Dear Kyriaki,

Thanks for the opportunity to share my experiences and ideas with the Senate Committee, with my long term goal being the improvement of telecommunications infrastructure to meet the growing need in this remote but important area. I am not one much for writing letters, so please excuse my writing stye of getting to the point. There is too much latency in satellite communications to be of any use in high speed data, and the Telstra Next g mobile network and backbone radio systems feeding the Islands is under provisioned, or NEXT G non existant on some islands. There is no adsl service out in the Islands.

1. The objective is to enable a Telstra NEXT G mobile base to be installed on each inhabited Torres Strait island to cater for increased mobile phone usage, as well as the use of usb mobile modems and fixed mobile data services for private, industry, national security, and government. AMSA's tide gauges, radars,shipping safety and monitoring is increasingly dependant on Telstra's Next G network in the important channel through the Torres Strait and down the Great Barrier Reef. Increasing the coverage and signal strength of the NEXT G network is of vital importance.
2. The Telstra back bone fibre runs from Cairns to Bamaga need to be fully terminated and hooked up at both ends. At Cairns to the network, and at Bamaga to the radio system firing over to the Hillman Hill Telstra site on Thursday Island. This is needed for backup redundancy and expected data increases, if it has not allready been done.
3. The Radio system from Bamaga to Thursday Island needs to be upgraded to handle the full capacity, with space / diversity radio systems for redundancy, if not allready so.Future expansion also needs to be considered.
4. The Millman Hill radio site may need equipment and provisioning upgrades as it is the critical point for all combs going out to the island radio hops.
5. The Torres Strait radio hops to the 4 main Island cluster groups will need upgrading and dual diversity redundancy installed if not allready. The 4 main groups are 1. western - Moa Island 2. central - Iama Island
   3. northern - Saibai Island 4. eastern - York Island.
6. The final radio hops to the satellite islands in each cluster will need upgrading, as well as dual diversity if not allready.
7. Dual diversity redundant radio systems are a necessity as the islands will be more dependant on the next g system when it is fully provisioned, and having only 1 radio transmitter and receiver creates unacceptable down time if there is a failure. This has proven to be a an ongoing problem for the island councils, the supermarkets,and medical aid facilities where doctors can't be contacted or medivacs arranged.
8. As it is all digital, the system health of every site will be monitored by Telstra's network operations centre, which makes it easy to remotely diagnose faults and respond quickly.
9. An adequate stock of critical spares needs to be held at the Thursday Island depot as there are too many inconsistencies with the existing monopoly airline operator into Horn Island to get spares up overnight from
   Sydney or Melbourne.
10. As there is no Telstra shop in the Torres Strait, there will need to be a marketing and information exercise to get next g internet devices sold at the local news agent, which is already partnered to Telstra Prepaid mobiles, and make people aware of the new mobile network range.

11. The next g transmitters need to be high powered to get the coverage, particularly as islanders travel mostly by dingy between islands, and in the fishing and cray fishing industry. This will also bring long term cost savings to maritime search and rescues as people can phone for help before the situation warrants and epirb being set off and expensive helicopter and fixed wing aircraft are tasked for sar.
12. As the next g aerials are vertical omni's , with 360 degree coverage, use of the Australian Mobile Network by Papuans and West Irians can be a problem up at the islands near the Png border, for national security, drug ,weapons and people smuggling. On those islands, split multiple coax feed directional phased array antennas can be utilised to exclude the border area from radio reception. This needs to be discussed

with the federal police, customs, army, fisheries, and immigration to come to some workable solution, as it may affect operations. I am available for dialog with the interested parties if required.
13. There needs to be some sort of service agreement with Telstra to have critical network faults repaired within certain amount of time.
14. There needs to be a small tower and a high powered next g mobile base installed at Seisia on the mainland , to cover the Seisia community, tourist campgrounds, and the marine area adjacent. It will also give coverage

to the communities of Injinoo, Umagico, and New Mapoon. There is existing optic fibre feeding the Seisia Telstra hut, which is fed from the Bamaga exchange, where the fibre run from Cairns terminates. The base at

Seisia will have extra heavy data traffic as most of the overland tourists stay at the Seisia campground, most of the fishing tour businesses and trades for the whole NPA area are based at the Seisia industrial precinct.

All the local fishing boats, and boat freight for the area is based at Seisia, so it is a critical site and needs urgent provisioning upgrade. All marine traffic from the Islands to the NPA area terminates at Seisia.
15. At the Horn Island airport, there is no adsl for the aircraft and customs surveillance industry, and Telstra will only provide expensive fixed data services. High speed adsl is a need. Wasaga village at the wharf end

of Horn Island has ADSL, but there is no cable between the sites. so each area is fed by a separate tower and radio system back to Thursday Island.
16. Thursday Island needs greater capacity for ADSL2, for speeds higher than.5 meg.

These are the most pressing issues, but I will probably think of others as time goes by. I am only too willing to discuss these issues further, as they are of a complex technical nature, and overall will require a great deal of money
to go Telstra's way before anything happens. Telstra is the only one that has spent the money up here on infrastructure, and I cannot see any competitors duplicating what has taken many years and dollars to achieve.
In the remote areas, any comms solution will always be expensive, and the Torres Straits is the highest cost area in Australia, so normal costing benchmarks will be highly elevated for these projects.
Telstra allready has the expertise in-house with NDC for planning and installation, and I believe they are the best in the Asia Pacific region. If this project is outsourced to companies that have no track record with installation in remote island areas, I believe we will have a system that that is second rate and will require high maintenance in the long run.

Thanks and much appreciation

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