# My answer to: Why is NBN progressing so slowly in Australia?

Source: <https://www.quora.com/Why-is-NBN-progressing-so-slowly-in-Australia>

The NBN had a great start, which was quickly modified by politicians to reduce costs, at the expense of network performance, individual speeds and long term benefit to the people.

Politicians became directly involved with deciding on the best technology to use, while at the same time having little understanding of each technology, and worse still, without properly consulting industry experts during the design phase of the project.

Tony Abbott told Malcolm Turnbull to destroy the project, with whatever it takes, to make sure Labor would not win the next election. He inflated the cost of the FTTP model, and downplayed its benefits, in a “my design is better” battle with Kevin Rudd.

Next, the Liberals won the election, and they went and bought a heap of new copper cable to upgrade parts of the network along the East coast of Australia, that were no good to run NBN at the speeds they had promised, and needed complete replacement.

This process was full of delays, as Telstra had downplayed the extra work needed to fix their network, and the cost of upgrades was quickly rising, to the point that their “far cheaper, FTTN model” was now looking to cost almost the same amount as the original plan, yet run at a quarter of the speed at best, and require ongoing maintenance, and much higher power usage compared to fibre.

They quickly realised that the NBN FTTN was indeed a far worse option to proceed with, but wouldn’t admit they were wrong.

The NBN rollout map was updated several times, to hide the slow progress, as customers who were expecting NBN to be rolled out in the next 3–6 months were being told they would have to wait longer, without being given any time frame.

Then NBN Co was reshuffled, key people left or were laid off, new contracts were drawn up, and investigations continued.

Meanwhile, people who were on cable previously, and had had decent speeds, had been switched over to NBN and were getting far worse speeds than before, with no options to switch to. Complaints were rampant, and it was looking like the NBN was becoming a white elephant, as industry representatives had feared.

Fast forward a couple of years, and the roll out situation still edges slowly forward, where brand new apartments and businesses are being built with NBN access available via third party arrangements, yet for the majority of people who want fast internet now, it doesn’t matter how much the demand is in their area, or whether they are willing to pay a premium to have it installed.

The first places that it is being rolled out to are universities, big companies, and other places where it is “cost effective” to do so, regardless of the number of people who will sign up, as with this model they only have to roll out high speed connections in the street, or to the nearest node.

It isn’t being rolled out in high demand areas first, which would make sense to most business minded people.

The tragedy of all this, is that the rest of the world has moved on from FTTN technologies, in favour of FTTP (the originally proposed plan).

In the FTTN model, the fast speeds extend from the internet up until the node, and then there is a bottleneck. The speed of the bottleneck determines the maximum speed your street / block / area will receive.

In a mixed technology model, there are all kinds of limitations that need to be addressed and considered. Cable internet is a shared medium so when people come home from work, and switch on Netflix or steam, the internet speed drops for everyone in that street, due to network congestion.

There are multiple cases I have heard from friends and clients, where their internet is fast during the day, but unusable at night, with fast uploads, but only ADSL1 downloads speeds or worse. I have a friend who only gets 5Mbps download speed after 6pm at night, on a NBN connection in Lidcombe.

Other people in country areas have dropouts when floodwater gets into the Telstra pit, and since copper conducts electricity, the internet and phone network shorts out until the Telstra pit dries out. Replacing this old copper with new copper doesn’t fix this type of problem.

Copper networks require power to run, which makes them expensive to roll-out in country areas, as even when solar boosters are used, they still cost money to build and maintain in the first place.

If we had gone with the FTTP model, this is based on optical fibre to the premises, and doesn’t have the same level of ongoing maintenance costs as copper.

To make a fibre based network faster, they use the same fibre, but install better transmission and receiving equipment at each end, so the ongoing costs are much lower, as less digging is involved. They also let the signal run from end to end without as much loss as copper, and being glass, are not affected by the environmental conditions.

The whole point of having an NBN was to overhaul the network, and eradicate these types of technological bottlenecks, and while doing so would have taken a lot of digging initially, it would have been the smarter long term solution.

Australian’s internet usage soared the moment Netflix et al became available, and what a surprise, we have buffering / stuttering / quality problems, in areas using mixed technologies, due to the poor internet infrastructure in Australia.

Netflix actually managed to cope best with this situation of the other big companies providing a similar service, and as Netflix isn’t going away anytime soon, and with the advent of 4K, 5K and 8K monitors and TVs, internet bandwidth is going to become a bit of a problem in the near future, when people upgrade to these products services.

Now many experts have suggested going back to the original plan, but while it is an option, it will end up being at much greater expense than if they had gone with it in the first place.

I personally think the best option would to consult a board of industry experts from the big 4 ISPs (Telstra, Optus, TPG, iinet), on how to proceed, as we need an opinion from several companies besides Telstra, who clearly doesn’t hold their customer’s needs in their best interests.

This level of infrastructure planning should never have been made into a political stunt, and this is the main reason the roll-out has taken significantly longer than originally planned.