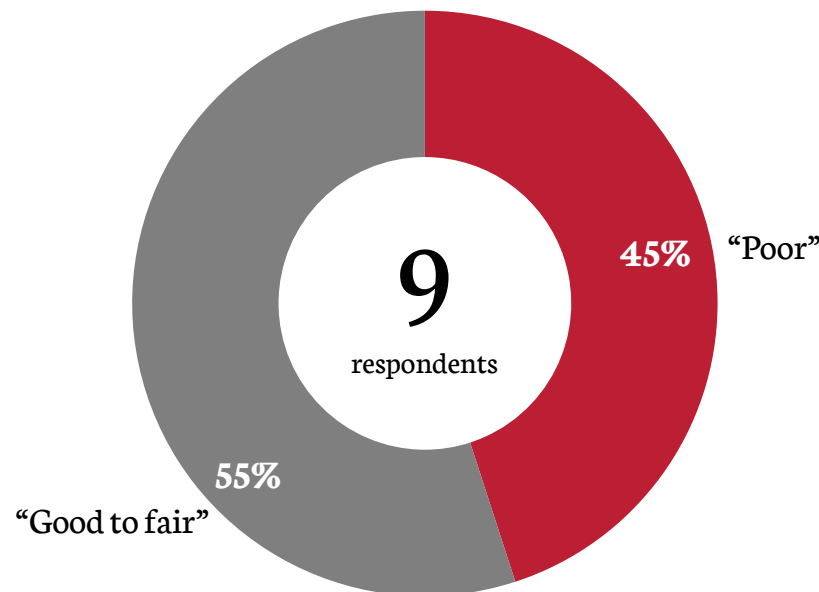
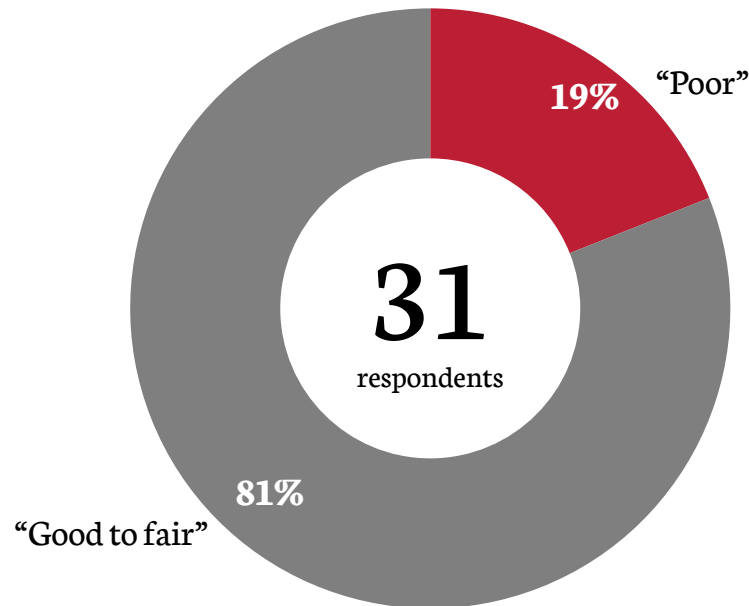
Q33: "How would you rate the value for money of your current internet services?"

Number of responses: 40

Responder type: all businesses using the internet

Internet users in urban areas

Internet users in rural areas



Survey observations

- These results only include active internet users

Insight

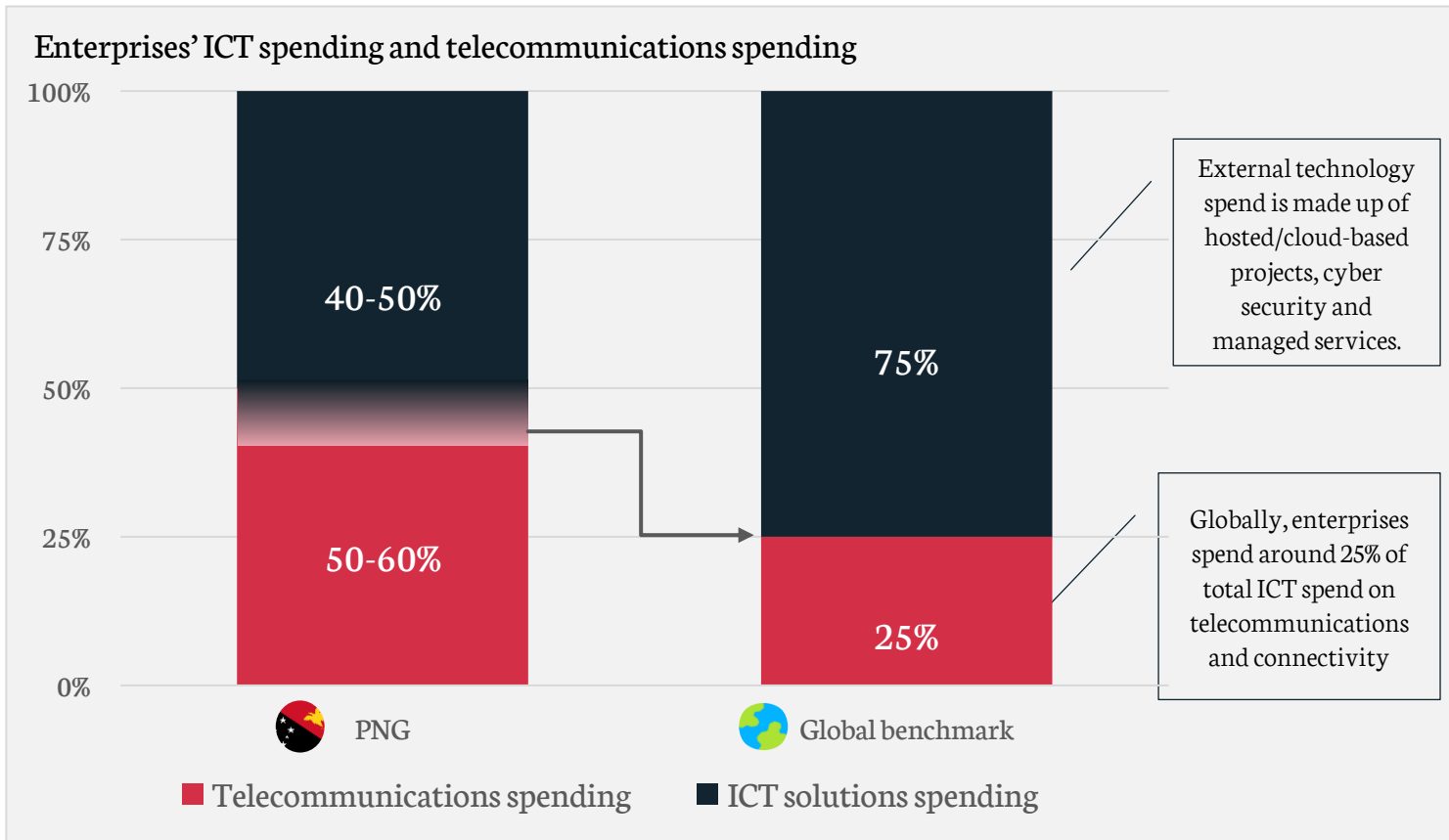
- Internet value for money in many countries is perceived to be lower in rural areas where incomes are lower

Note: Of 30 respondents stating value for internet was good or fair, 25 were urban and 5 rural; of 10 respondents stating it was poor, 6 were urban and 4 rural.

Source: Survey data, Long Street Advisors analysis

Enterprises are spending 50-60% of their total ICT spend on connectivity costs alone, squeezing their ability to spend on digital solutions

PNG figures represent indicative estimates based on inputs from surveyed stakeholders and participating enterprises. They are not drawn from official or independently verified sources



Key observations

- PNG enterprises allocate 50-60% of ICT budgets to telecommunications and connectivity, far above the global average of 25%
- High telecom costs leave little room for cloud applications and managed services
- At the same time, because large businesses in PNG are dependent on the internet, they have to spend the money

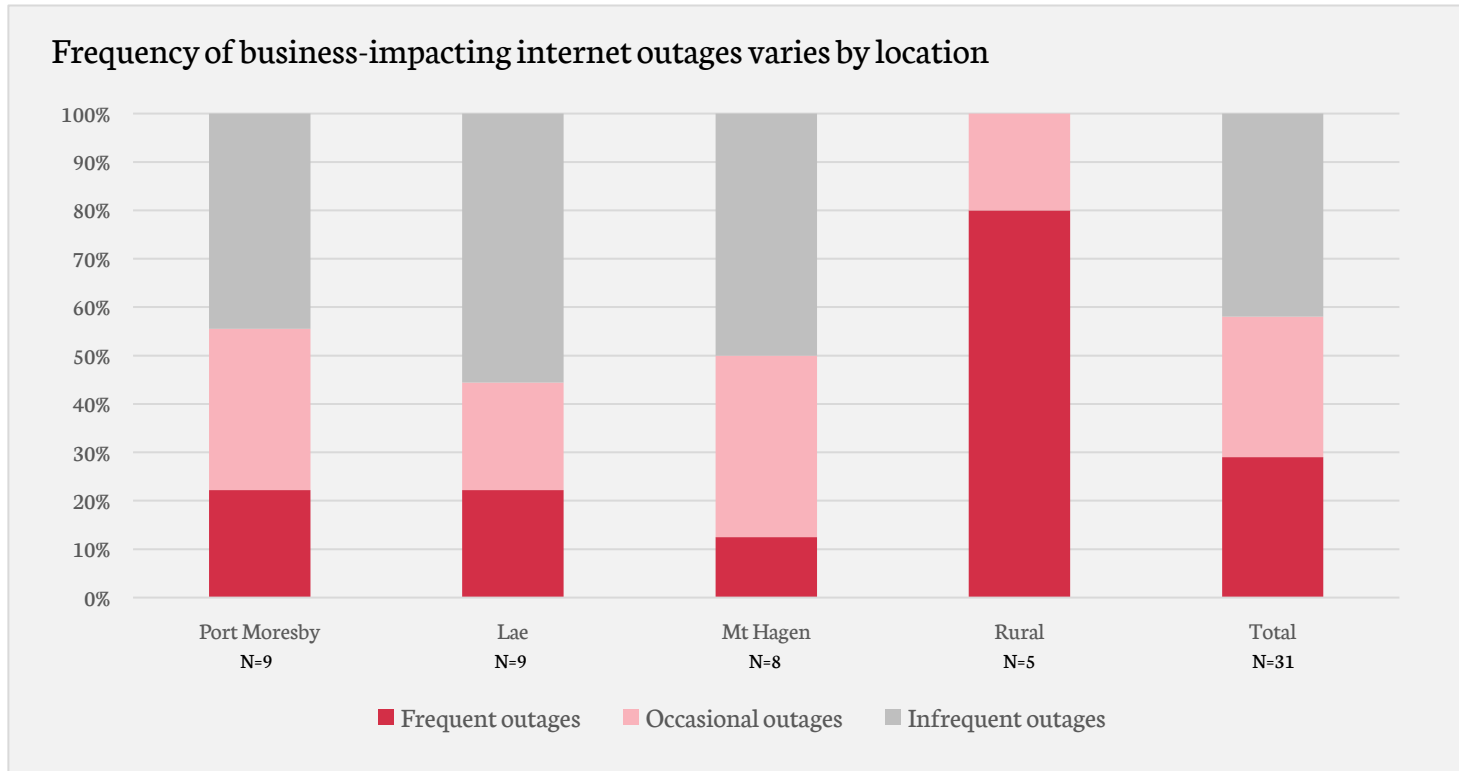
More than half of businesses experience occasional or frequent internet outages, with the highest frequency among rural firms



Q13: "How often do you experience internet disruptions that affect your business?"

Number of responses: 31

Responder type: Internet users



Key observations

- Internet disruptions are a routine operating issue
- Rural firms face a much higher incidence of outages

Insight

- Outages constrain reliability, productivity and day-to-day operations

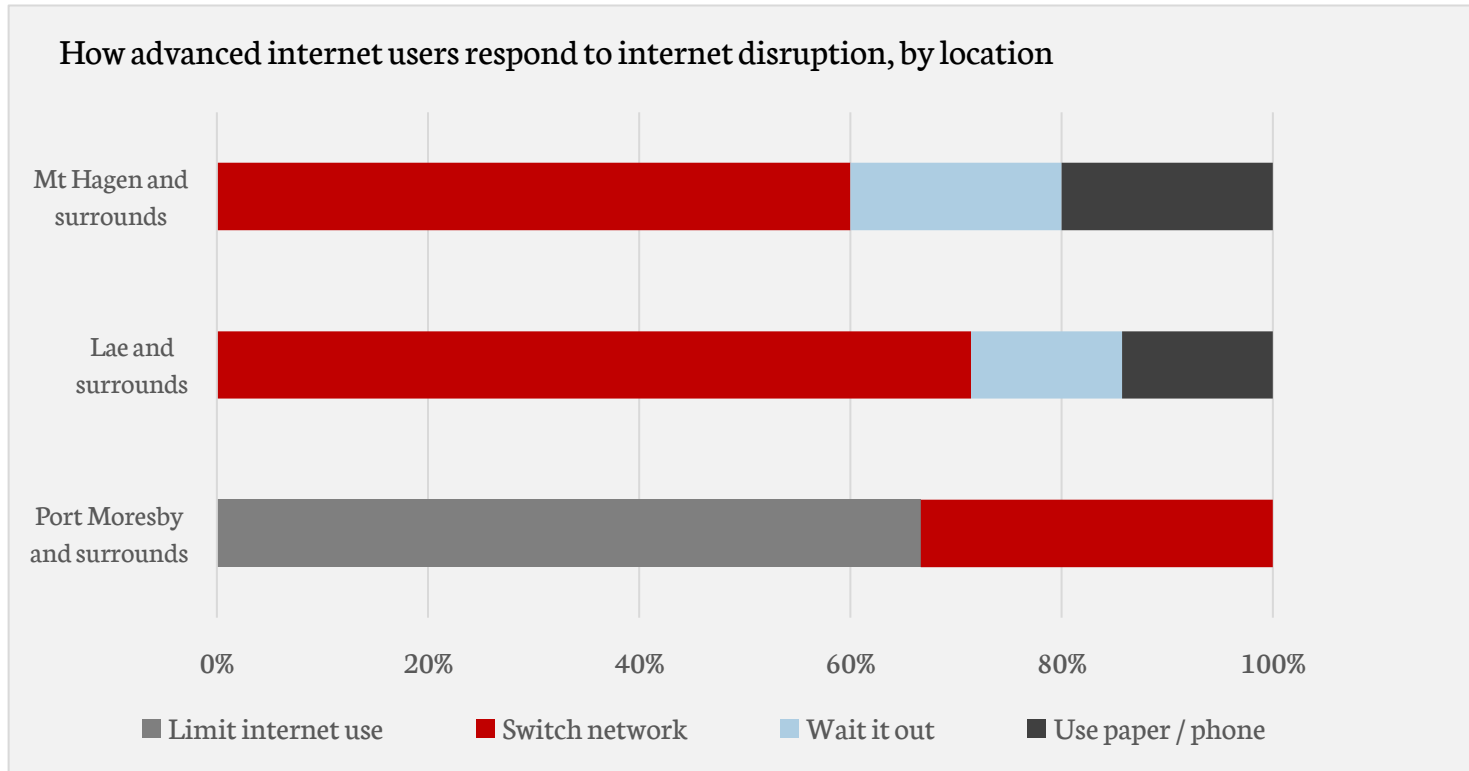
Advanced internet users switch to a back-up network when the internet fails: indicating they can't rely on a single connection staying up



Q13: "How do you manage your internet challenges for business continuity?"

Number of responses: 18

Responder type: Advanced internet users



Survey observations

- 60-70% of users in Mt Hagen and Lae switch to a back up network when there is an internet disruption
- Only 35% of users in POM switch to a back up network, indicating that power outages in POM are less disruptive than elsewhere

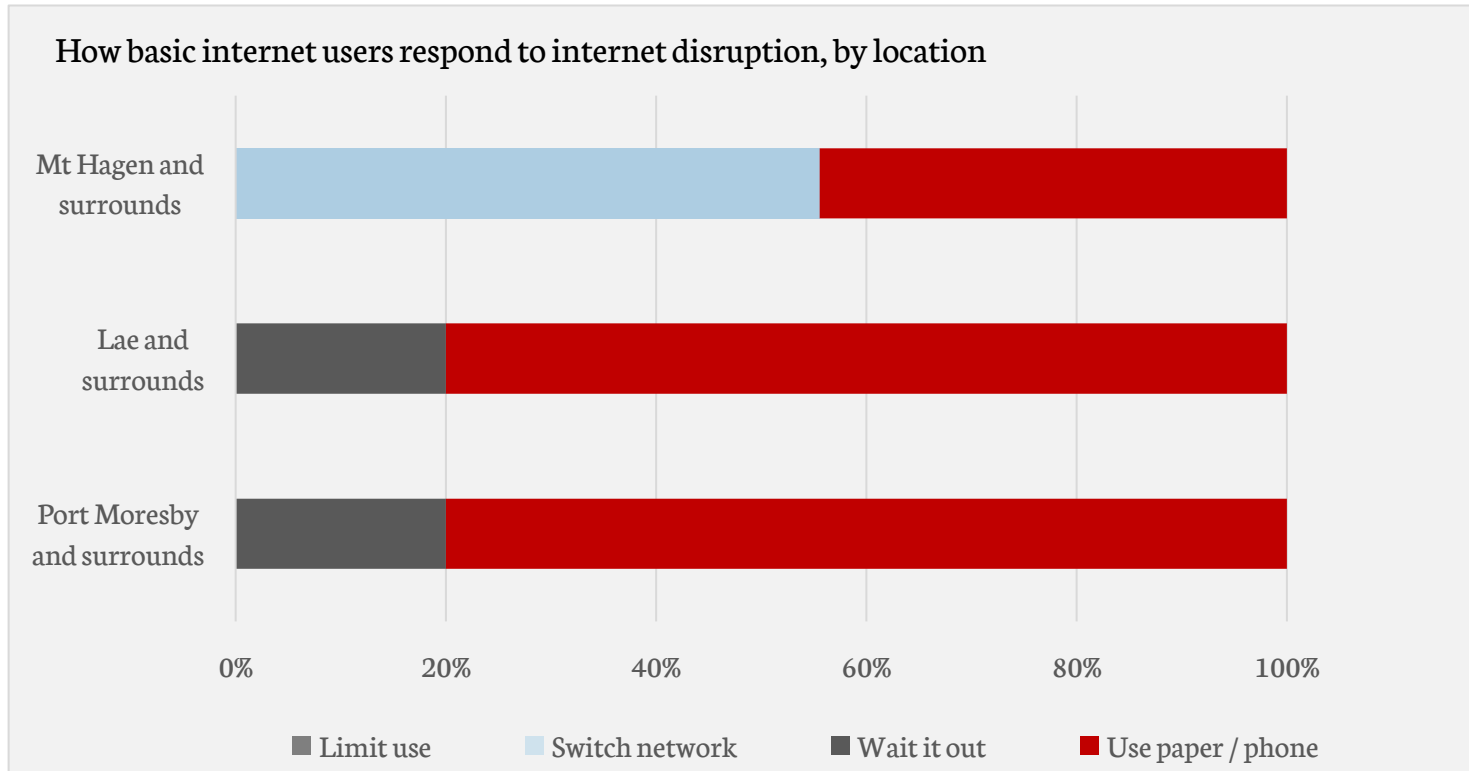


Two thirds of basic internet users revert to phone calls or paperwork when the internet fails, limiting growth and reducing productivity

Q24: "How do you manage your internet challenges for business continuity?"

Number of responses: 19

Responder type: Basic internet users



Survey observations

- 12 out of 19 basic internet user firms surveyed revert to using paper or making calls when the internet fails
- In Mt Hagen, we found 5 firms that are basic internet users have an alternative network to use when the internet fails



PNG businesses want better internet: 80% say more reliable internet access would help them grow or run their business

Q25: "Do you think more regular and reliable internet access could help you grow your business?"

Number of responses: 20

Responder type: all basic internet users

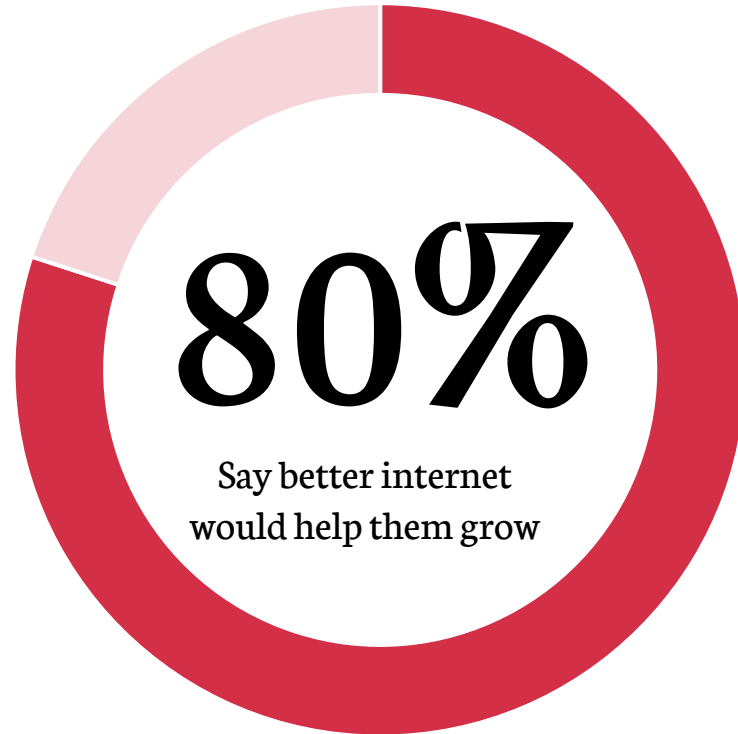
Survey observations

"Internet would help me grow my business"

72% of respondents are in urban areas

"Internet can't help my business grow"

3 of 4 respondents are outside POM
3 of 4 respondents are small firms



Insight

“ Internet will help promote our business to clients ”

“ If internet was available 24/7 we would do away with paper-based documents and move to 100% digital learning ”

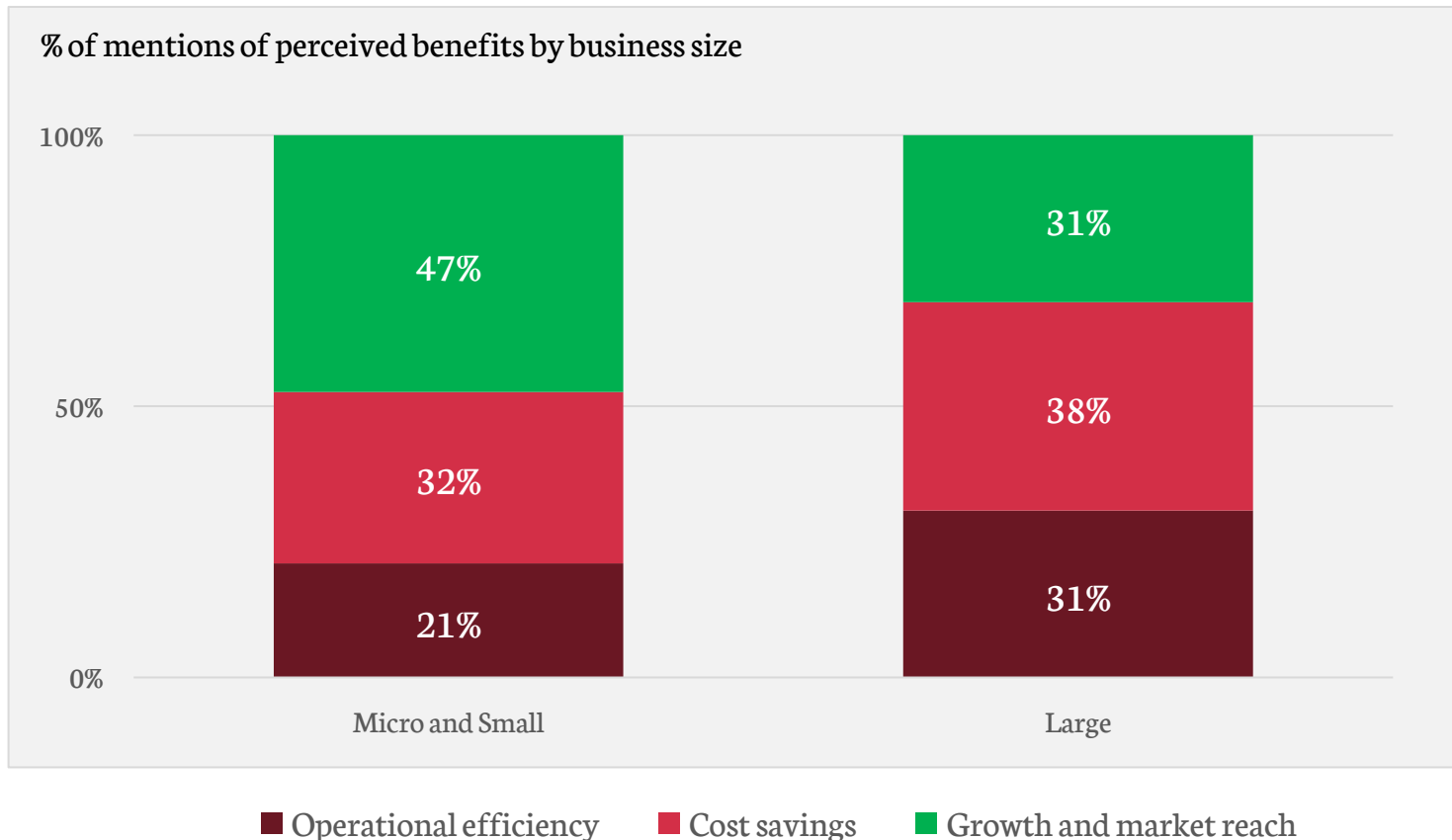
“ We could sell online; advertise and market products and services ”

Micro and small firms would use cheaper and reliable internet to seek growth, whilst large firms would prioritise efficiency and cost reduction

Q34: "If the internet was cheaper or more reliable how would it assist your business to grow?"

Number of responses: 46

Responder type: Micro, small and large respondents (not medium)



Survey observations

- Micro and small firms are 1.5x more likely than large firms to seek growth as a benefit of better internet

Insight

- The responses indicate that large firms are burdened with high ICT costs in PNG

Industry executives reported on challenges in PNG which undermine the business user's internet experience and affordability



“There are complications in building and maintaining networks, pushing up roll out costs and undermining coverage and quality”



“Despite sharp retail price drops, the costs of internet ownership continue to be a drag on business uptake”



“Sector policy and market dynamics could do more to encourage novel infrastructure solutions to achieve mass coverage quicker”

Key industry question to consider

What steps can we take to help address PNG's network rollout and maintenance problems?

What steps can be taken to unleash PNG's digital potential to benefit businesses everywhere?

Are there practical options for PNG to encourage the market to achieve mass coverage?

At every step of the process, deploying a telecom network in PNG presents complications which operators find costly and time-consuming to address



Subsea, local and international links

- Subsea connectivity requires reliance on the wholesale provider for access to capacity which can be unreliable
- There are unreliability issues with one of the cables which sits on an earthquake trench

Backhaul and satellite

- There is an additional cost burden in building self-provide backhaul networks to bolster redundancy options and network resilience
- The legal prohibition of using LEO Sat services is slowing down building up coverage and internet access in rural areas

Towers and rights of way

- Difficulties in gaining land access from traditional landowners for deploying networks
- Local community land disputes can result in third parties destroying towers or fibre links on the land

Power and fuel

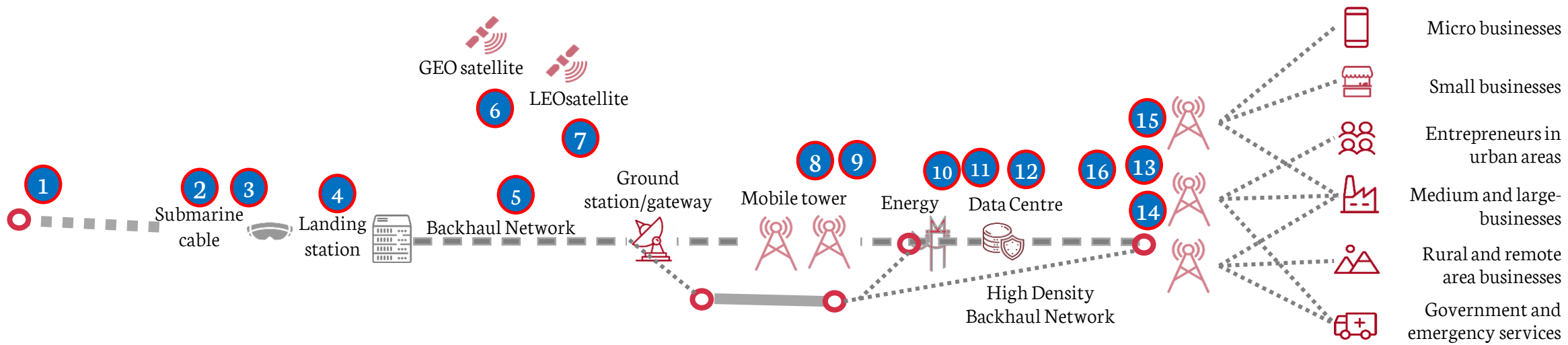
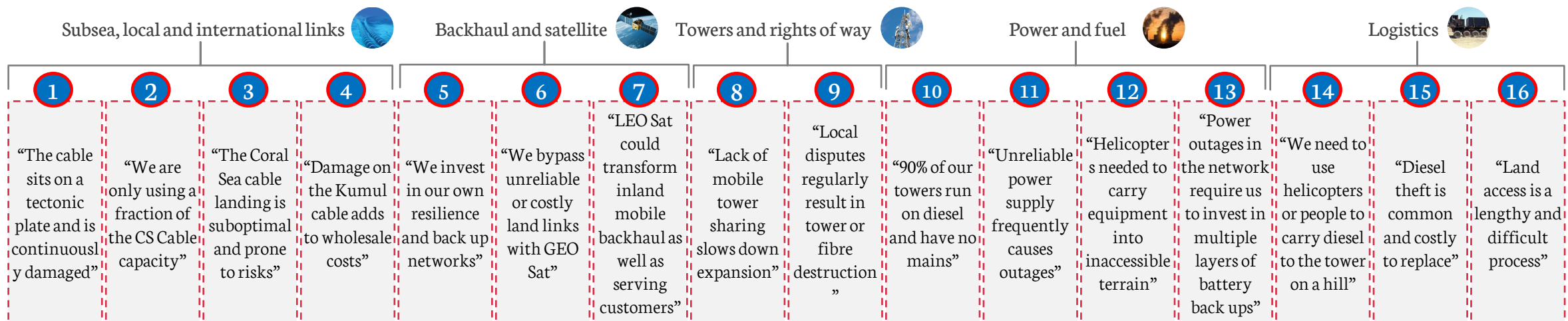
- End to end power disruptions affect mobile and fixed networks daily.
- Mobile operators are running networks on diesel generators due to power instability, posing cost burdens, theft and security concerns.

Logistics

- Many operator sites in PNG are in rural areas or difficult terrain which means that transporting equipment and people is a costly feat.

Insights from interviewing telecom sector executives

Telco leaders cite 16 complications in deploying networks: pushing up costs, constraining coverage and quality and ultimately forcing up prices



Source: Long Street Advisors advanced internet connectivity framework, stakeholder consultations

3.

Business and regional economic impacts

The “Telescope” model was informed by our proprietary frameworks and global experience to support our approach



Sub-Saharan Africa:

Telecommunications markets which demonstrate similar demographic and GDP characteristics to PNG

- Country experience cited: Ethiopia, Kenya, Zimbabwe



Developing Asia:

Telecommunications markets which demonstrate similar demographic and GDP characteristics to PNG

- Country experience cited: Myanmar, Bangladesh



Developed markets:

Telecommunications developments and use cases in markets which indicate the direction that PNG will move towards in the future

- Country experience cited: Australia, Brunei, OECD

Telescope model extract:

Papua New Guinea - Digital Connectivity Impact Summary					
Province		National Capital District			
*Use the drop down list to choose your province					
Section 1: Business Overview					
Metric	Year	Unit	This Province Total	National Total	
Total revenue uplift for digitalisation	2026-2035	K bn	35.3	178.2	
Section 2: Non-Mining Economic Impact (GRP)					
2030 impact					
Metric	Year	Unit	This Province Total	National Total	
Economy size baseline as of today	2025	k bn	40.0	88.3	
GRP (BAU)	2030	K bn	46.4	102.2	
GRP (Unleash Digital)	2030	K bn	48.5	107.4	
GRP uplift from Unleash Digital	2030	K bn	2.1	5.2	
2035 impact					
Metric	Year	Unit	This Province Total	National Total	
GRP (BAU)	2035	K bn	53.8	118.4	
GRP (Unleash Digital)	2035	K bn	62.3	140.0	
GRP uplift from Unleash Digital	2035	K bn	8.5	21.6	
2026-2035 Cumulative Impact					
Metric	Year	Unit	This Province Total	National Total	
GRP (BAU)	2026-2035	K bn	472.7	1,040.6	
GRP (Unleash Digital)	2026-2035	K bn	506.1	1,125.5	
GRP uplift from Unleash Digital	2026-2035	K bn	33.4	84.9	
Uplift % (against 2025 economy size)	2035/2025	%	83%	96%	
New jobs created (to 2035)	2026-2035	#	54,406	132,792	
CAGR - baseline	2026-2035	%	3.0%	3.0%	
CAGR - digital enabled economy	2026-2035	%	4.7%	4.9%	
Digital Readiness Score	2025	#	80.0		

“Telescope” is built on a range of policy, economic and industry levers and demonstrates how combinations of these levers influence outcomes



Levers for reform and industry growth

What are the levers that would help unlock growth and resolve current problems in internet uptake by businesses?

01.



- Ten ICT and ICT-related levers affecting business connectivity
- Relative weights for each lever
- Timeline for improvements for each lever
- Lever impacts adjusted depending on geography (POM, Urban, Rural)



3 broad change scenarios for digitalisation

How does business internet adoption evolve under different reform and investment scenarios?

02.



- Based on previous experience and insights we constructed three scenarios:
- **Unleash Digital** - businesses are meaningfully using digital services that offer productivity, efficiency and cost-saving benefits
 - **Fix the network** - all businesses can rely on high quality connectivity and power supply that allows for uninterrupted business operations
 - **Mass internet uptake** - rapid internet adoption driven by network coverage and more affordable internet for the majority of the population



National impact on economy and jobs

How does increased business internet use under each change scenario translate into economic growth and job creation?

03.



- For each scenario and at a national level we looked at:
- EBITDA uplift
 - Revenue uplift
 - GRP uplift
 - Job creation
 - Cumulative impact through 2035
 - CAGR



Provincial readiness and impact

What is the economic impact at a provincial level and what is their current potential to benefit from the target scenario?

04.

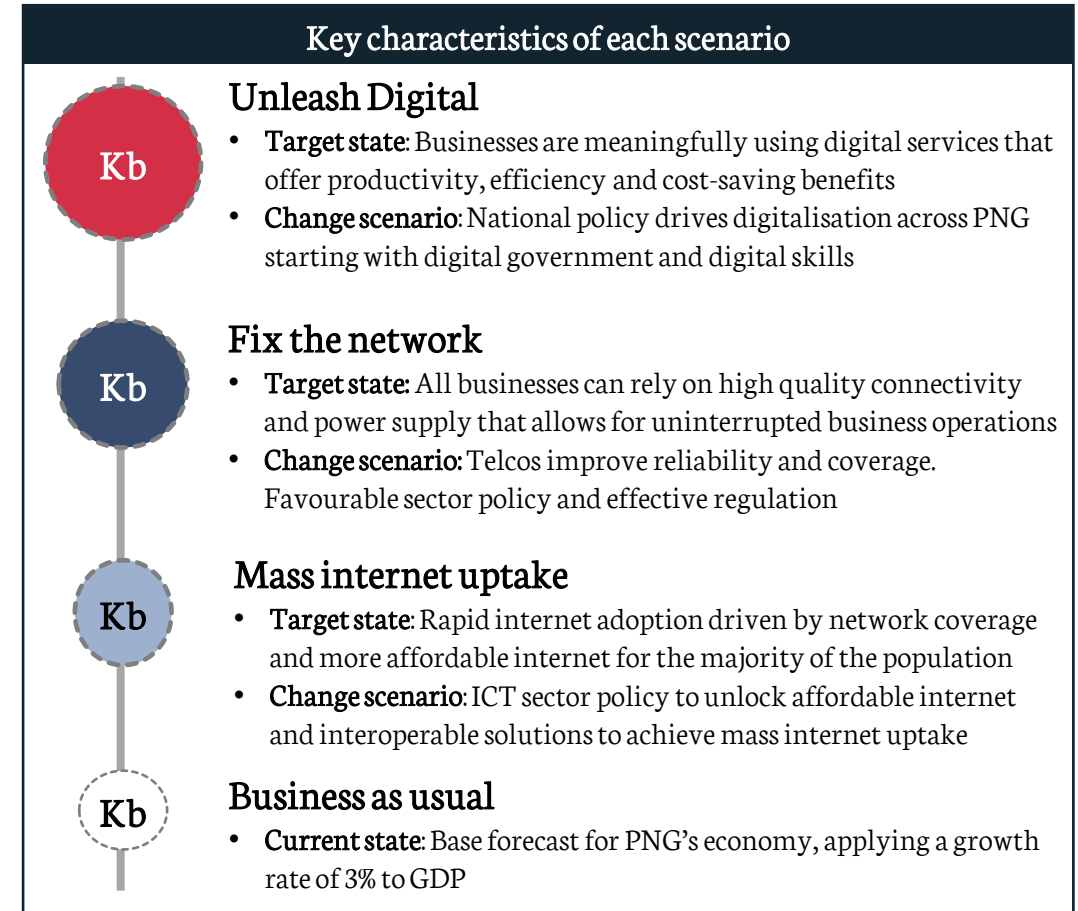
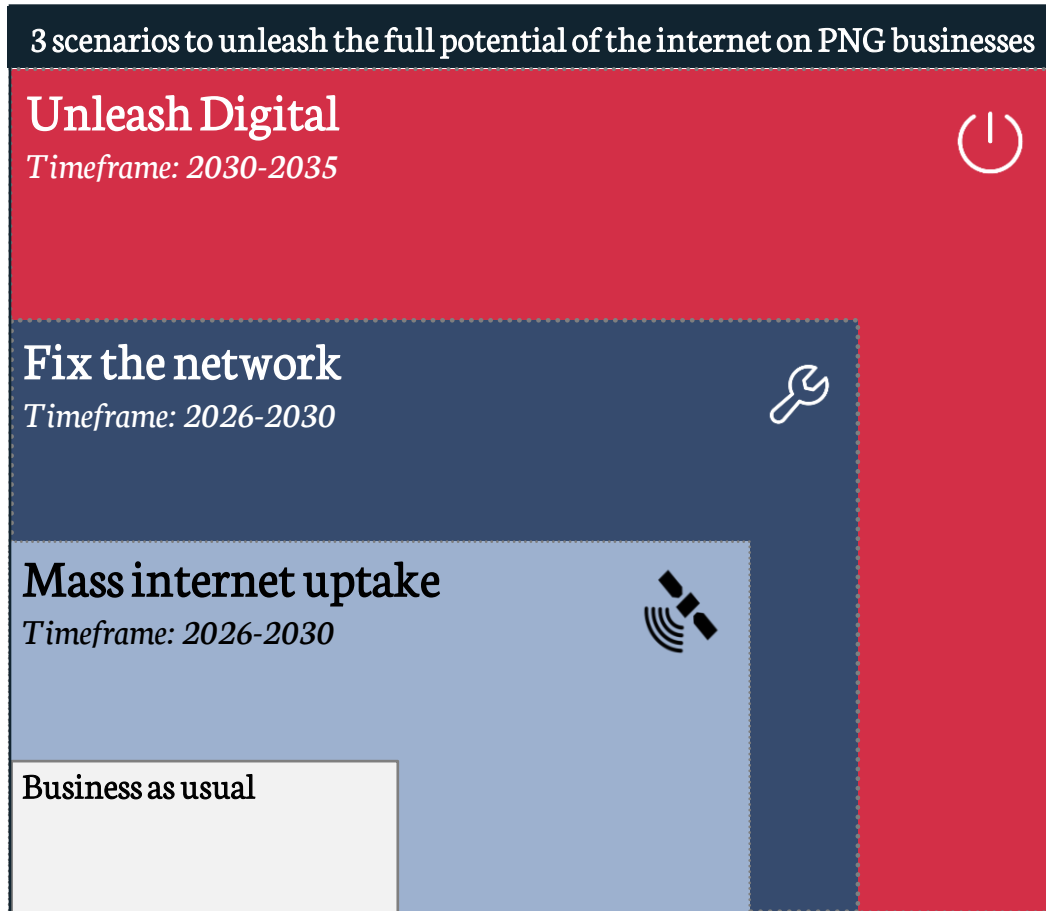


- For 21 provinces we looked at:
- Dividing each province’s total economy into four types of businesses, based on the DFAT-Tebbutt study
 - GRP uplift from Unleash Digital
 - CAGR
 - New jobs
 - Digital Readiness Score taking into account internet coverage, electrification, business adoption and affordability

Key question

What we modelled

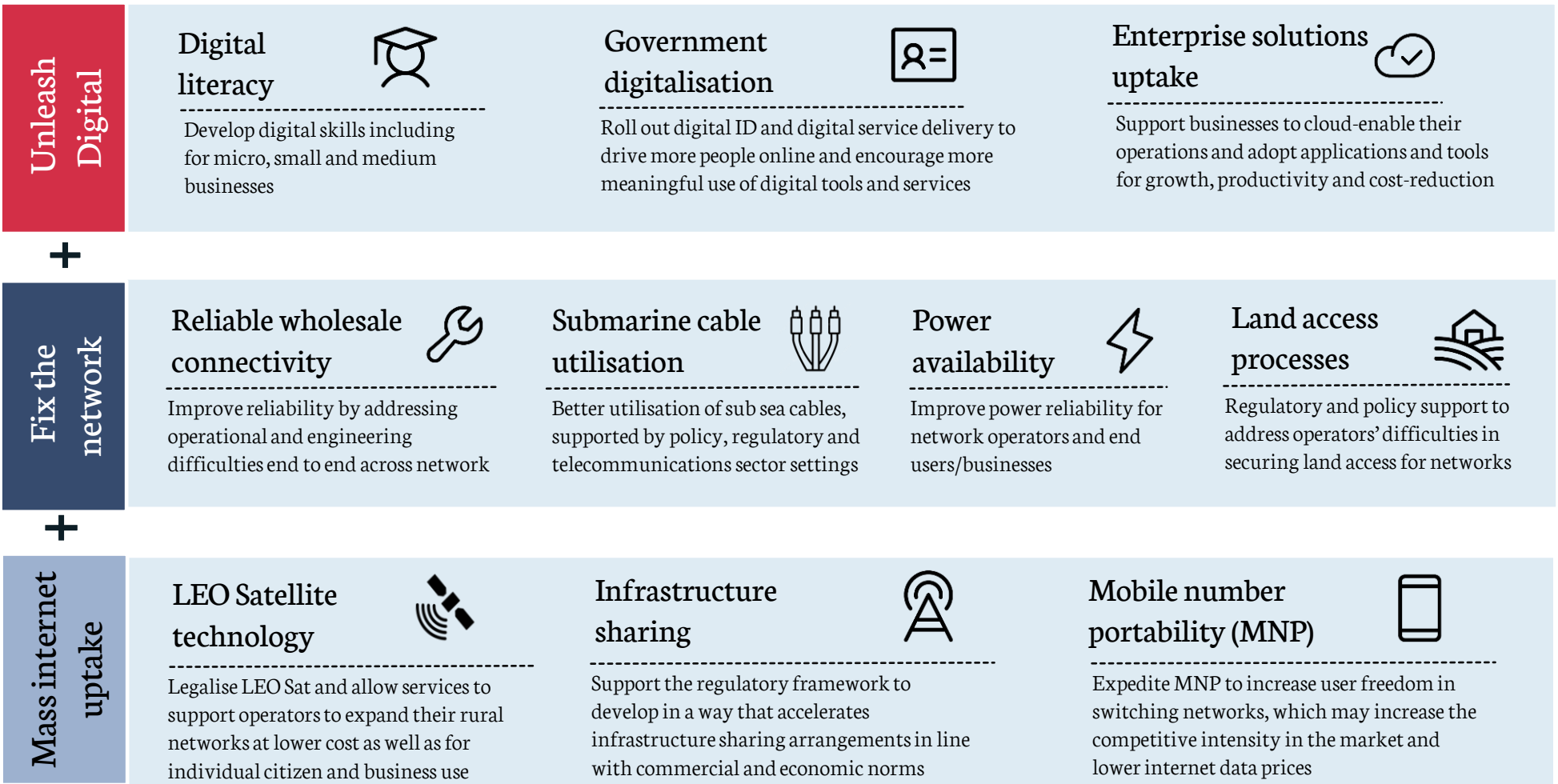
Unleashing internet access to businesses could have significant economic impacts, which we look at through three scenarios



With each change scenario, there are levers which would unlock growth and help resolve current problems in internet uptake by businesses



10 Potential levers for reform and industry growth

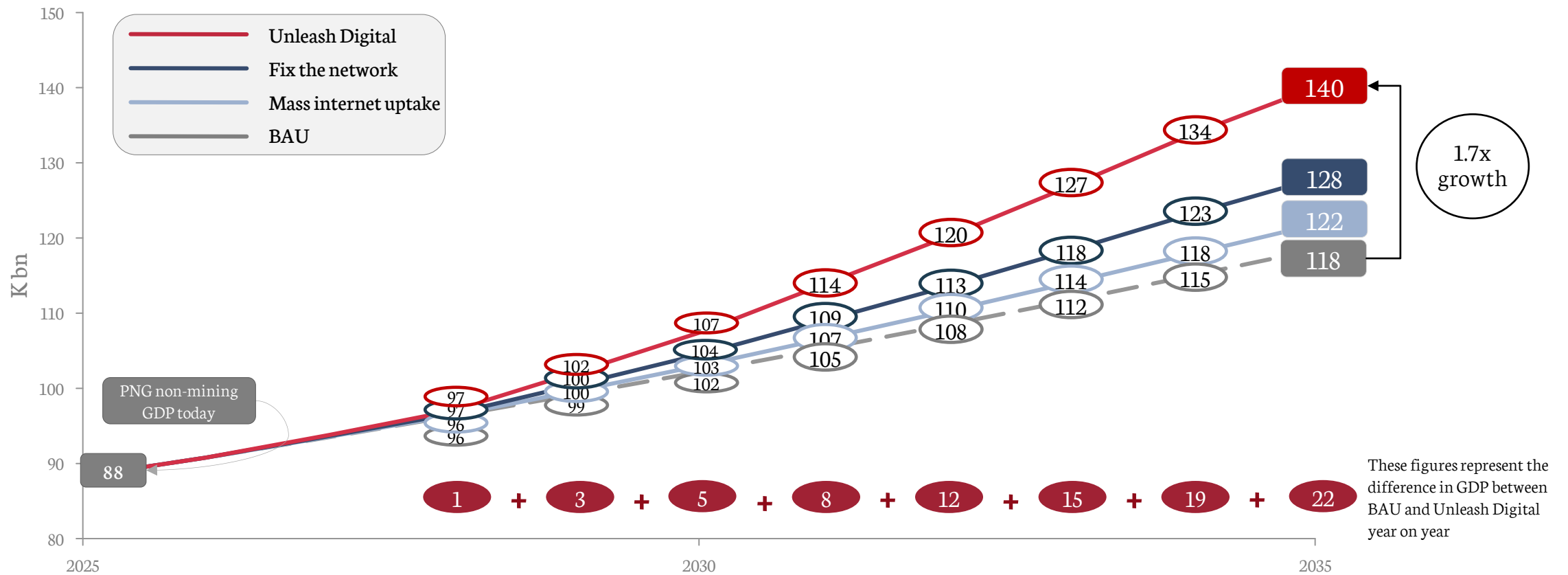




An Unleash Digital scenario could elevate PNG's forecast growth rate to above 4.5%, creating 85 Kbn in new output between now and 2035

Economy size projection under three digitalisation scenarios (kina billions)

HIGH LEVEL ESTIMATES



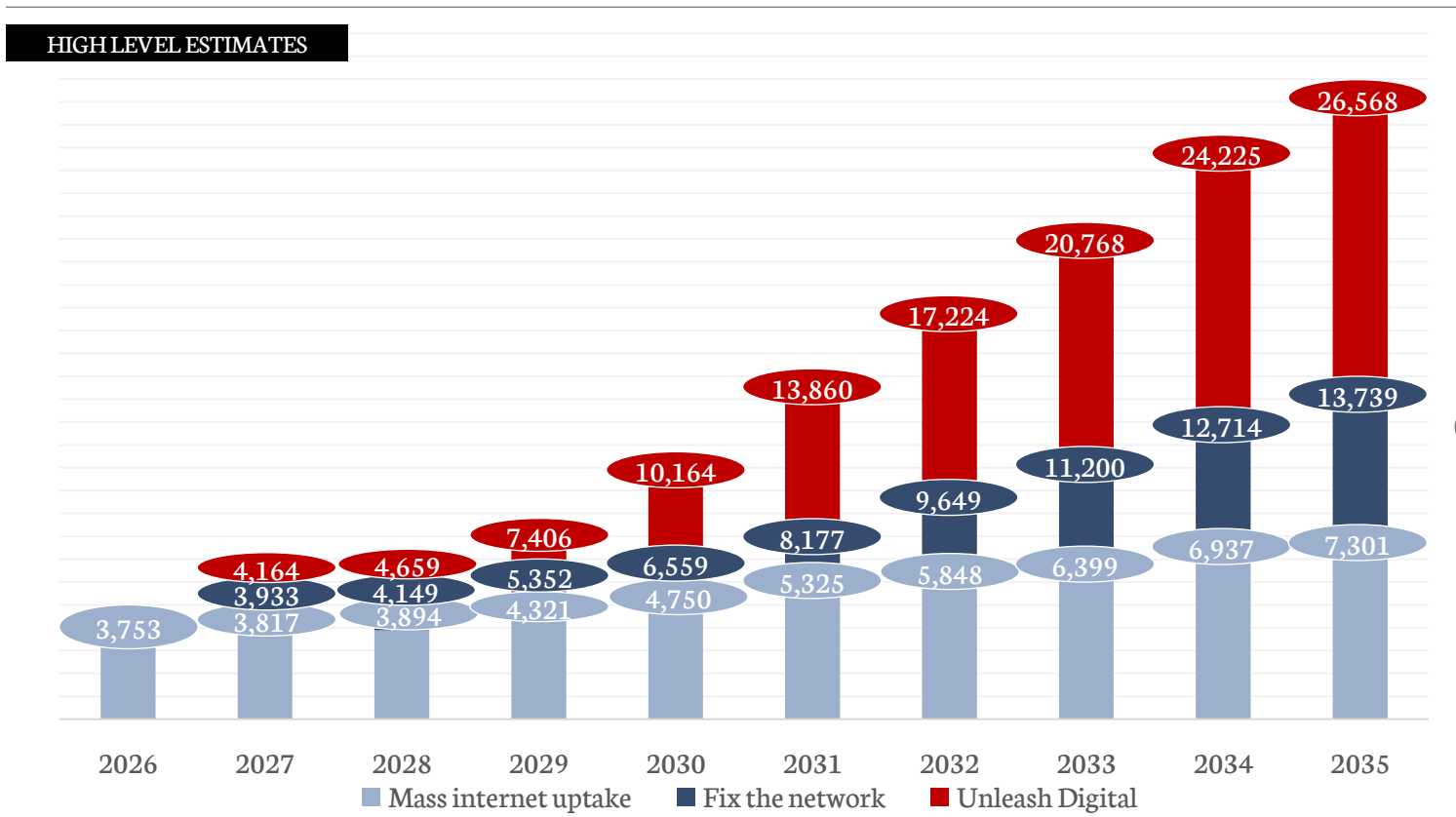
Note: Based on LSA Business Telescope model using national data. These are estimates based on high level modelling and incomplete data sets. See Annex for detailed methodology.

Source: Long Street Advisors analysis, National Statistics Office, published data

Unleash Digital unlocks 132k new jobs in PNG by 2035, reshaping the nation's economic future and driving inclusive growth at scale



Potential new jobs created from digitalisation under three connectivity scenarios



Key observations

- The cumulative gap widens sharply after 2029, highlighting the long-term nature of achieving digital enablement
- Cumulative jobs created from digitalisation by 2035 under each scenario:
 - Mass internet uptake: 52,000
 - Fix the network: 79,000
 - Unleash Digital: 132,000
- The Unleash Digital scenario generates 2.5X more jobs than mass internet uptake, outperforming other scenarios from around 2030 onwards, as digitalisation impacts beyond connectivity uplifts would set in

Note: Based on LSA Business Telescope model using national data. These are estimates based on high level modelling and incomplete data sets. See Annex for detailed methodology.

Source: Long Street Advisors analysis, National statistics office, published data



Each province has unique needs and circumstances, and we have accounted for these differences in our digitalisation opportunity analysis

1  **GDP uplift**

Takes into account each provinces’:

- **Share of national non-mining GDP** estimated using GST remittance data
- **Baseline GDP levels and sector mix** drawn from national statistics
- **Forecast growth rates** from PNG Treasury (2024-25) and World Bank (2026 onwards)
- **Expected digitalisation impact** applied proportionally to provincial economic size and growth outlook

2  **Job creation**

Takes into account each provinces’:

- **Share of national formal employment** and **number of formal businesses** according to GST allocation and Tebbutt report
- **Baseline employment levels**, including resource sector jobs, from PNG BCFW Labour Market Brief
- **Employment growth** aligned with provincial GDP expansion and digital-enabled GDP uplift
- **Job creation elasticity** used to convert GDP growth into new employment opportunities

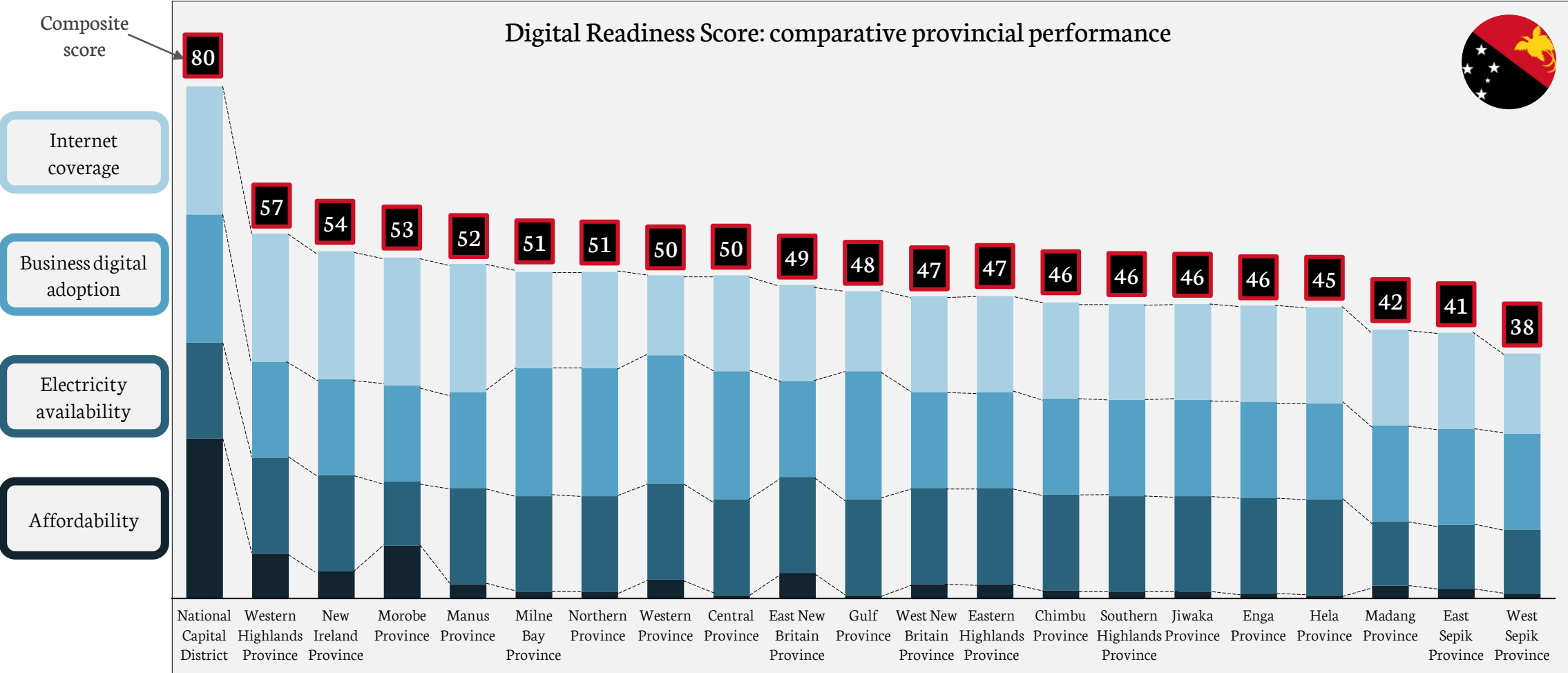
2  **Digital readiness score**

Takes into account each provinces’:

- **Coverage class** (Average, good, limited) based on available network coverage maps
- **Business internet adoption** based on regional proxy according to Tebbutt report
- **Mains electricity availability** based on regional proxy according to Tebbutt report
- **Affordability** based on GRP per capita ranking for each province

Note: Teddbut report refers to the PNG Micro, Small and Medium Enterprises and Informal Sector Study done by Teddbutt for the Australia, Papua New Guinea Economic Partnership (APEP) in September 2024

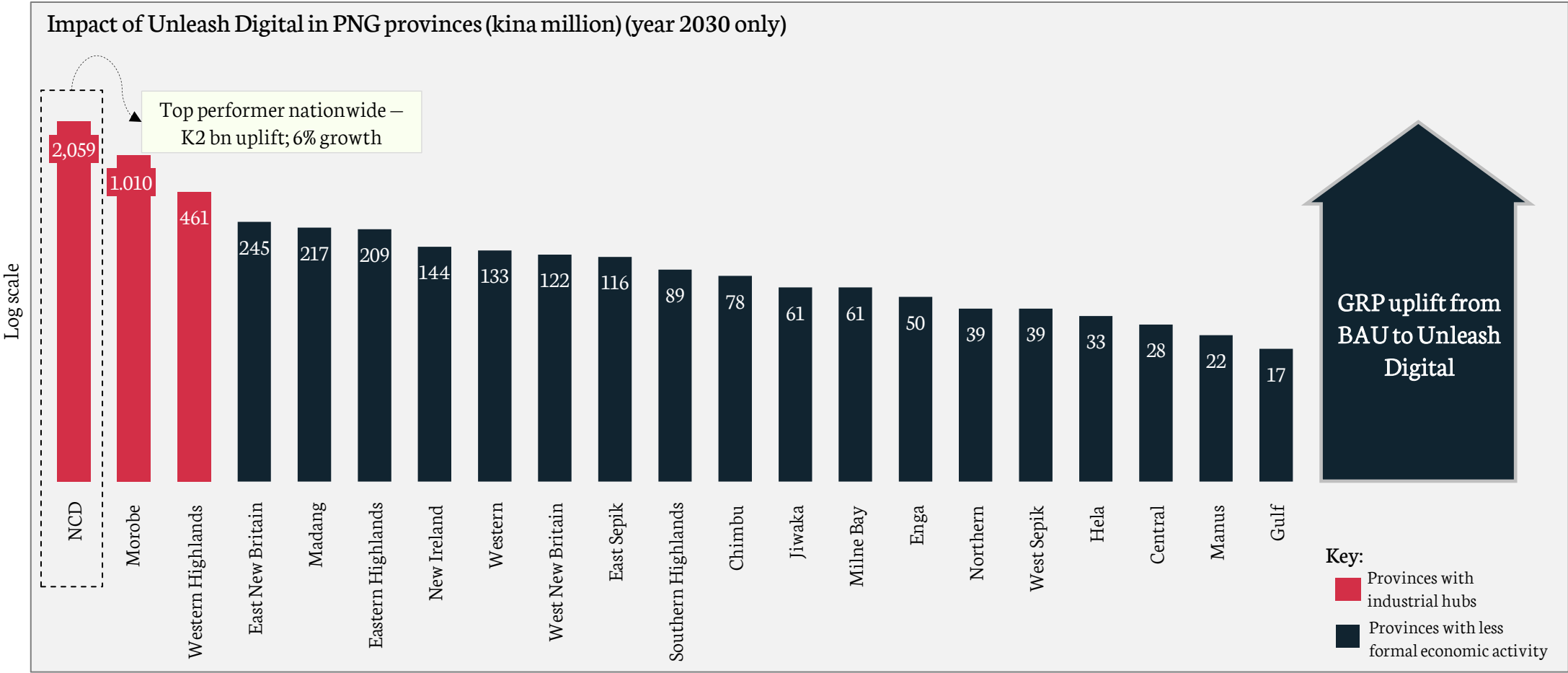
The Digital Readiness Score refers to how ready each province is to benefit from the Unleash Digital scenario



Note: Based on LSA Business Telescope model using national data. Bougainville is not included in the results due to a lack of formal GST data which makes it difficult to apply GDP calculations at a province level.
 Source: Long Street Advisors analysis



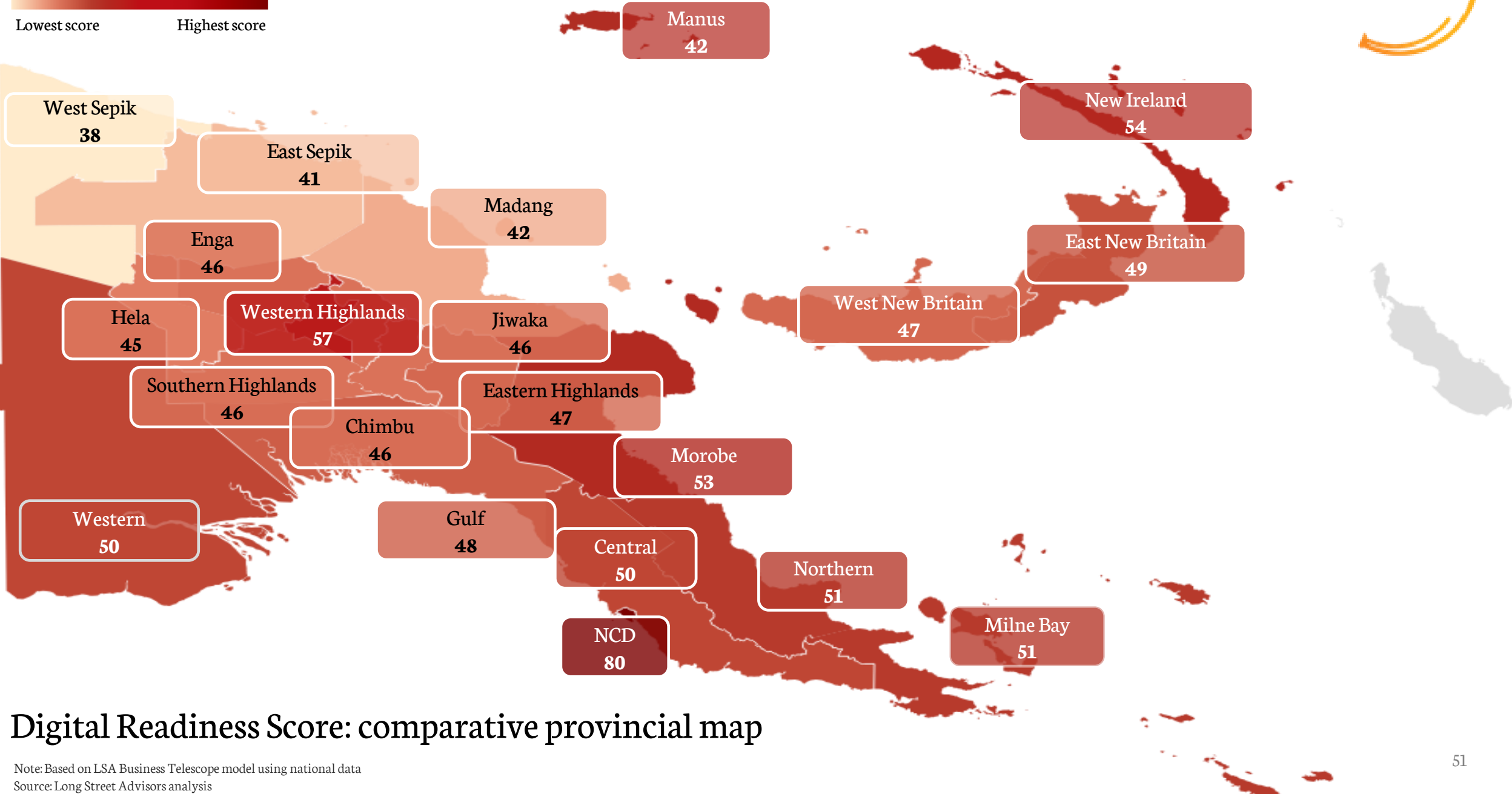
Output¹ uplift under Unleash Digital could be significant across PNG's built up and more rural and remote regions



Note: Unleash Digital GRP was estimated for 2030 by applying uplift levers, based on LSA assumptions and market survey findings, to each province's baseline GRP. The percentage uplift represents the relative difference between Unleash Digital and baseline GRP in 2030. Output refers to GRP.

Source: Long Street Advisors analysis, National statistics office, published data

Key:



Digital Readiness Score: comparative provincial map

Note: Based on LSA Business Telescope model using national data
Source: Long Street Advisors analysis

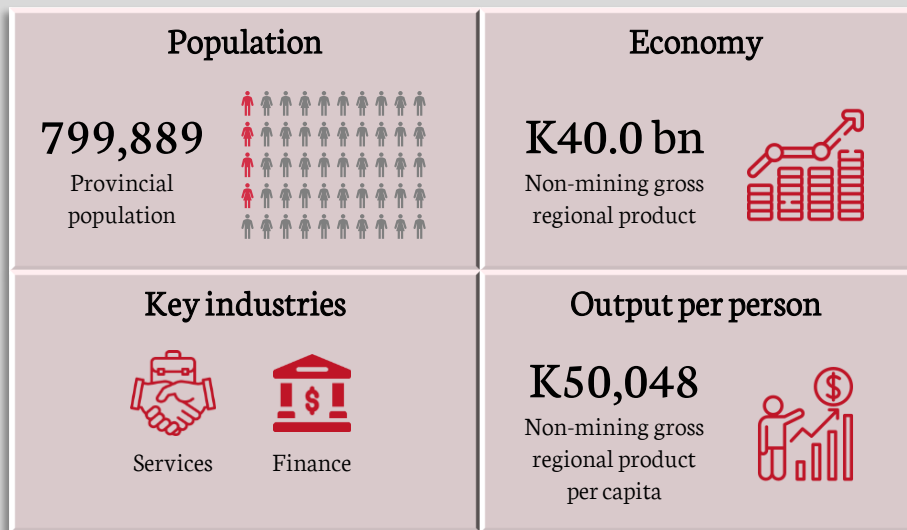
Digital readiness score **80.0**

Digital readiness rank **1/21** provinces

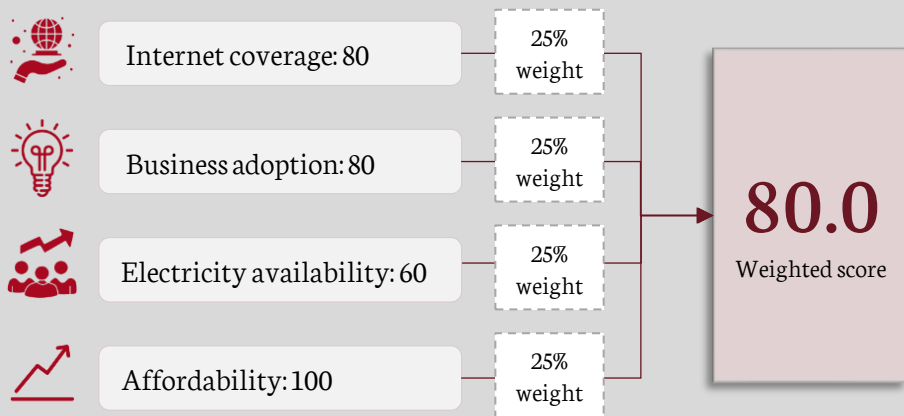
Unleashing Digital through better connectivity could grow National Capital District's economy by an additional **K33.4 bn** in economic activity in the decade up to 2035, creating **54,400** new jobs



2025 province snapshot

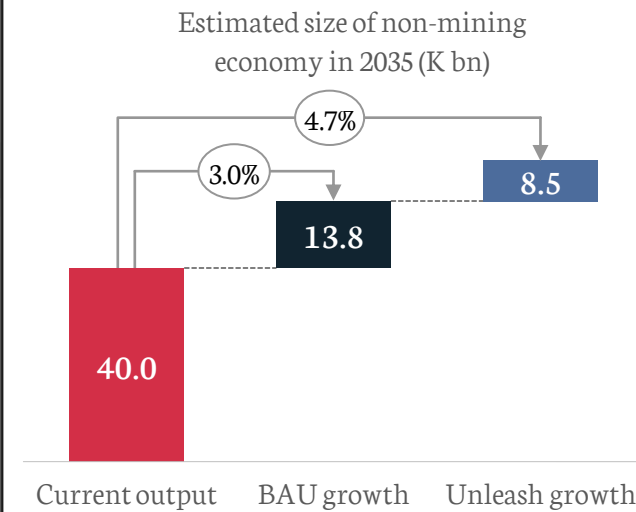


Digital readiness score



Projected economic impact by 2035

- By 2035, an Unleash Digital scenario implies:
- **A larger economy:** K62.3 bn vs K53.8 bn under baseline
 - **Faster growth:** 4.7% per year vs 3.0%
 - **Material uplift:** ~K33.4 bn in additional output over a decade
 - **More economic activity:** ~4,500 new businesses and ~54,400 jobs



Levers to Unleash Digital



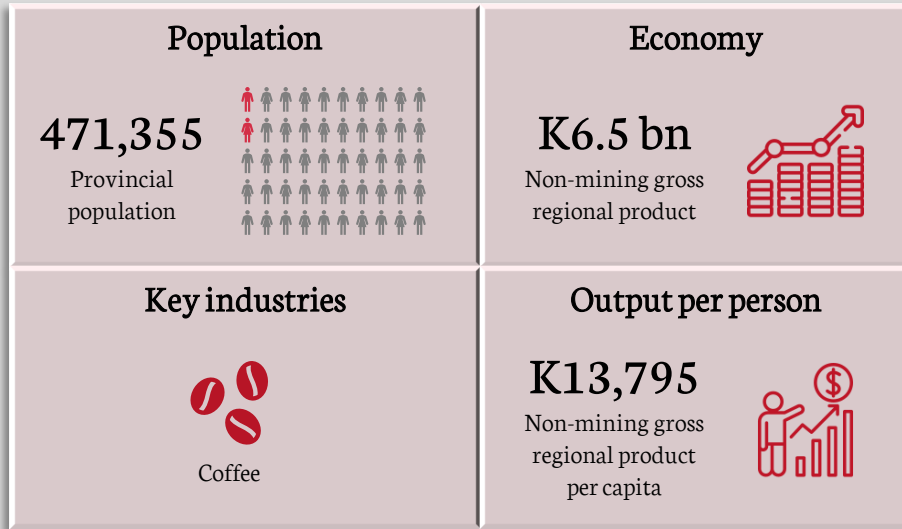
- Mobile number portability
- Reliable connectivity
- Power availability
- Digital skills
- Government digitalisation
- Enterprise solution uptake

“PNG needs digital to power its economy”

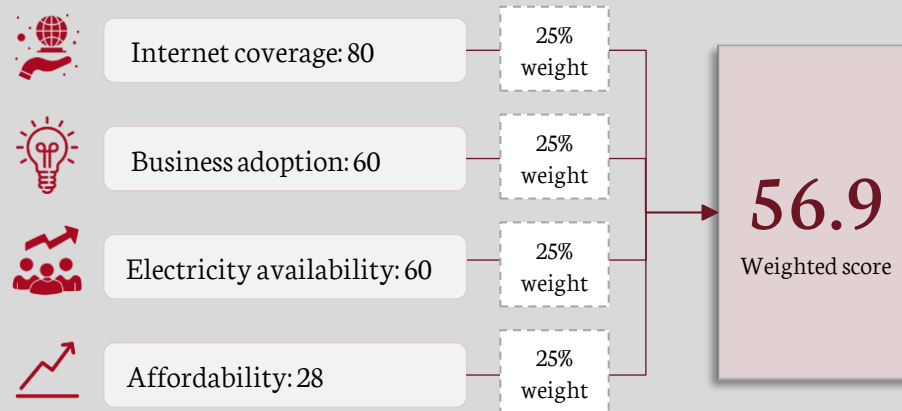
“Access to fast and reliable internet is essential for inclusive economic growth.”



2025 province snapshot



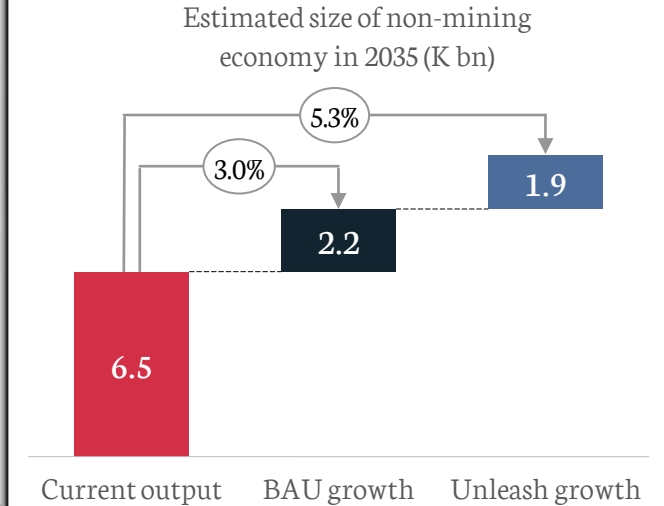
Digital readiness score



Projected economic impact by 2035

By 2035, an Unleash Digital scenario implies:

- **A larger economy:** K10.6 bn vs K8.7 bn under the baseline
- **Faster growth:** 5.3% per year vs 3.0%
- **Material uplift:** ~K7.5 bn in additional output over a decade
- **More economic activity:** ~1,800 new businesses and ~11,100 jobs



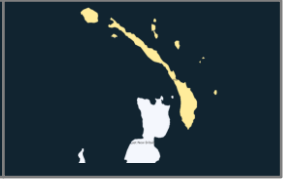
Levers to Unleash Digital

- LEO Sat technology
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

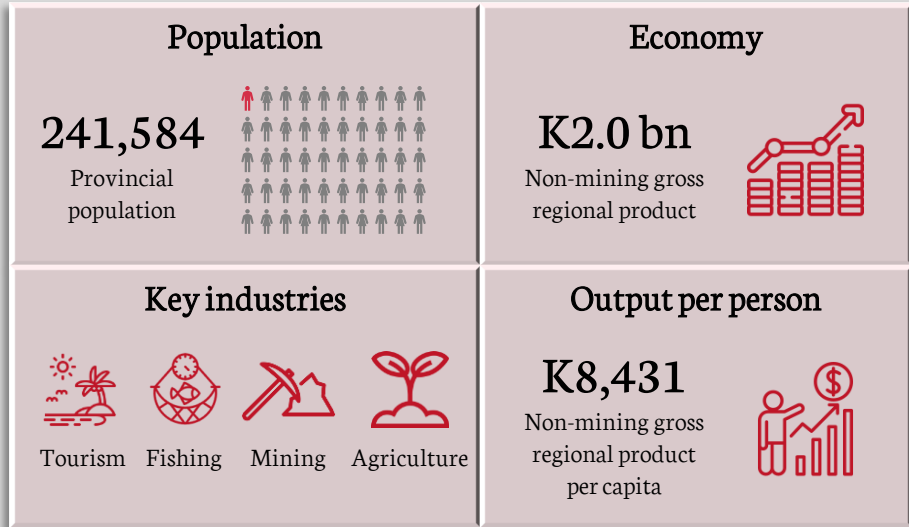
“Connectivity outages are disrupting business operations and affecting livelihoods.”

“60% of our total ICT spend is connectivity alone.”

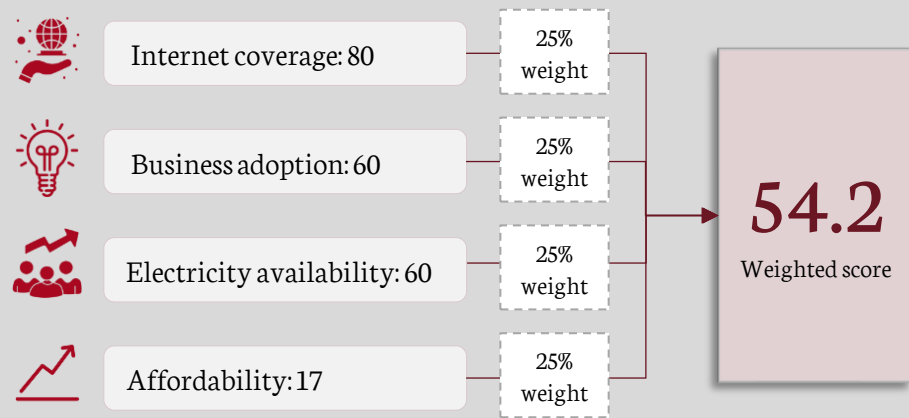




2025 province snapshot

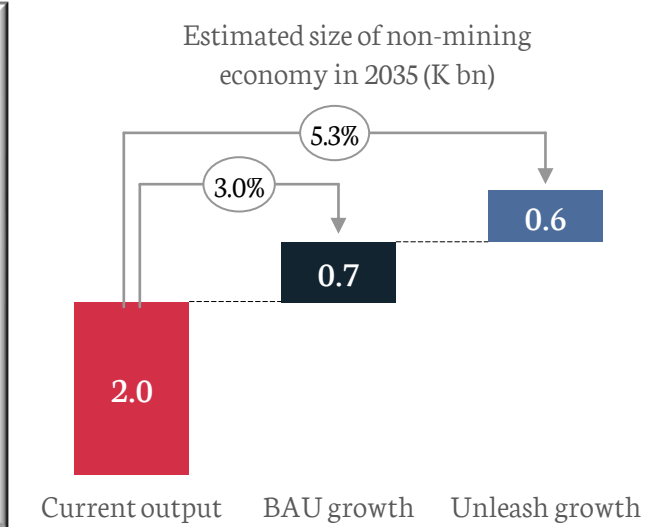


Digital readiness score



Projected economic impact by 2035

- By 2035, an Unleash Digital scenario implies:
- A larger economy:** K3.3 bn vs K2.7 bn under the baseline
 - Faster growth:** 5.3% per year vs 3.0%
 - Material uplift:** ~K2.3 bn in additional output over a decade
 - More economic activity:** ~1,800 new businesses and ~3,400 jobs



Levers to Unleash Digital



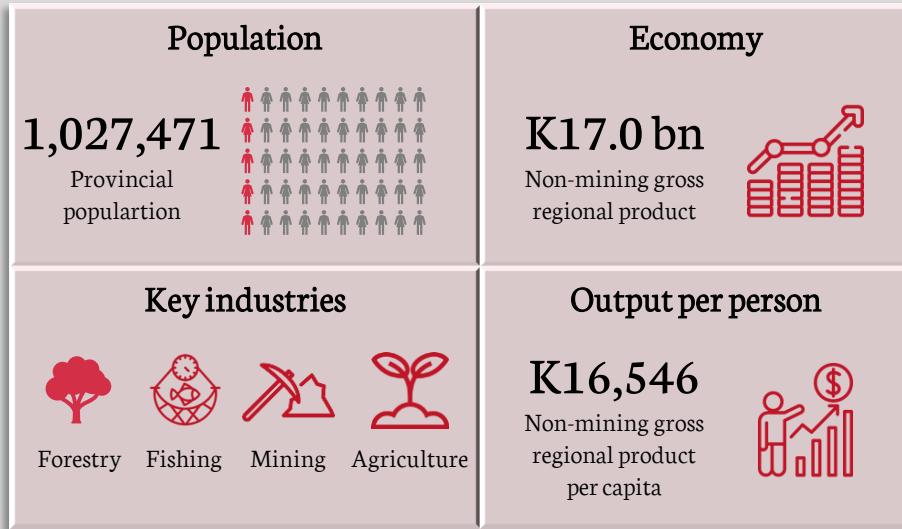
- LEO Sat technology
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

“Kavieng still has slow data, but the new connection should improve business.”

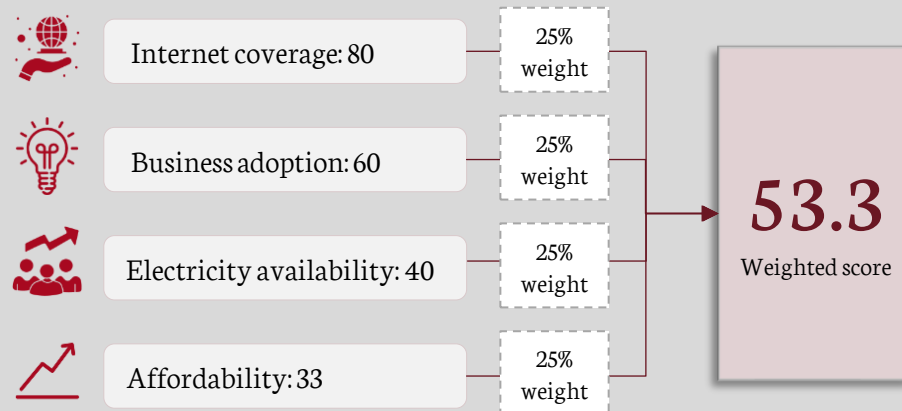
“We use cloud for stores, stocks management, control of supply chain.”



2025 province snapshot



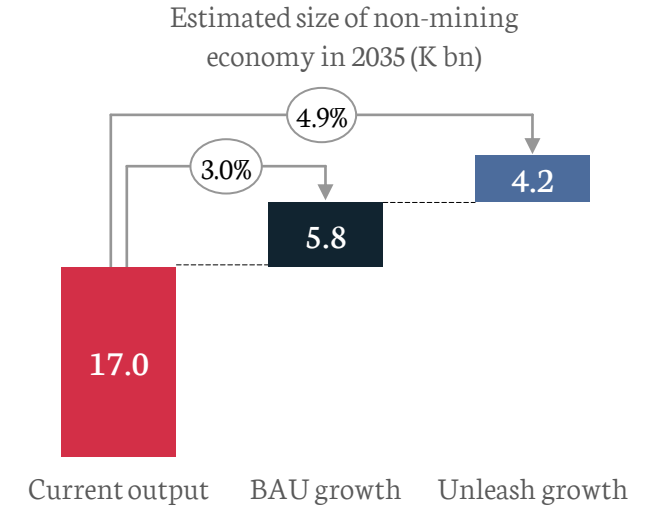
Digital readiness score



Projected economic impact by 2035

By 2035, an Unleash Digital scenario implies:

- **A larger economy:** K27.0 bn vs K22.8 bn under the baseline
- **Faster growth:** 4.9% per year vs 3.0%
- **Material uplift:** ~K16.4 bn in additional output over a decade
- **More economic activity:** ~1,800 new businesses and ~25,500 jobs



Levers to Unleash Digital



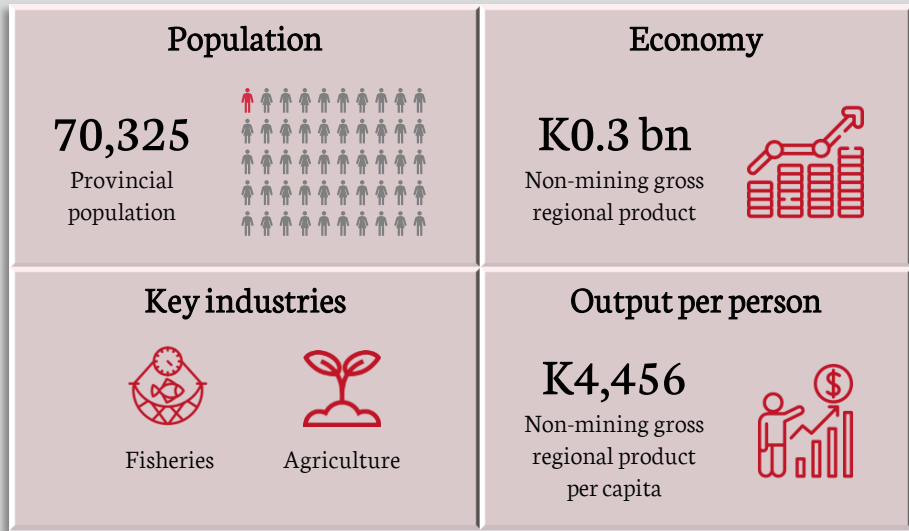
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

“We’re filling gaps where mobile carriers won’t go for economic reasons.”

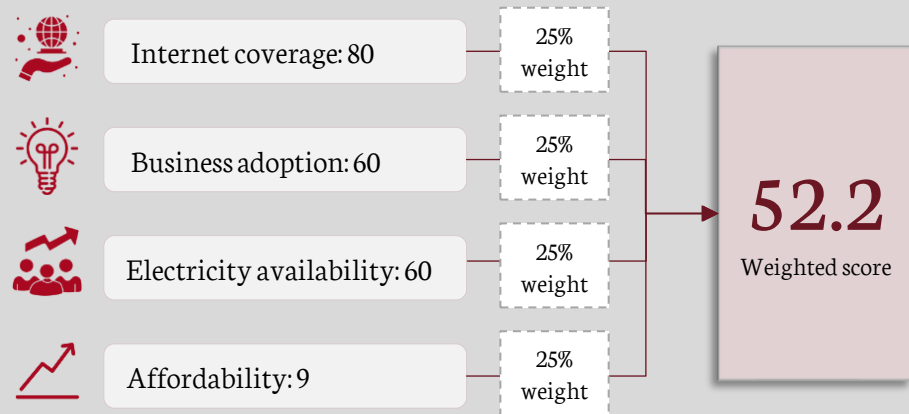
“Power fluctuations are PNG’s biggest issue, costing millions.”



2025 province snapshot

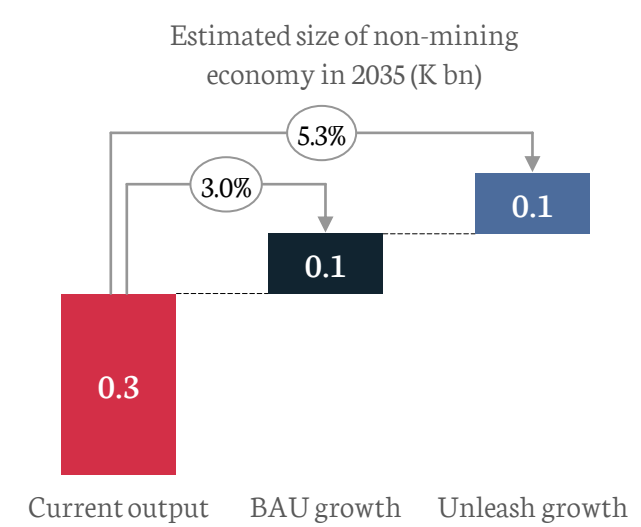


Digital readiness score



Projected economic impact by 2035

- By 2035, an Unleash Digital scenario implies:
- A larger economy:** K0.5 bn vs K0.4 bn under the baseline
 - Faster growth:** 5.3% per year vs 3.0%
 - Meaningful uplift:** ~K0.4 bn in additional output over a decade
 - More economic activity:** ~1,300 new businesses and ~500 jobs



Levers to Unleash Digital

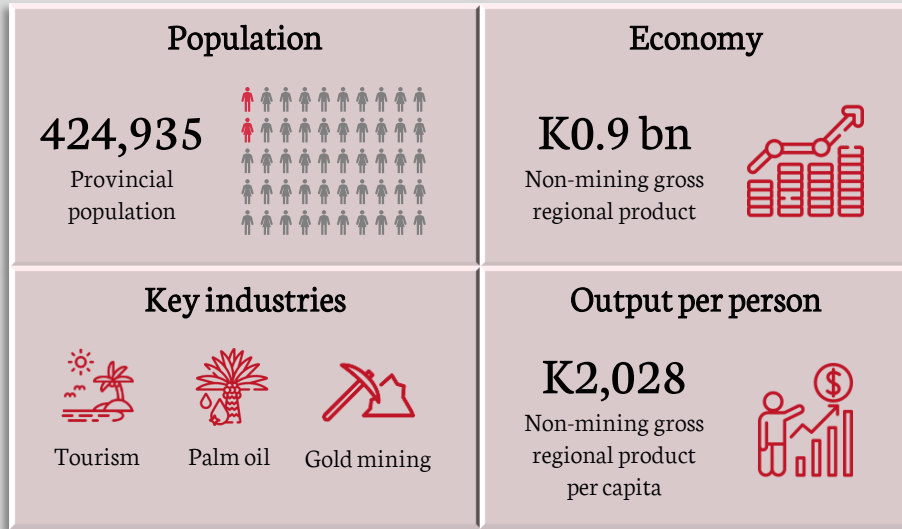


- LEO Sat technology
 - Infrastructure sharing
 - Mobile number portability
 - Reliable connectivity
 - Power availability
 - Submarine cable utilisation
 - Land access processes
 - Digital skills
 - Government digitalisation
 - Enterprise solution uptake
- “If more people start using digital platforms, it will improve utilisation of the cables.”
- “Once landed, the cable will provide Manus with high-speed internet.”

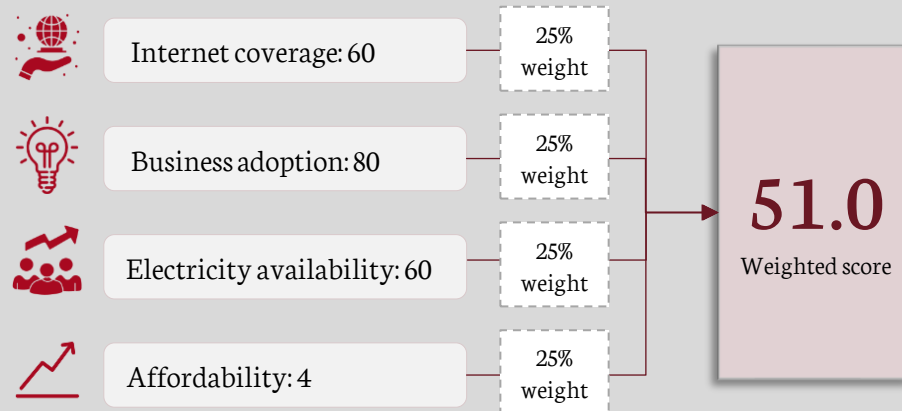
Source: Long Street Advisors analysis



2025 province snapshot



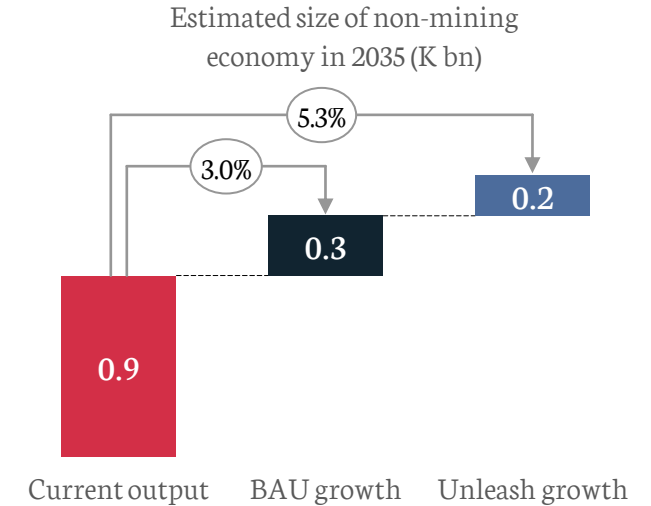
Digital readiness score



Projected economic impact by 2035

By 2035, an Unleash Digital scenario implies:

- **A larger economy:** K1.4 bn vs K1.2 bn under the baseline
- **Faster growth:** 5.3% per year vs 3.0%
- **Meaningful uplift:** ~K1.0 bn in additional output over a decade
- **More economic activity:** ~2,200 new businesses and ~1,400 jobs



Levers to Unleash Digital

- LEO Sat technology
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

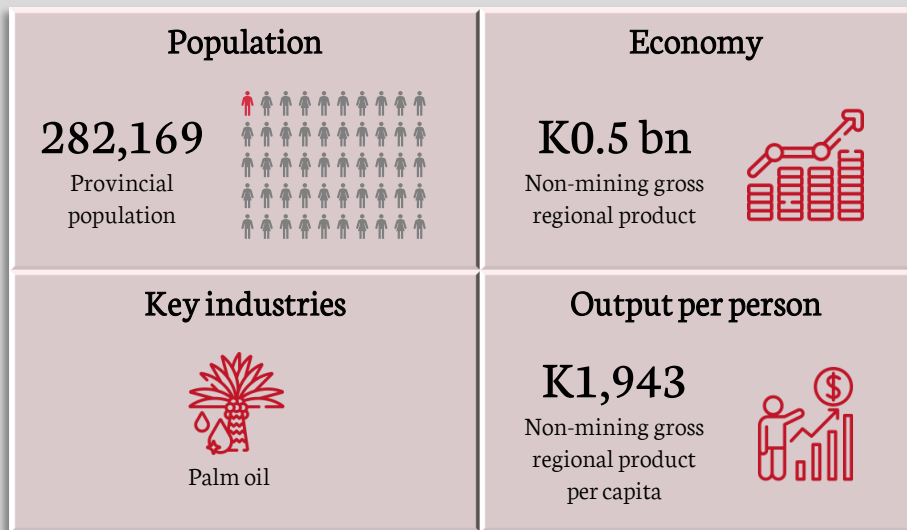


“Power outages crippling Milne Bay businesses, chamber urges immediate action.”

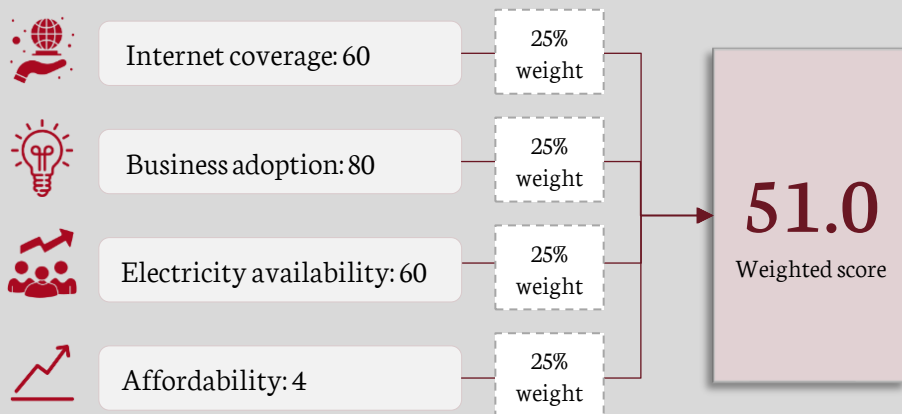
“Starlink for schools and hospitals would be a game changer.”



2025 province snapshot



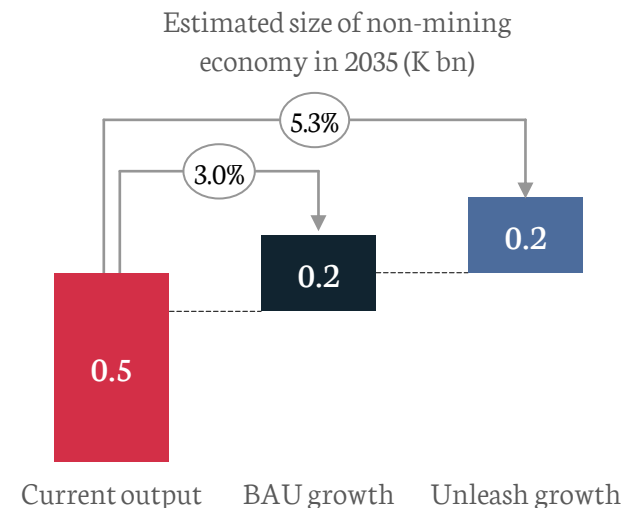
Digital readiness score



Projected economic impact by 2035

By 2035, an Unleash Digital scenario implies:

- **A larger economy:** K0.9 bn vs K0.7 bn under the baseline
- **Faster growth:** 5.3% per year vs 3.0%
- **Meaningful uplift:** ~K0.6 bn in additional output over a decade
- **More economic activity:** ~1,300 new businesses and ~900 jobs



Levers to Unleash Digital

- LEO Sat technology
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

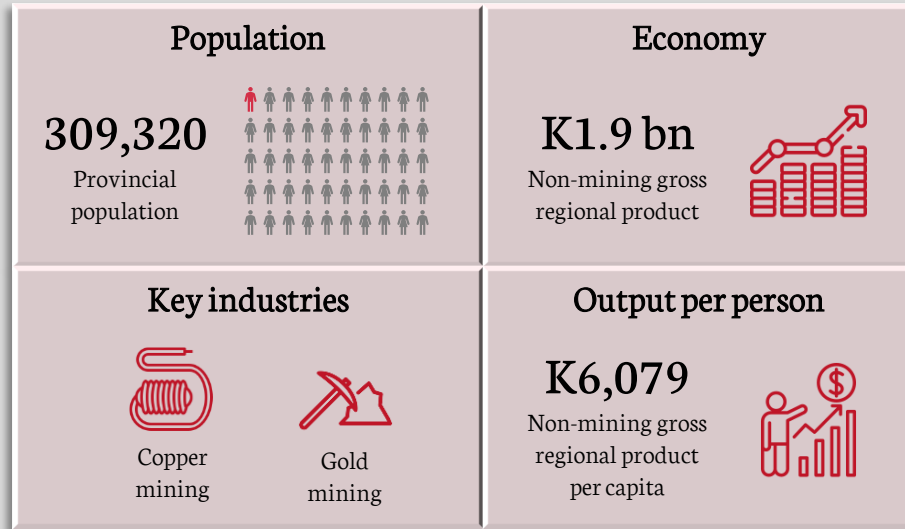
“We will need to connect electricity from Popondetta to Oro Bay this year.”

“Internet should be in every school in the country.”

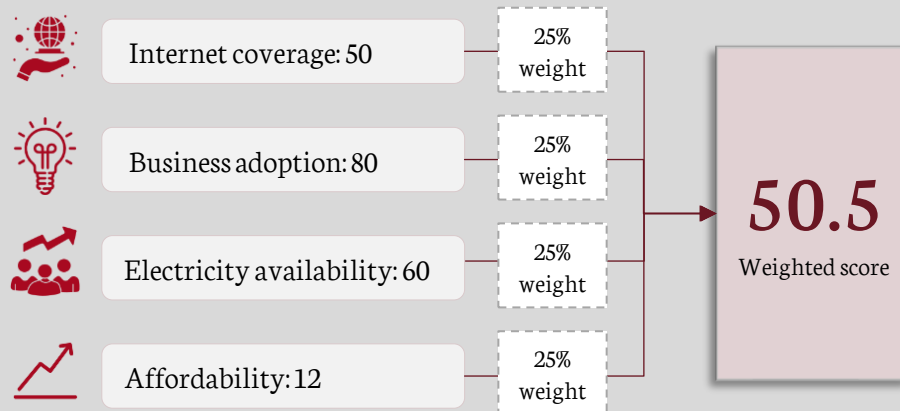




2025 province snapshot



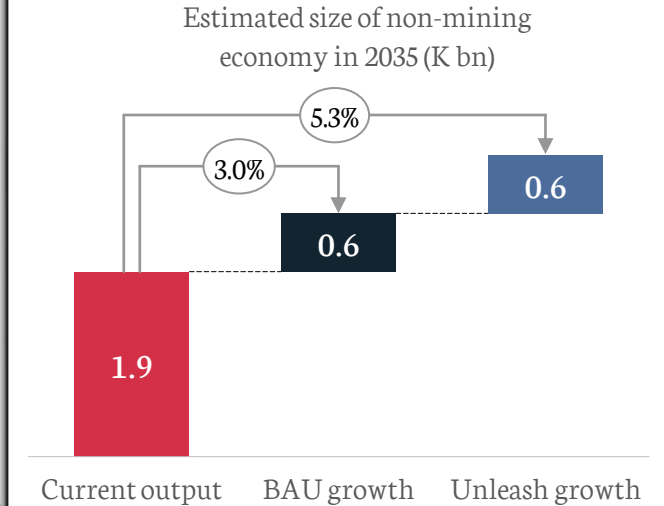
Digital readiness score



Projected economic impact by 2035

By 2035, an Unleash Digital scenario implies:

- **A larger economy:** K3.1 bn vs K2.5 bn under the baseline
- **Faster growth:** 5.3% per year vs 3.0%
- **Meaningful uplift:** ~K2.2 bn in additional output over a decade
- **More economic activity:** ~2,700 new businesses and ~3,200 jobs



Levers to Unleash Digital

- LEO Sat technology
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

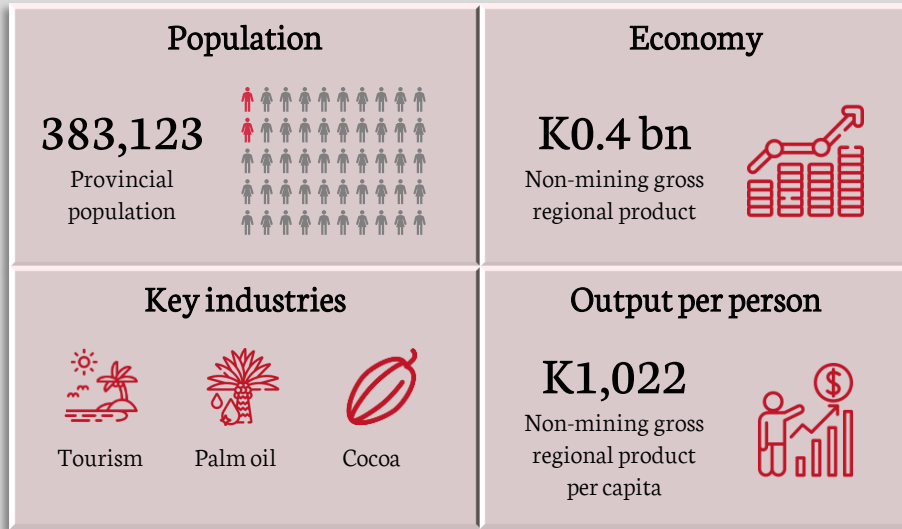
“With reliable internet access, we would be able to focus on building the business.”

“Millions lost in revenue to disruptions.”

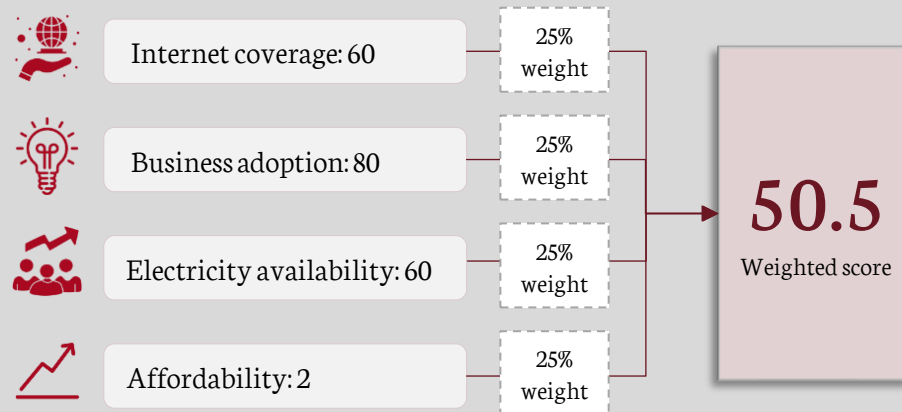




2025 province snapshot



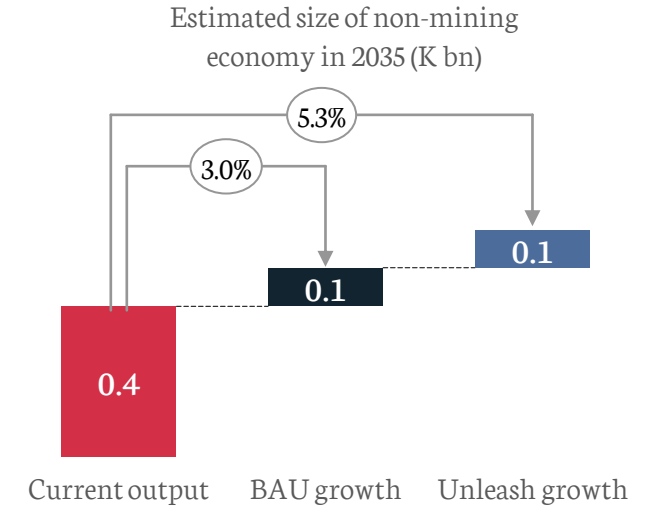
Digital readiness score



Projected economic impact by 2035

By 2035, an Unleash Digital scenario implies:

- **A larger economy:** K0.6 bn vs K0.5 bn under the baseline
- **Faster growth:** 5.3% per year vs 3.0%
- **Meaningful uplift:** ~K0.5 bn in additional output over a decade
- **More economic activity:** ~400 new businesses and ~600 jobs



🔒 Levers to Unleash Digital

- LEO Sat technology
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

“Rigo district received improved internet access ahead of Independence celebration.”

“Goilala is now connected to Connect PNG, improving access to services.”

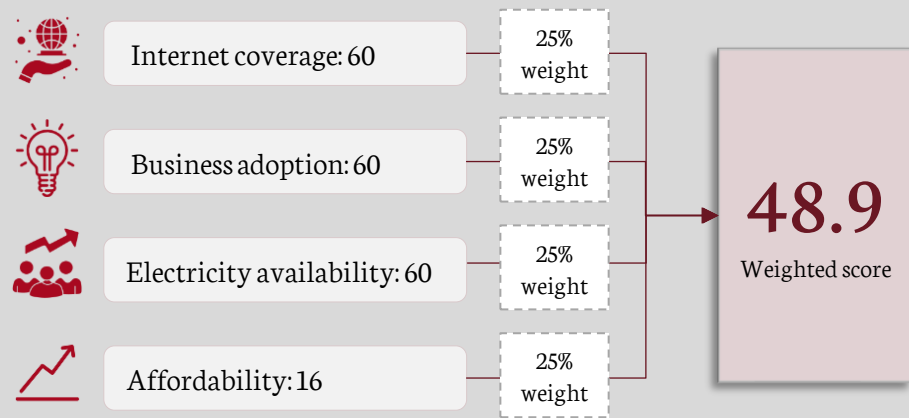




2025 province snapshot

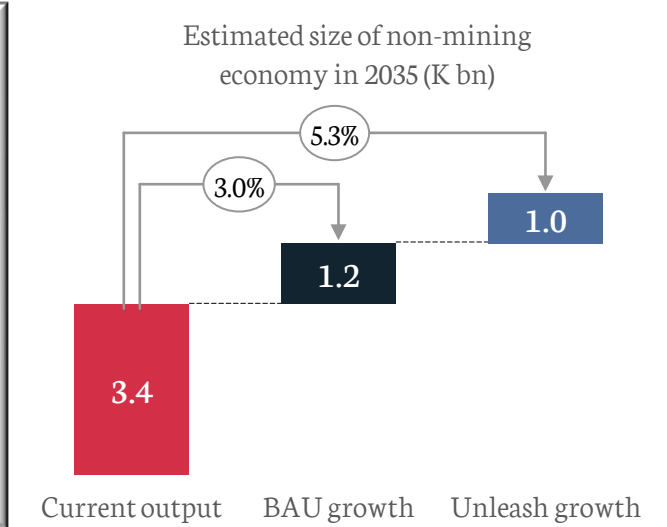
<p>Population</p> <p>444,322 Provincial population</p>	<p>Economy</p> <p>K3.4 bn Non-mining gross regional product</p>
<p>Key industries</p> Marine based tourism Tuna fishing Agriculture (cocoa, copra, palm oil)	<p>Output per person</p> <p>K7,758 Non-mining gross regional product per capita</p>

Digital readiness score



Projected economic impact by 2035

- By 2035, an Unleash Digital scenario implies:
- **A larger economy:** K5.6 bn vs K4.6 bn under the baseline
 - **Faster growth:** 5.3% per year vs 3.0%
 - **Meaningful uplift:** ~K4.0 bn in additional output over a decade
 - **More economic activity:** ~4,100 new businesses and ~5,900 jobs



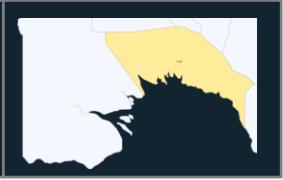
Levers to Unleash Digital



- LEO Sat technology
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

“Prolonged outages in East New Britain have raised consumer concern.”

“We are transitioning to an oracle cloud solution for our services.”



2025 province snapshot

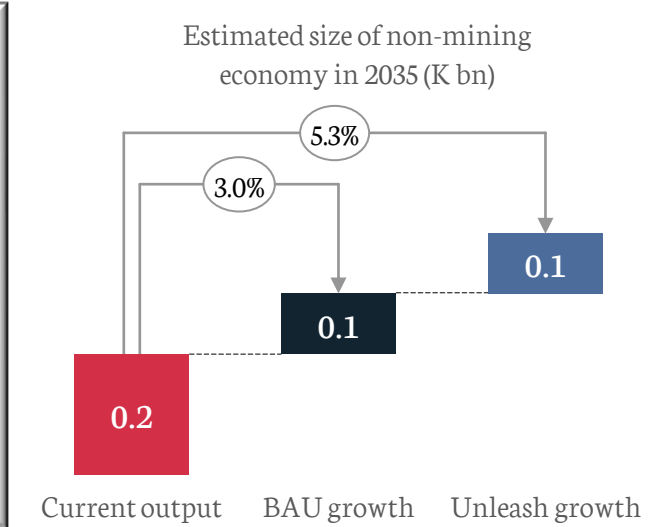
<p>Population</p> <p>207,616 Provincial population</p>	<p>Economy</p> <p>K0.2 bn Non-mining gross regional product</p>
<p>Key industries</p> <p>Liquid natural gas Coastal fisheries</p>	<p>Output per person</p> <p>K1,132 Non-mining gross regional product per capita</p>

Digital readiness score

Internet coverage: 50	25% weight	<p>48.1 Weighted score</p>
Business adoption: 80	25% weight	
Electricity availability: 60	25% weight	
Affordability: 2	25% weight	

Projected economic impact by 2035

- By 2035, an Unleash Digital scenario implies:
- A larger economy:** K0.4 bn vs K0.3 bn under the baseline
 - Faster growth:** 5.3% per year vs 3.0%
 - Meaningful uplift:** ~K0.3 bn in additional output over a decade
 - More economic activity:** ~900 new businesses and ~400 jobs



Levers to Unleash Digital



- LEO Sat technology
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

“Cannot focus on customers or growth because you get dragged into fire fighting.”

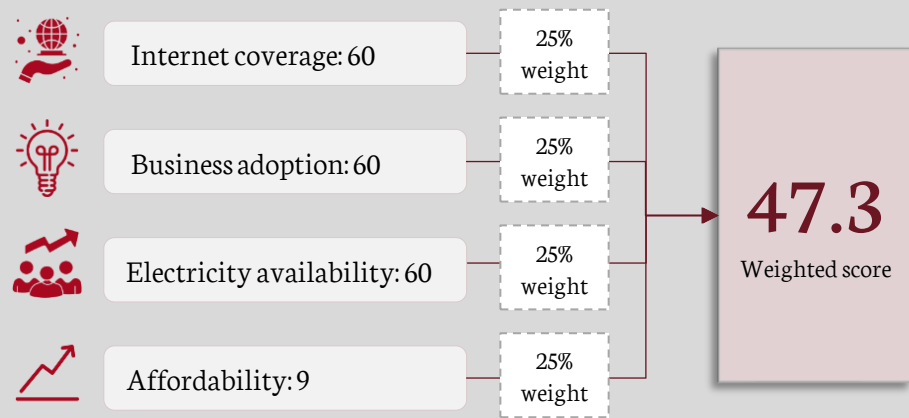
“Internet should be in every school in the country.”



2025 province snapshot

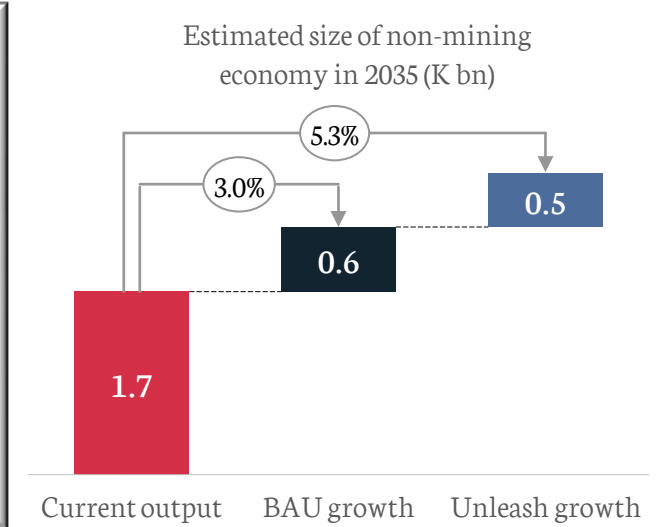
<p>Population</p> <p>378,228 Provincial population</p>	<p>Economy</p> <p>K1.7 bn Non-mining gross regional product</p>
<p>Key industries</p> <p>Palm oil</p>	<p>Output per person</p> <p>K4,557 Non-mining gross regional product per capita</p>

Digital readiness score



Projected economic impact by 2035

- By 2035, an Unleash Digital scenario implies:
- **A larger economy:** K2.8 bn vs K2.3 bn under the baseline
 - **Faster growth:** 5.3% per year vs 3.0%
 - **Meaningful uplift:** ~K2.0 bn in additional output over a decade
 - **More economic activity:** ~3,600 new businesses and ~2,900 jobs



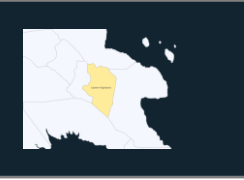
Levers to Unleash Digital

- LEO Sat technology
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

“We use Telikom, Vodafone and Digicel for 1m kina/yr because we can't rely on one.”

“Businesses in Kimbe are struggling due to ongoing outages.”





2025 province snapshot

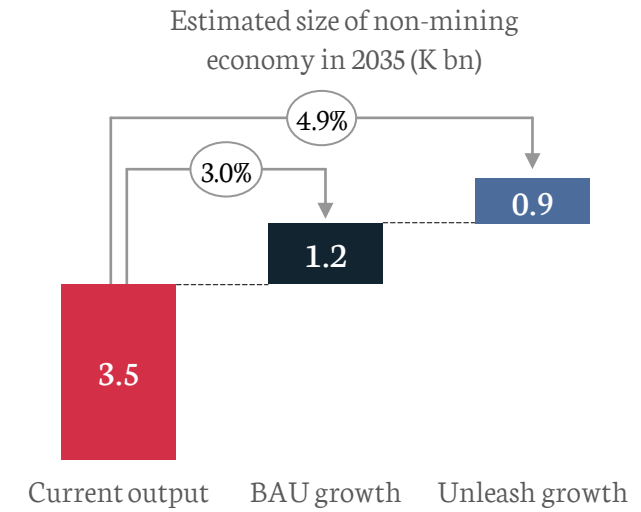
<p>Population</p> <p>820,074 Provincial population</p>	<p>Economy</p> <p>K3.5 bn Non-mining gross regional product</p>
<p>Key industries</p> <p>Forestry Fisheries Agriculture</p>	<p>Output per person</p> <p>K4,299 Non-mining gross regional product per capita</p>

Digital readiness score

Internet coverage: 60	25% weight	<p>47.1 Weighted score</p>
Business adoption: 60	25% weight	
Electricity availability: 60	25% weight	
Affordability: 9	25% weight	

Projected economic impact by 2035

- By 2035, an Unleash Digital scenario implies:
- A larger economy:** K5.6 bn vs K4.7 bn under the baseline
 - Faster growth:** 4.9% per year vs 3.0%
 - Meaningful uplift:** ~K3.4 bn in additional output over a decade
 - More economic activity:** ~3,200 new businesses and ~5,300 jobs



Levers to Unleash Digital



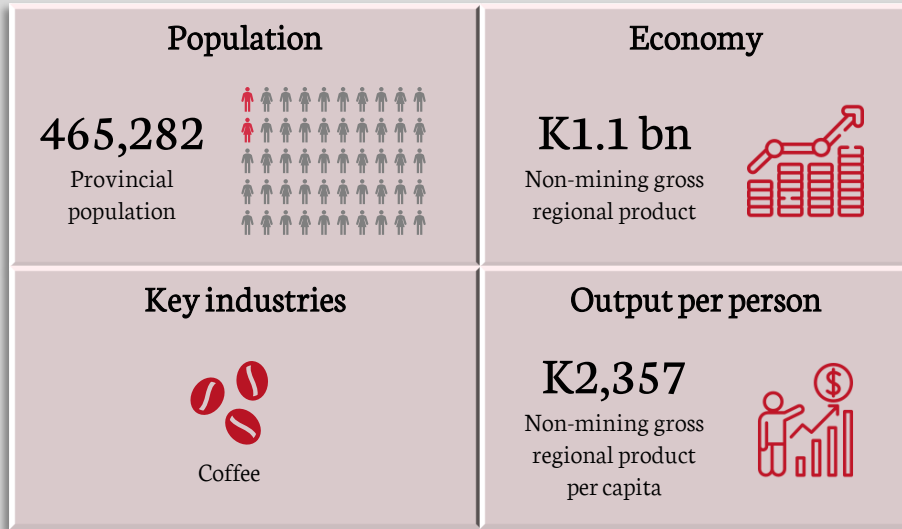
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

“MTDP provides context for ICT sector plan to support digital economy and society.”

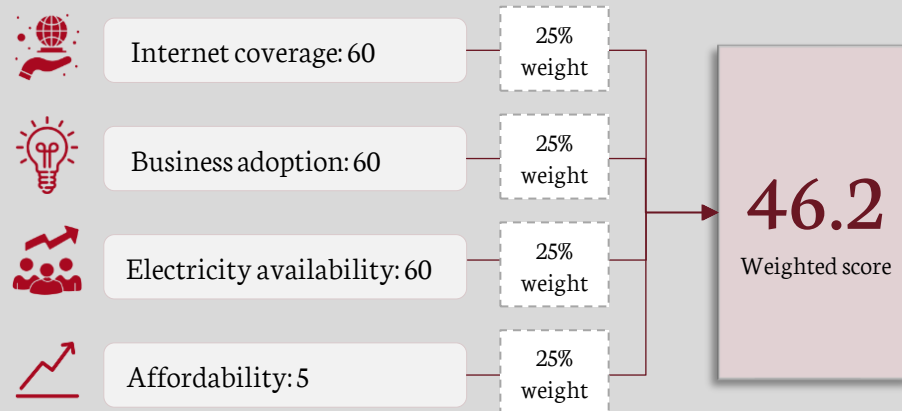
“Goroka is facing regular blackouts like other centres.”



2025 province snapshot



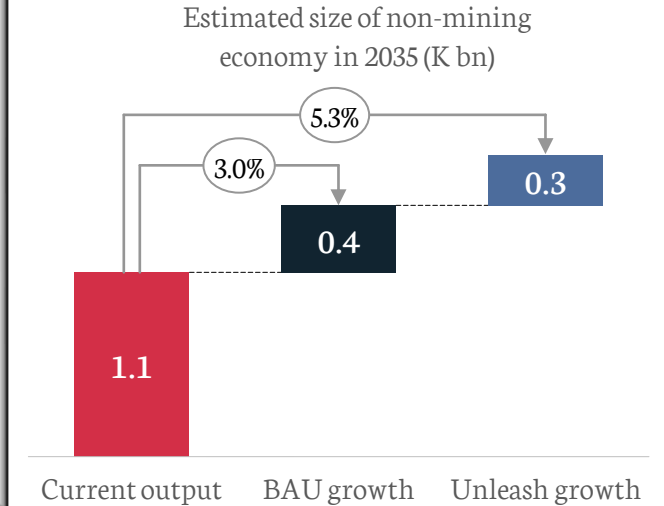
Digital readiness score



Projected economic impact by 2035

By 2035, an Unleash Digital scenario implies:

- **A larger economy:** K1.8 bn vs K1.5 bn under the baseline
- **Faster growth:** 5.3% per year vs 3.0%
- **Meaningful uplift:** ~K1.3 bn in additional output over a decade
- **More economic activity:** ~3,200 new businesses and ~1,800 jobs



Levers to Unleash Digital

- LEO Sat technology
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

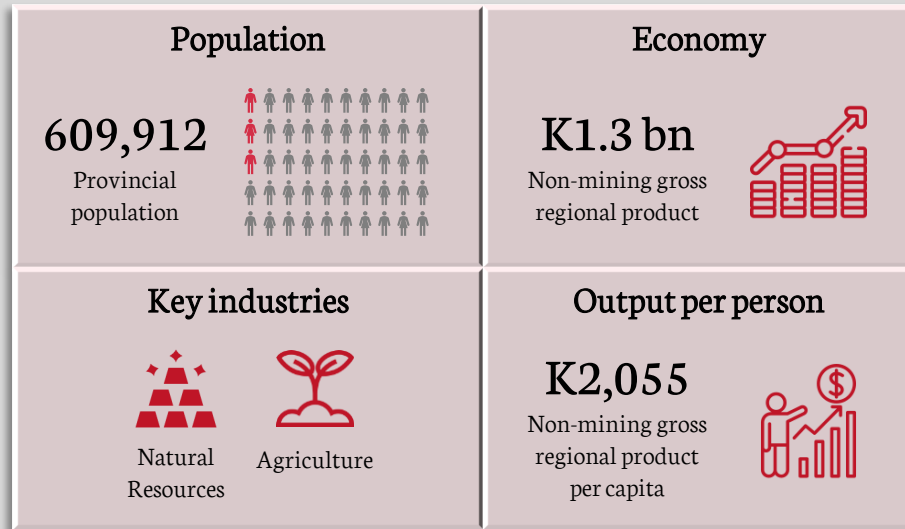
“It’s time we updated the ICT sector policy, and this gives DICT an opportunity to define change.”

“For power, we need a back up to the back up to the back up.”

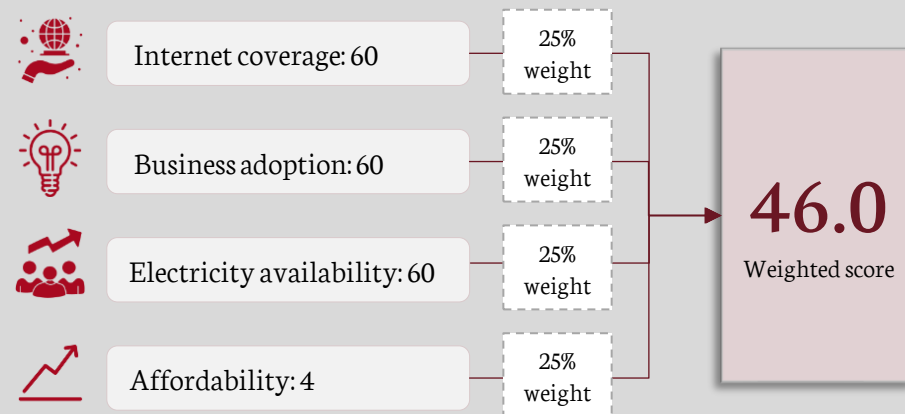




2025 province snapshot

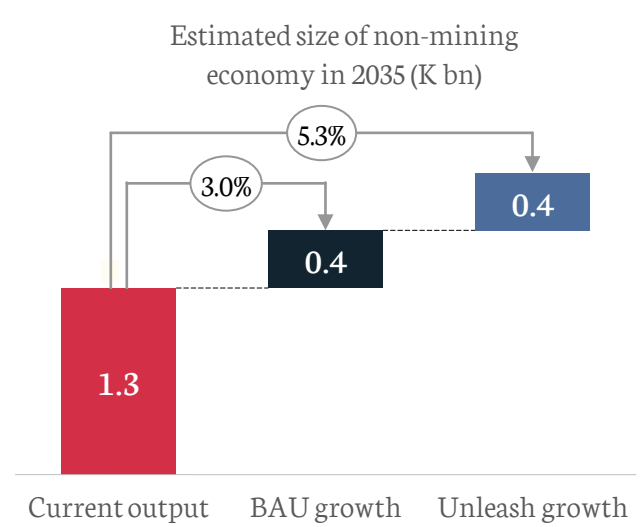


Digital readiness score



Projected economic impact by 2035

- By 2035, an Unleash Digital scenario implies:
- A larger economy:** K2.1 bn vs K1.7 bn under the baseline
 - Faster growth:** 5.3% per year vs 3.0%
 - Meaningful uplift:** ~K1.4 bn in additional output over a decade
 - More economic activity:** ~1,300 new businesses and ~2,100 jobs



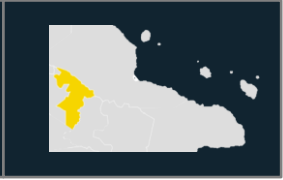
Levers to Unleash Digital



- LEO Sat technology
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

“Locally owned businesses in the Southern Highland are suffering miserably.”

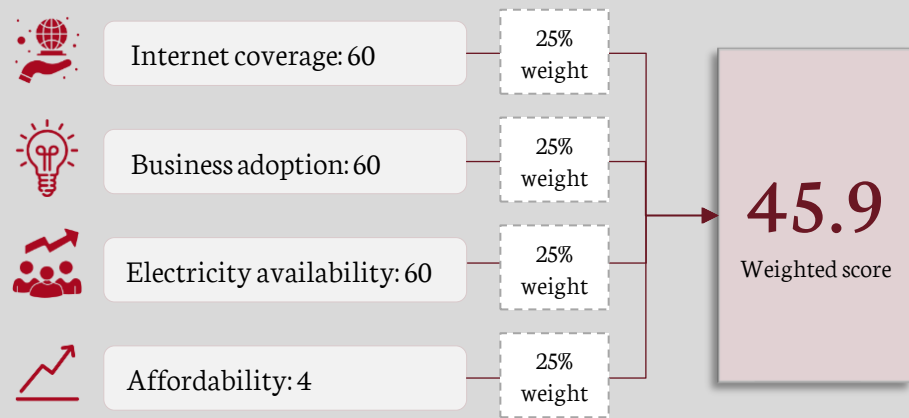
“For power, we need a back up to the back up to the back up.”



2025 province snapshot

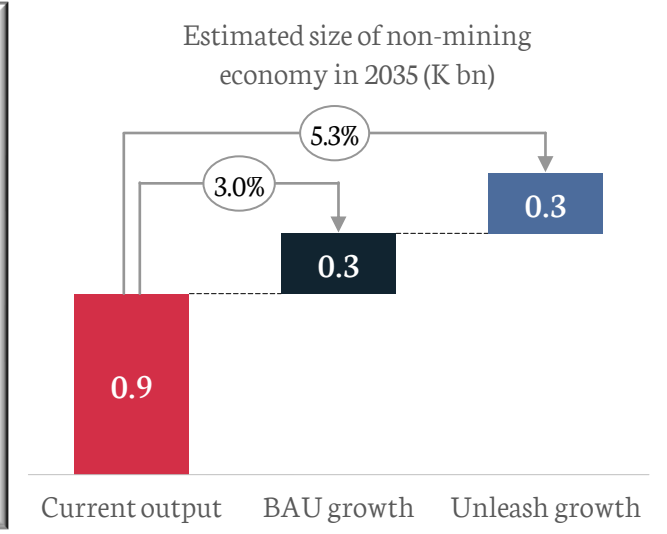
<p>Population</p> <p>465,223 Provincial population</p>	<p>Economy</p> <p>K0.9 bn Non-mining gross regional product</p>
<p>Key industries</p> <p>Coffee</p>	<p>Output per person</p> <p>K1,852 Non-mining gross regional product per capita</p>

Digital readiness score



Projected economic impact by 2035

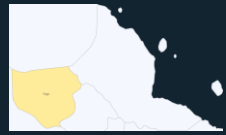
- By 2035, an Unleash Digital scenario implies:
- **A larger economy:** K1.4 bn vs K1.2 bn under the baseline
 - **Faster growth:** 5.3% per year vs 3.0%
 - **Meaningful uplift:** ~K1.0 bn in additional output over a decade
 - **More economic activity:** ~3,200 new businesses and ~1,400 jobs



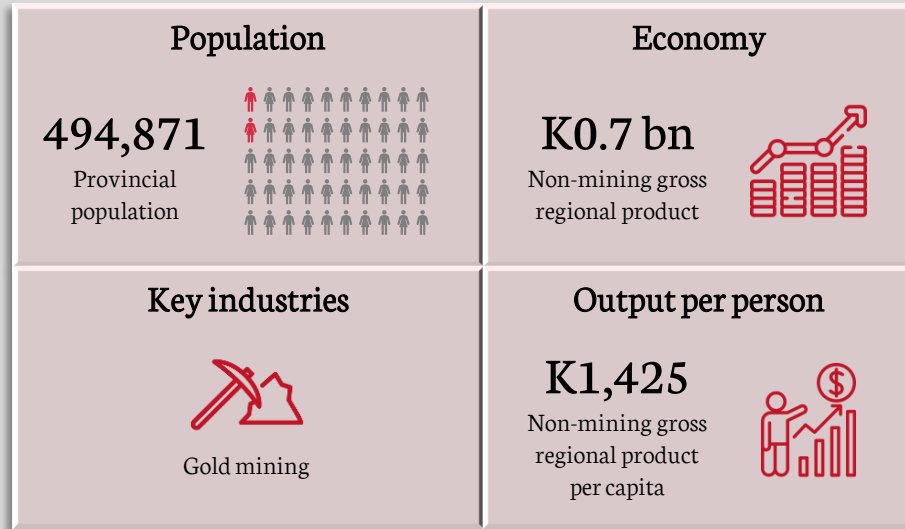
Levers to Unleash Digital



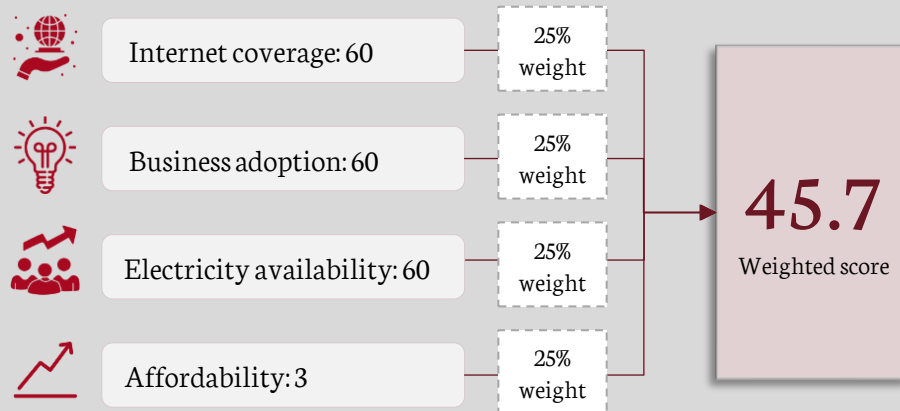
- LEO Sat technology
 - Infrastructure sharing
 - Mobile number portability
 - Reliable connectivity
 - Power availability
 - Submarine cable utilisation
 - Land access processes
 - Digital skills
 - Government digitalisation
 - Enterprise solution uptake
- “PNG DataCo has improved access to affordable internet in Jiwaka.”
- “PNG needs digital to power its economy.”



2025 province snapshot



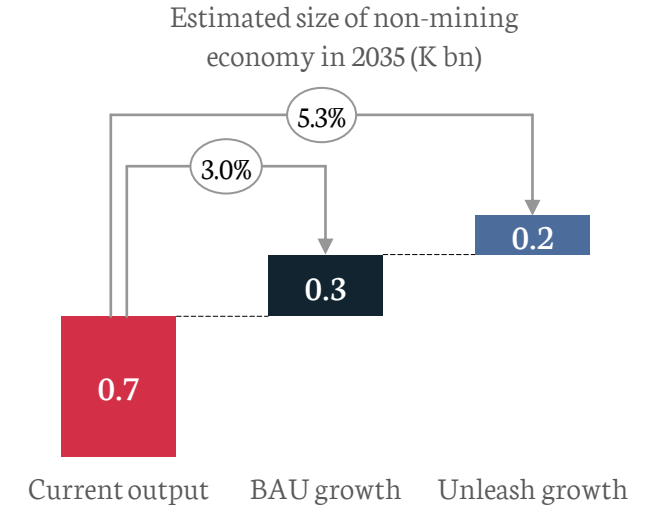
Digital readiness score



Projected economic impact by 2035

By 2035, an Unleash Digital scenario implies:

- **A larger economy:** K1.2 bn vs K0.9 bn under the baseline
- **Faster growth:** 5.3% per year vs 3.0%
- **Meaningful uplift:** ~0.8K bn in additional output over a decade
- **More economic activity:** ~400 new businesses and ~1,200 jobs



Levers to Unleash Digital

- LEO Sat technology
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

“We can now send reports and emails without travelling to Wabag – saves time and cost.”

“Starlink is a big opportunity for ‘side of the street’ MSMEs.”





2025 province snapshot

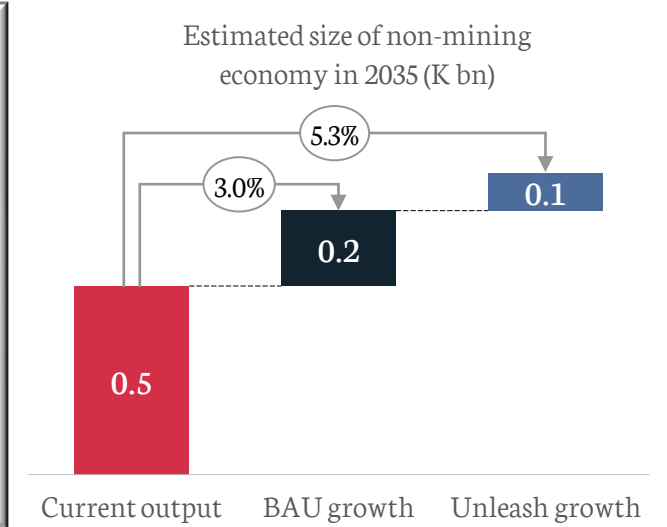
<p>Population</p> <p>376,780 Provincial population</p>	<p>Economy</p> <p>K0.5 bn Non-mining gross regional product</p>
<p>Key industries</p> <p>Coffee Natural gas Natural oil</p>	<p>Output per person</p> <p>K1,248 Non-mining gross regional product per capita</p>

Digital readiness score

<p>Internet coverage: 60</p> <p>25% weight</p>	<p>45.6 Weighted score</p>
<p>Business adoption: 60</p> <p>25% weight</p>	
<p>Electricity availability: 60</p> <p>25% weight</p>	
<p>Affordability: 2</p> <p>25% weight</p>	

Projected economic impact by 2035

- By 2035, an Unleash Digital scenario implies:
- A larger economy:** K0.8 bn vs K0.6 bn under the baseline
 - Faster growth:** 5.3% per year vs 3.0%
 - Meaningful uplift:** ~K0.5 bn in additional output over a decade
 - More economic activity:** ~900 new businesses and ~800 jobs



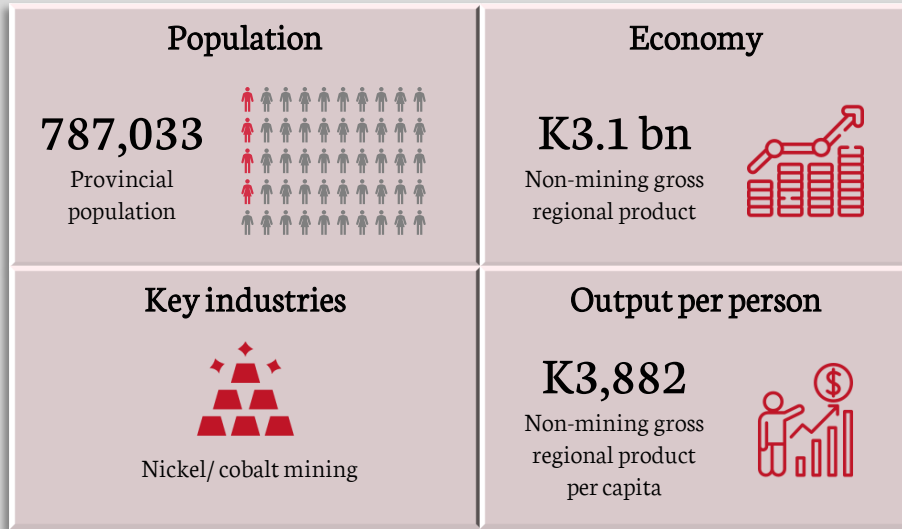
Levers to Unleash Digital



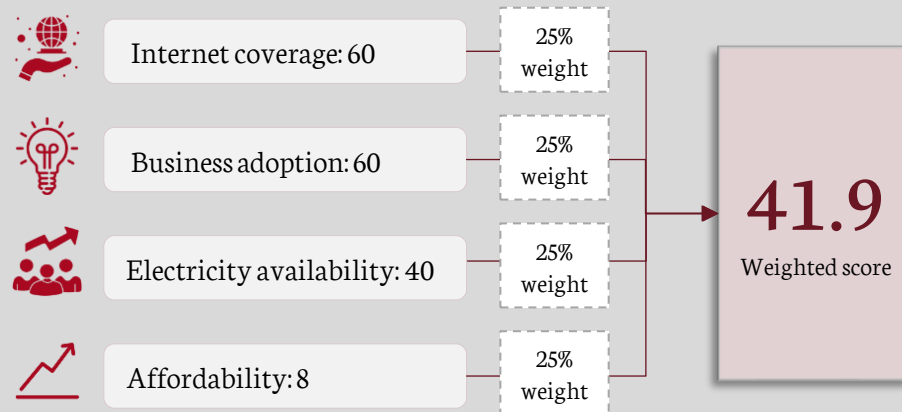
- LEO Sat technology
 - Infrastructure sharing
 - Mobile number portability
 - Reliable connectivity
 - Power availability
 - Submarine cable utilisation
 - Land access processes
 - Digital skills
 - Government digitalisation
 - Enterprise solution uptake
- “Want to use tablets to replace papers but digital literacy of staff is too low.”
- “We will build our own power supply and use Starlink for internet.”



2025 province snapshot



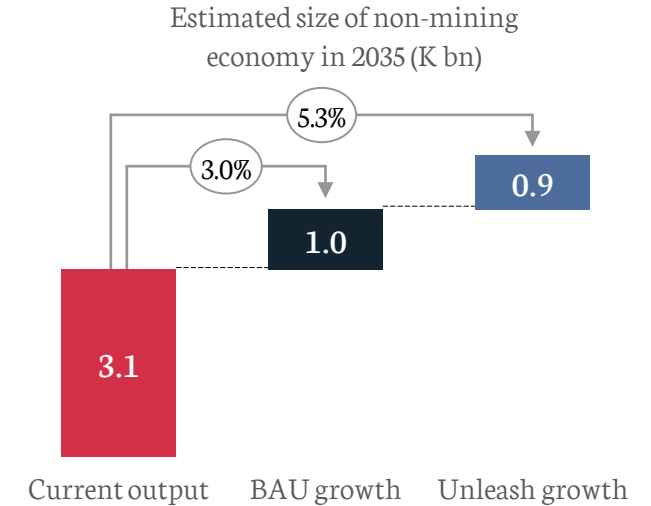
Digital readiness score



Projected economic impact by 2035

By 2035, an Unleash Digital scenario implies:

- **A larger economy:** K5.0 bn vs K4.1 bn under the baseline
- **Faster growth:** 5.3% per year vs 3.0%
- **Meaningful uplift:** ~K3.5 bn in additional output over a decade
- **More economic activity:** ~1,800 new businesses and ~5,200 jobs



Levers to Unleash Digital

- LEO Sat technology
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake

“We are fire-fighting unreliable internet. We don't think about growth.”

“Power blackouts mean it's not worth trying to use the cloud.”

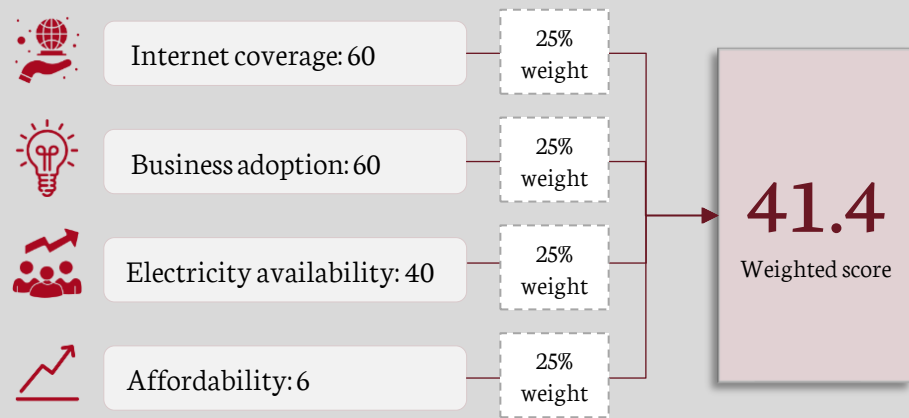




2025 province snapshot

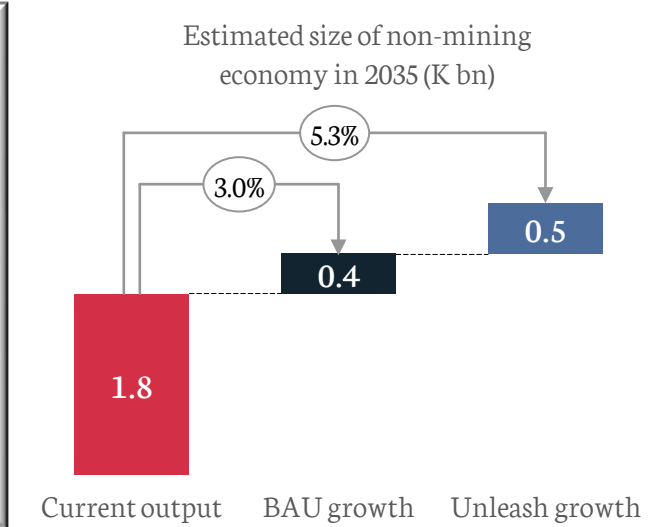
<p>Population</p> <p>648,218 Provincial population</p>	<p>Economy</p> <p>K1.8 bn Non-mining gross regional product</p>
<p>Key industries</p> <p>Vanilla, Coconut, Cocoa Agriculture</p>	<p>Output per person</p> <p>K2,780 Non-mining gross regional product per capita</p>

Digital readiness score



Projected economic impact by 2035

- By 2035, an Unleash Digital scenario implies:
- A larger economy:** K2.7 bn vs K2.2 bn under the baseline
 - Faster growth:** 5.3% per year vs 3.0%
 - Meaningful uplift:** ~K1.9 bn in additional output over a decade
 - More economic activity:** ~1,300 new businesses and ~3,000 jobs



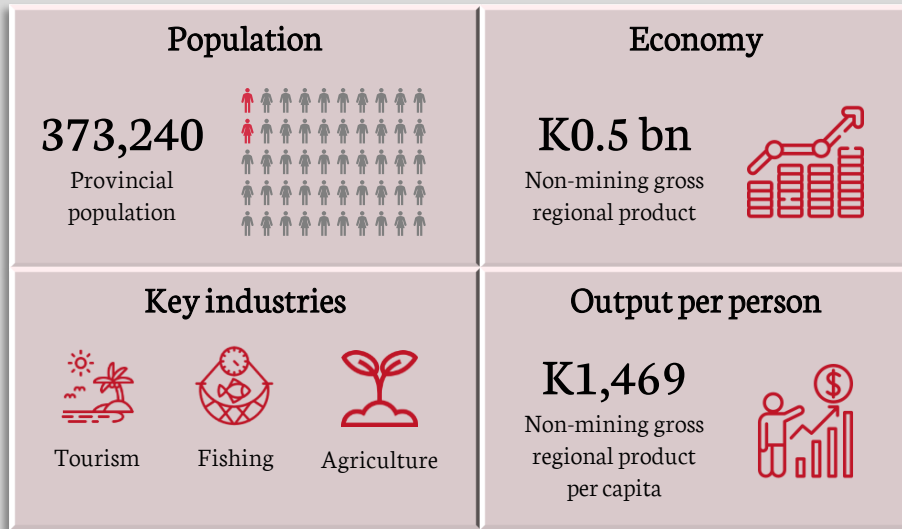
🔒 Levers to Unleash Digital



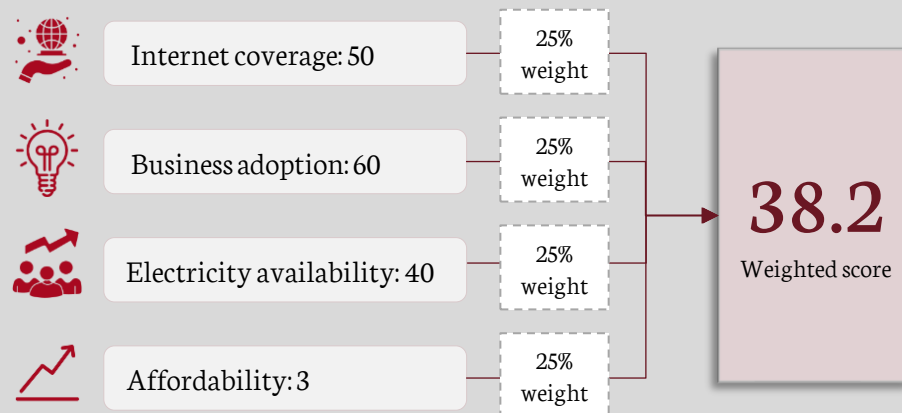
- LEO Sat technology
 - Infrastructure sharing
 - Mobile number portability
 - Reliable connectivity
 - Power availability
 - Submarine cable utilisation
 - Land access processes
 - Digital skills
 - Government digitalisation
 - Enterprise solution uptake
- “Maprik has been elevated to urban status due to growing businesses and cash flow.”
- “Rugged terrain shouldn't justify poor telecoms when technology is available.”



2025 province snapshot



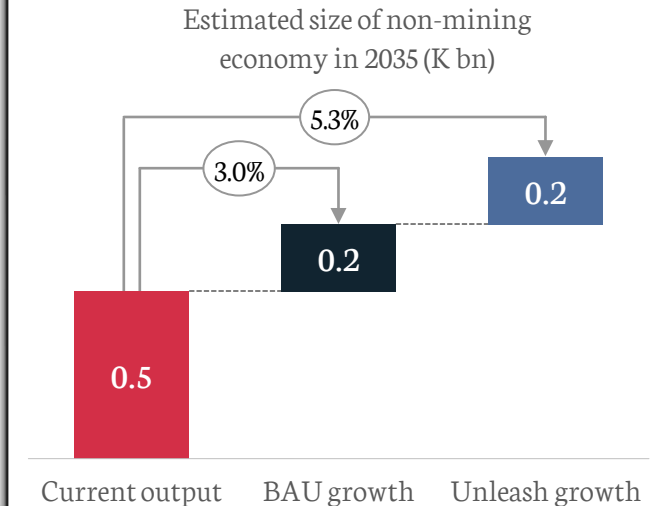
Digital readiness score



Projected economic impact by 2035

By 2035, an Unleash Digital scenario implies:

- **A larger economy:** K0.9 bn vs K0.7 bn under the baseline
- **Faster growth:** 5.3% per year vs 3.0%
- **Meaningful uplift:** ~K0.6 bn in additional output over a decade
- **More economic activity:** ~1,300 new businesses and ~900 jobs



Levers to Unleash Digital

- LEO Sat technology
- Infrastructure sharing
- Mobile number portability
- Reliable connectivity
- Power availability
- Submarine cable utilisation
- Land access processes
- Digital skills
- Government digitalisation
- Enterprise solution uptake



“Want to use tablets to replace papers but digital literacy of staff is too low.”

“To push adoption of SME bundles, licensing barriers need to be removed.”

4.

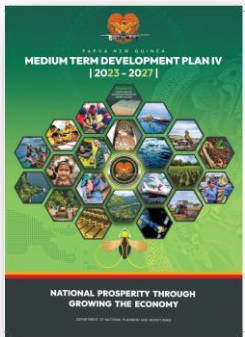
Stakeholder feedback and action planning



Digital connectivity and adoption for businesses is the foundation for achieving national, economic and social targets

Affordable connectivity is a necessary, not optional, condition for achieving national goals at scale

NOT EXHAUSTIVE



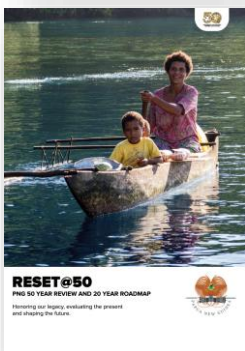
Job creation target
“Create an additional one million jobs by 2030”
MTDP

Need for digitalisation
Connectivity that encourages more businesses will spur new growth creating thousands of new jobs across the nation



Health outcome
“Achieve quality, affordable and easily accessible health care”
MTDP

Need for digitalisation
Without technology, PNG relies on costly physical infrastructure for health care instead of leveraging virtual care services



Economic growth target
“Grow the economy to K200 billion by 2030”
MTDP

Need for digitalisation
Digital development is essential for any industry growth in PNG, and especially for emerging industries beyond minerals



Education outcome
“Quality education and skilled human capital”
MTDP

Need for digitalisation
Without available connectivity, students in rural areas cannot benefit from flexible, remote learning



MSME development target
“Increase the number of registered MSMEs from 150,000 to 240,000 by 2027”
MTDP

Need for digitalisation
MSMEs are unlikely to emerge or formalise at scale without digital tools, which provide access to markets and finance



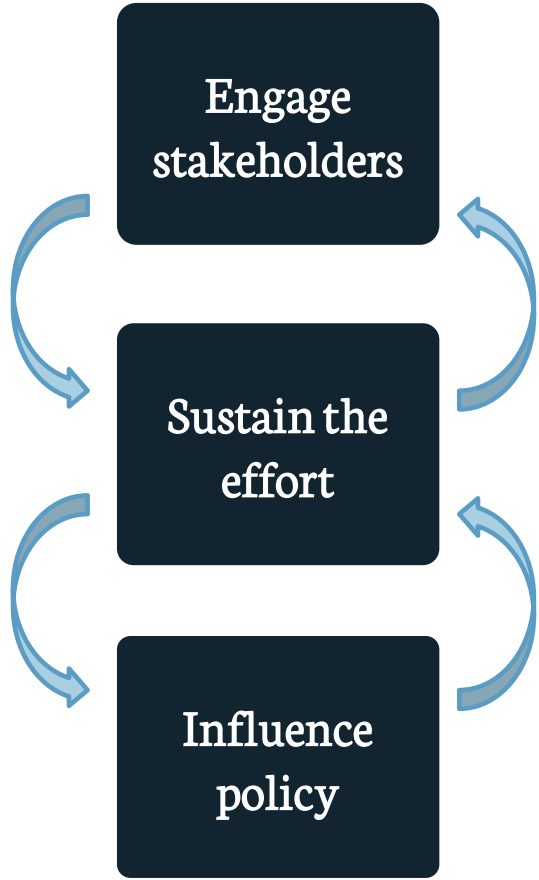
Women empowerment outcome
“Equal opportunities in education, sports, arts, employment, business activities and political representation”
MTDP

Need for digitalisation
Digitalisation gives women the tools to turn access into agency by improving health, education and access to finance

National plans committing to development goals



Next steps



- Build a national and province level campaign for discussing the findings of this pack and encourage nationwide, fact-based articulation of business needs and challenges regarding internet affordability and access
- Involve private sector bodies to participate, including chambers, councils and industry groups
- Engage with local and province level leaders across PNG, using these initial Fact Sheets to create specific discussions at a local level, and enrich the discussion through these channels

- Create a mechanism for updating the Province Fact Sheets regularly, e.g. annually
- Formalise the high-level GDP analysis so that it can be used for sector reform modelling
- Create reliable data sets, e.g. province level power, coverage and output data
- Create a formal PNG internet affordability measurement for regular monitoring

- Engage Government officials, e.g. in DICT, NICTA and other agencies, to understand their perspective on internet affordability, quality and availability and align on the need for change
- Engage wider Government officials, e.g. in Prime Minister’s Office, Finance and Commerce and Industry to discuss how internet connectivity is key to achieving growth and new jobs creation targets
- Support government actors in developing industry reform packages so they respond to business needs






Guide to modular use of this pack

The contents of this pack have been designed to be modular, allowing selective inclusion of slides to address different stakeholder priorities. There are a large number of slides. The entire set is not likely to be needed for any single meeting. We recommend the slide deck be tailored for each audience it is used for, considering:

- **Audience needs:** What challenges are relevant to them? What are their priorities? What is their decision-making context/remit?
- **Detail level:** Do the audience have a technical understanding of connectivity and digitalisation? Are they focused on a specific province or are they interested in national outcomes? Do they prefer high-level or in-depth material?
- **Outcomes sought:** Is this stakeholder more focused on operational/technical implementation or are they focused on more strategic/visionary outcomes?

It is important that the content is selected in a way that does not confuse the story. We recommend you consider introduction and conclusion slides that keep the story consistent across all audiences. Below are some suggestions for how the deck could be modularised for three stakeholder audiences:

National government executives 	Provincial/regional executives 	Industry representatives 
<p>Chapter 1: All slides to set strategic context</p> <p>Chapter 2: High-level summary (17) and pick out 3-4 slides relevant for specific stakeholder interests</p> <p>Chapter 3: Slide 40 or 41 to show the link between industry challenges and policy reform</p> <p>Chapter 4: National GDP and jobs creation uplift potential (slides 44, 45, 46, 47)</p> <p>Chapter 5: Could use one fact sheet as an example if relevant</p> <p>Chapter 6: Slide 76 to connect the digitalisation discussion with broader national objectives</p>	<p>Chapter 1: Slide 8, 10, 14 to set out affordability challenges likely relevant at a provincial level</p> <p>Chapter 2: Select any combination or full set of slides to build the fact base</p> <p>Chapter 3: Slide 41 to prompt discussion on how industry challenges manifest in that specific region</p> <p>Chapter 4: Slide 44 and 45 to understand the scenarios and then 49, 50, 51 for regional comparison</p> <p>Chapter 5: Select relevant province fact sheet</p>	<p>Chapter 1: Slides 10, 11, 12 and 14 which focus on pricing and affordability relevant to stakeholders in the telecommunications sector</p> <p>Chapter 2: Select any combination of slides that demonstrate the customer pain points and impact on total cost of internet ownership</p> <p>Chapter 3: All slides</p> <p>Chapter 4: Slides 44, 45 and 46 to understand the market levers and the enabling policy environment needed</p>

Open discussion



5.

Close out and next steps

Thank you