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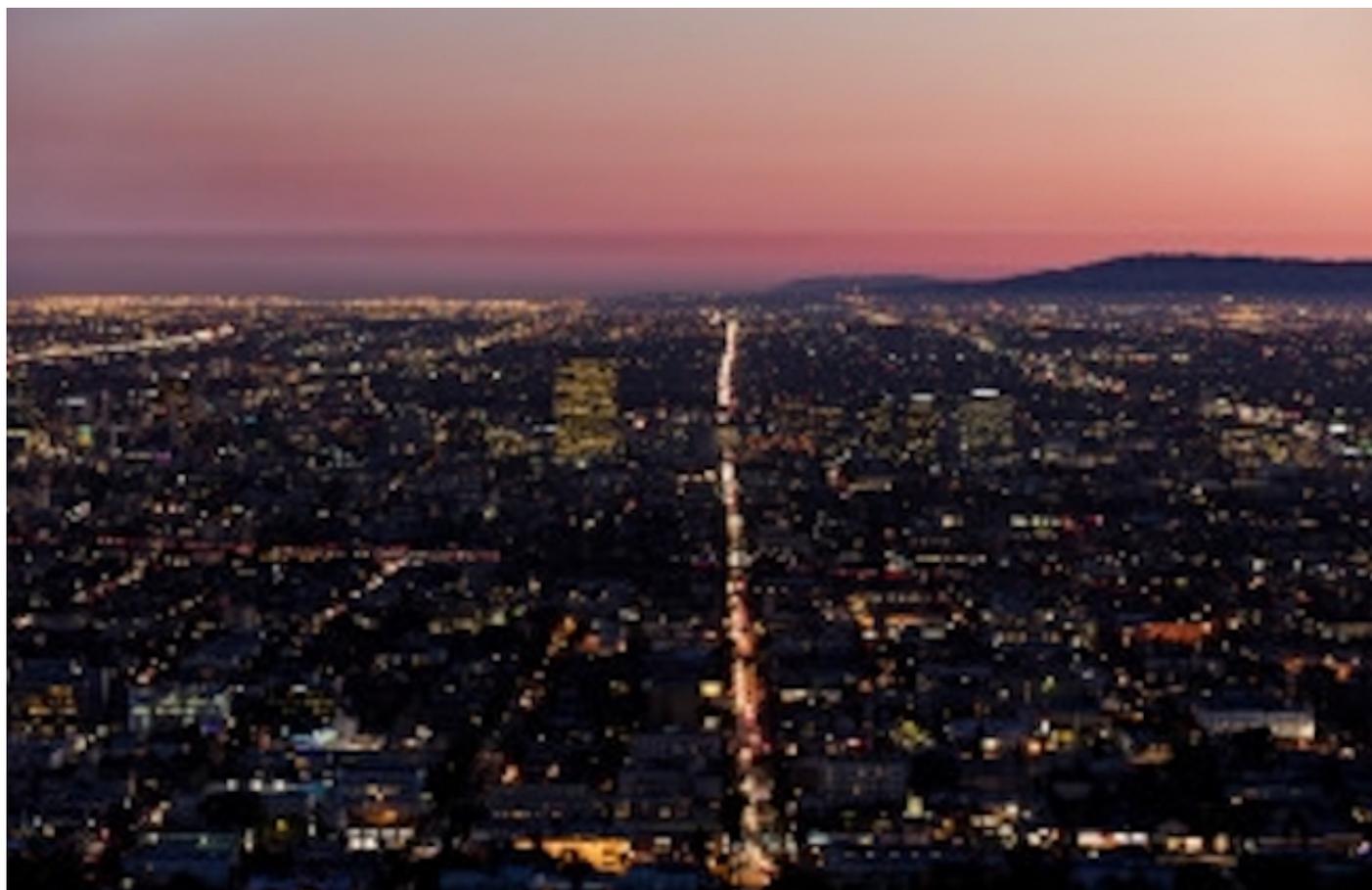
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## COMMERCIAL 5G SERVICES NEXT YEAR: ERICSSON



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CommsWire/Telecommunications Editor: Stan Beer

Staff writers: Peter Dinham, Alex Zaharov-Reutt, Sam Varghese. Columnist: John de Ridder

Advertising: CEO and Editor in Chief, Andrew Matler: [andrew.matler@itwire.com](mailto:andrew.matler@itwire.com) • Tel: 0412 390 000

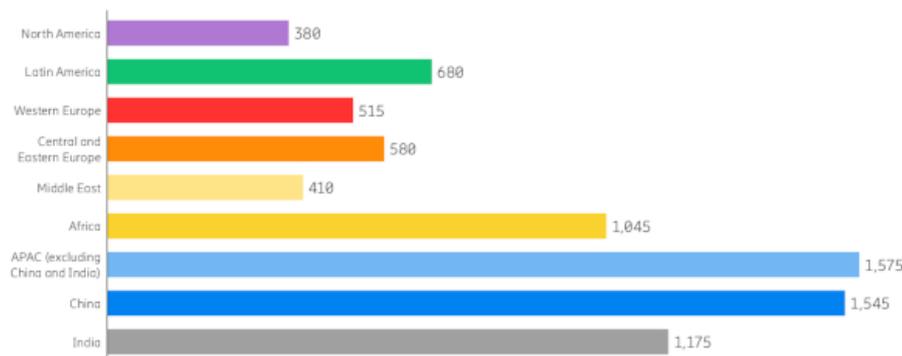
# ERICSSON REPORT SAYS 5G WILL COVER 40% OF POPULATION BY 2024

**Swedish telecoms multinational Ericsson says it expects about 40% of the world's population to be covered by 5G by 2024, with 2019 the year that 5G takes off.**

In its Mobility Report, the company said one of the first 5G use cases would be fixed wireless access. As 5G smartphones became available during 2019, it said it expected several service providers to launch commercial 5G services.

Significant 5G subscription volumes were forecast to be seen early in North America and North-East Asia.

Mobile subscriptions Q3 2018 (million)



The report also forecast that the build-out of population coverage for 5G would be faster than that for LTE.

"Initial LTE build-out was led by Western Europe, North America, Japan and South Korea. With the exception of Western Europe, these areas,

along with China, are expected to also lead the 5G population coverage build-out," the report said.

With nearly half the world's households yet to have a fixed broadband connection, Ericsson said opportunities existed for operators to deliver broadband services to homes and small- and medium-sized business using fixed-wireless access.

It pointed out that in order for FWA to be a viable alternative to fixed broadband - including xDSL, cable and fibre-optic access technologies - it must be able to be dimensioned with comparable capacity and performance.

"While 5G will make this possible, there is also a range of markets to be addressed with LTE technology on the way to 5G," the report noted.

The report said there were 7.9 billion mobile subscriptions globally in the third quarter of 2018, with 120 million new subscriptions added during the quarter.

Subscriptions grew 3% year-on-year with China having the most net additions (37 million) followed by India (31 million) and Indonesia (13 million).

Mobile broadband subscriptions were growing 15% year-on-year and increased by 240 million in Q3 2018, the report said. There were now 5.7 billion mobile broadband subscriptions globally.

**Sam Varghese**

## PNG SAYS WILL STICK WITH HUAWEI FOR INTERNET PROJECT

**A minister in the Papua New Guinea government has said that his country will honour the agreement it has made with Chinese telecoms equipment maker Huawei Technologies to build its Internet infrastructure, snubbing offers by the US, Japan and Australia to step in.**

William Duma, the minister for public enterprise and state investment, [told Reuters](#) on Monday that PNG had an existing agreement with Huawei to build the infrastructure in question.

Huawei won the contract two years ago but the US, Australia and Japan attempted to take on the task recently. The deal was for an 5457-km network of submarine cables that would link 14 coastal towns in PNG.

Duma dismissed the offer from the US, Japan and Australia as patronising, adding that Huawei had already completed nearly two-thirds of the work.

The US, Australia and Japan [said](#) during the recent APEC summit, held in Port Moresby, that they would fund a rollout of electricity and cable in PNG.

The move comes in the wake of what the US and its allies describe as moves by China to expand its influence in the Asia-Pacific region.

An agreement to deliver the project was signed on 18 November, according to reports.

**Reuters** quoted Jonathan Pryke, a member of the Sydney-based think-tank, the Lowy Institute, as saying that the signing of the agreement meant that that the US and the others were not completely locked out.

Contacted for comment, a Huawei spokesperson told **ITWire**: "Huawei has a proud history of delivering world leading technology to PNG safely and securely for over 10 years.

"We look forward to continuing to work with our local partners to help give the people of PNG access to the world's best technology."

Australia [intervened](#) in a cable project in the Solomon Islands last year that was to be built by Huawei.

In the end, Canberra ended up [taking on the task](#) in April and contracted a local company, Vocus Communications, to built the undersea cable that would touch Sydney, the Solomon Islands and PNG.

**Sam Varghese**



John de Ridder

Telecommunications Economist

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## ENCRYPTION BILL 'POORLY CONCEIVED', SAYS UN PRIVACY OFFICIAL

**Australia's proposed encryption bill has been described as a national security measure that has been poorly conceived and likely to endanger security as not by the UN Special Rapporteur on the right to privacy, Professor Joseph Cannataci.**

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Prof Cannataci told the Parliamentary Joint Committee on Intelligence and Security on Tuesday evening that it was up in the air whether the legislation could achieve its aims and avoid introducing vulnerabilities in devices.

He spoke at length on what he described as weak oversight and accountability in the bill.

Tuesday marked the fourth day of hearings on the bill — officially known as the Telecommunications and other Legislation Amendment (Assistance and Access Bill) 2018 — and the PJCIS also heard from Margaret Stone, the inspector-general of intelligence and security, deputy Commonwealth ombudsman Jaala Hinchcliffe and Jake Blight, inspector-general of intelligence and security.

Prof Cannataci said, rather than attempt to make changes here and there in the bill, it would be better to drop it altogether and start again from scratch, after proper consultation and developing an idea of the real purpose of the legislation.

He said that the targets of the bill - seasoned organised criminals and terrorists - had the means to invest in their own algorithms and develop their own cryptography, defeating the point of the bill.

Also, he said, it was pertinent to note that the UK, which had a similar law, had not tried to get any big technology company to provide it with a means to access encrypted devices as the matter would result in prolonged litigation.

Asked by Senator Eric Abetz how he, as someone concerned with privacy, had made comments about the bill that extended to other realms. Prof Cannataci patiently explained how his field, privacy, was affected by various aspects of the bill.

In his submission to the committee, Prof Cannataci mentioned the fact that Australia had passed 70 counter-terrorism laws since the terrorist attacks on the world trade centre in New York on 11 September 2001.

"Concern has been expressed at the international level about trends in Australia's human rights performance," he pointed out. "This includes the UN Human Rights Committee who requested the Australian Government to reconsider the legality of its power in certain areas."

He said that the bill under consideration had been criticised as too broad and potentially undermining the privacy of Australians.

The PJCIS is due to hold another two days of hearings on 30 November and 4 December, before submitting its report to the government.

**Sam Varghese**

# CISCO UNCOVERS CAMPAIGN TARGETING ME GOVT NETWORKS

**A campaign that targets government domains in Lebanon and the UAE, as well as Middle East Airlines, has been uncovered by Cisco's Talos Intelligence Group, which claims that attackers have studied their targets' networks well enough to remain inconspicuous.**

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Researchers Warren Mercer and Paul Rascagneres [said](#) the campaign, named DNSpionage, appeared to be a by a new group unconnected to any previous similar attacks.



Two fake malicious websites were used in the campaign to target possible victims using infected Microsoft Office documents which contained embedded macros.

Apart from the attacks, the actors used the same IP to redirect the DNS of legitimate .gov and private domains, carefully generating certificates for the redirected domains.

"During each DNS compromise, the actor carefully generated Let's Encrypt certificates for the redirected domains. These certificates provide X.509 certificates for TLS free of charge to the user. We don't know at this time if the DNS redirections were successful," Mercer and Rascagneres wrote.

The two malicious websites used were [hr-wipro\[.\]com](#) and [hr-suncor\[.\]com](#) which redirected to [wipro.com](#) and [suncor.com](#).

"At this time, we don't know how the target received these links. The attackers most likely sent the malicious document via email as part of a spear-phishing campaign, but it also could have circulated via social media platforms, such as LinkedIn, in an attempt to legitimise the opportunity for a new job," the researchers said.

One of the Lebanese Government domains that was targeted was that belonging to the Ministry of Finance.

"We are highly confident that both of these campaigns came from the same actor," Mercer and Rascagneres noted.

"However, we do not know much about the location of the actors and their exact motivations. It is clear that this threat actor was able to redirect DNS from government-owned domains in two different countries over the course of two months, as well as a national Lebanese airline.

"They were able to work from the system's point of view by using a Windows malware, as well as the network, by using DNS exfiltration and redirection. It is unclear if these DNS redirection attacks were successful, but the attackers have kept up their efforts, launching five attacks so far this year, including one in the past two weeks."

The detailed analysis is [here](#).

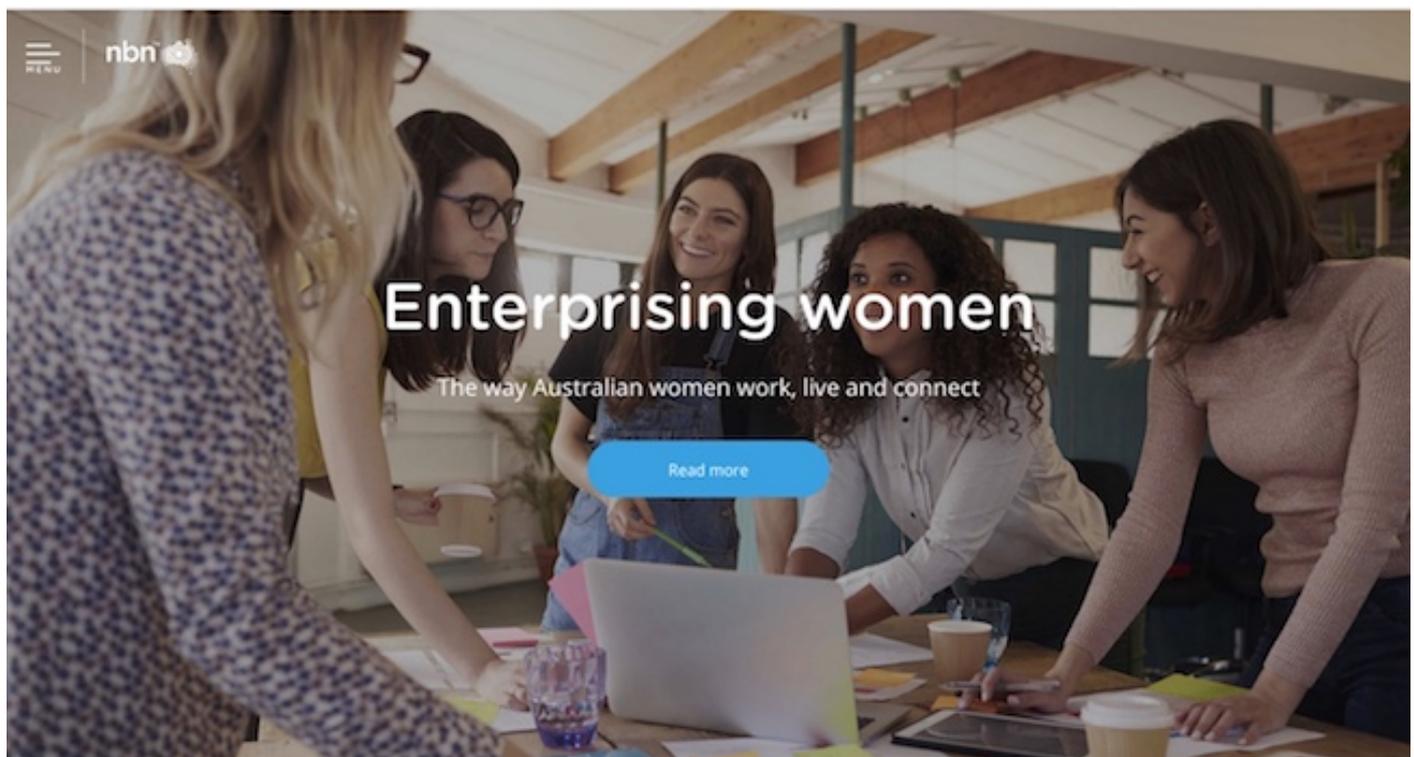
**Sam Varghese**

# FAST BROADBAND BOOSTS FEMALE ENTREPRENEURSHIP: NBN CO

**Fast-broadband connectivity is contributing to a boom in female entrepreneurship and giving women more flexibility to choose where and how they work, according to a new research report just released by national broadband network provider NBN Co**

The [Connecting Australia Enterprising Women Report](#), commissioned by the company building the National Broadband Network, NBN Co, reveals that more Australian women are choosing to become their own bosses.

Self-employed women in NBN network connected regions are growing on average 2.3% a year - or 20 times the pace of growth in the number of self-employed women in areas not yet connected to the NBN.



Touted as the first national economic and social study to understand the impact of the NBN broadband access network on the lives of Australians and the economy, the research was undertaken by independent research agency AlphaBeta,.

The research combines national census data with an Ipsos survey of 3500 individuals across 1700 postcodes in metropolitan, regional and remote areas.

And, the research reveals that faster growth in female self-employment in regional NBN-connected regions compared to metropolitan equivalents.

Key Enterprising Women findings include:

- Enhanced workplace flexibility: The number of self-employed women working from home grew on average at twice the pace in NBN connected regions, compared to all other self-employed people in non-NBN network regions. Up to 830 women were self-employed women working from home due to the NBN effect last year. Up to 52,200 additional women are expected to be self-employed by 2021, attributable to the NBN access network.
- More opportunities for part-time work: The number of self-employed women working part-time grew on average five times the pace in regions connected to the NBN network compared to non-NBN regions. There were up to 3,400 self-employed women working part-time with the help of the NBN network in 2017.
- Greater female entrepreneurship in regional areas: In areas of regional Australia connected to the NBN network, female self-employment grew by an average of 2.4 per cent a year compared to 1.5 per cent annual growth in metropolitan NBN areas. In non-NBN areas, female self-employment in regional Australia actually contracted 0.8 per cent a year on average while in metro non-NBN areas female self-employment only grew 0.4 per cent – just under a third of the pace of nbn-connected metro-areas.
- More participation: In non-NBN network areas, self-employment by women who did not finish Year 12 contracted by an average of 3.9 per cent a year. But in NBN network connected regions, the number of self-employed women who left school early remained steady. Up to 2,100 women who didn't finish school are estimated to be self-employed with the help of the NBN network.

“Whether it’s cutting out the long commute, getting connected to the workforce sooner after having a child, or finding new opportunities for work from regional Australia, fast broadband is supporting new ways that women are engaging with the workforce,” said NBN Co Chief Executive Officer Stephen Rue.

According to Naomi Simson, founder of online gift retailer RedBalloon and co-founder of the Big Red Group, “when self-employed women in regional communities become true ‘entrepreneurs’ or business owners - employing others in the local community - “that's when the real value and impact will be amplified even further”.

“They may commute weekly or a few times a month to conduct face-to-face business meetings in the major cities, but the rest of the time they’re raising families in small country towns and rural areas; their lifestyles enabled by via initiatives like the NBN,” Simson says.

To access NBN Co’s Connecting Australia website [click here](#).

**Peter Dinham**

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