A Submission to the Fourth Review by the Joint Committee on the NBN

By Kevin Morgan

It is somewhat unfortunate, but obviously not of the committee's making, that submissions to the current review are due before the Minister for Broadband releases the revised NBN Corporate plan. This is especially so given the position of NBN Co's CEO Mike Quigley who maintains that the NBN's performance should not be gauged against the targets set the initial corporate plan. Mr Quigley argues that the initial plan and the rollout targets are irrelevant because of factors beyond the control of NBN Co.

On a number of occasions Mr Quigley has argued that changes to the greenfield policy and the sheer challenge of delivering fibre to new estates has led to delays in meeting greenfield demand. Similarly he has argued delays in meeting brownfield targets are due to 'external' factors such as the ACCC POI decision, the breakdown of contractor negotiations in April 2011 and the protracted Telstra negotiations.

These are well rehearsed excuses but cannot explain why NBN Co has failed to meet targets set less than two years ago. In summary approximately only 9% of the fibre rollout target for the year ending June 2012 has been met and less than 3% of the connection target has been achieved. Progress has been made though on the wireless network deployment and on both the interim and long term satellite networks. The wireless and satellite networks have been fully contracted out and it appears NBN co have played little part in their development beyond initial design/specification.

Although Mr Quigley dismisses measures of NBN Co's performance against the initial corporate plan as irrelevant, because the company has been victim of circumstances beyond its control, this is hardly the case. Other than the intervention by the regulator on the number and location of the POI's the supposed causes of delays are in large part due to factors that NBN Co could have readily influenced. Indeed NBN Co., embarking on a large and complex project should have understood the challenge of the greenfield deployment and should have cautioned the government against making them responsible for it. Similarly NBN Co., and especially someone such as Mr Quigley with thirty years of industry experience, much in very senior positions, should have understood that Telstra deal, with its many facets, could not be completed and ratified within a twelve month time frame.

Despite the obvious complexity of the deal and the need to obtain regulatory approval for conditions precedent such as the Telstra SSU and then gain Telstra shareholder approval, the corporate plan, for which Mr Quigley and his board have full responsibility, was predicated on the following assumption. The plan noted, " It has been assumed that these agreements will be successfully completed and approved by 30 June 2011." Obviously the agreements weren't approved by that date but even so it is somewhat misleading to suggest that the delays in ratifying the deal led to the delays which slowed the brownfield rollout.

The Implementation and Interpretation Deed, the cornerstone of the NBN Co./Telstra deal was signed on 23 June 2011 and came into immediate effect as it "contained the mechanics needed to bring the transaction to life". Specifically the deed contained "various interim arrangements to enable NBN Co to obtain immediate access to Telstra's facilities and infrastructure for its early phase rollout." In effect NBN Co. had an agreement to use Telstra facilities within the timeframe assumed by the NBN corporate plan. Consequently there can be no suggestion that lack of agreement with Telstra caused delays.

Nor can NBN Co just shift responsibility for the failure to secure agreement with contractors solely onto the fourteen construction companies it was negotiating with in early 2011. Obviously NBN Co. was the other party to those negotiations. And whilst NBN Co have argued they terminated the negotiations because they could not secure value for the taxpayer, and there were suggestions of collusion and price gouging by bidders, other more fundamental factors may have been responsible for the failure to reach agreement.

First and foremost it NBN Co may have had unrealistic expectations about the level of risk contractors would assume, risks that contractors could manage within the headline budget allowed for the fibre build. Indeed the ability to reach large scale agreement may have been impossible given the price on offer which was locked in by the capital budget set by the corporate plan.

Given the paucity of information in the corporate plan it is not clear how NBN Co. arrived at their total capital cost. It would seem though that NBN Co. uncritically accepted the headline costs which had been determined by the earlier McKinsey implementation study . As yet there is still no publicly available evidence to verify the reasonableness of the NBN's capital cost determined by McKinsey. The implementation study lacked the spreadsheets and calculations needed to support its findings. All one can assume is that Mckinsey had reworked the $43 billion cost, initially announced by the then Prime Minister Kevin Rudd in April 2009.

The statement that accompanied Mr. Rudd's announcement was a mere 1100 words and contained absolutely no detail on or explanation of how the $43 billion cost estimate had been determined. It may well have been plucked from thin air as neither Treasury nor the portfolio department DBCDE undertook any modeling of the costs although it seems Finance did produce some raw 'output' costs for the networks.

No understanding of how that original estimate may have been derived has been made public although it is rumoured that the expert group, that considered the FTTN tender, derived the $43 billion estimate FTTH based on UK cost estimates. Those estimates were contained in an earlier Septemebr 2008 study undertaken by the Broadband Stakeholders Group, "The costs of fibre based next generation broadband infrastructure"

If the initial cost was derived from that source then it may well explain the considerable difficulties faced by NBN as it sought to reverse engineer construction contracts into a fixed capex envelope. Although the McKinsey study validated the government's $43 billion estimate it noted substantial savings could be realised from a deal with Telstra that gave access to existing infrastructure and most notably ducts. This cost saving was reflected in the estimate of capital expenditure embedded in the NBN Co corporate plan which determined the NBN's capital cost would be $36 billion.

Even discounting that there was considerable risk in accepting overseas fibre build costs as a basis for estimating Australian costs, given the very different geotypes encountered in Australia, if the UK estimates were used, they would have created a fundamental problem. The UK estimates were based on the use of existing infrastructure i.e. ducts so the savings estimated by McKinsey from the Telstra deal may have 'double counted' the benefits of using Telstra's ducts etc.

The question of how the costs of the NBN were first determined may be dismissed as irrelevant, just as the absence of a cost/benefit analysis is dismissed. But if the original cost estimates are not robust then the foundations of the NBN are flawed and it will prove utterly impossible to build the network either at the predicted cost or within the expected stated timeframe. Quite simply if the original capital cost was underestimated then something must give. Either the cost will increase or the scale of the fibre rollout will have to be reduced significantly.

Although the absence of any independent verification of the costs is summarily dismissed by the government as being of concern , the problems now all too evident in the rollout lie in the emerging tensions between inaccurately determined costs and real world costs. Nowhere is this more evident than in the debacle in the greenfield sector. Based on the estimates in the 2010 corporate plan NBN Co have achieved 0.6 % of the cumulative greenfield rollout target (homes/lots passed) and 0.2% of the connection target. This failure cannot be excused given that NBN Co readily and uncritically accepted the responsibility to provide essential infrastructure to new housing developments. For the first time in decades we again have waiting lists for basic telecommunications services i.e. a fixed line telephone service let alone high speed fibre based broadband.

Although NBN Co had ample opportunity in light of the recommendation by McKinsey that they should not be given responsibility for the greenfield rollout, they didn't quible about being given the task. In January 2011 NBN boasted "they would hit the ground running" and in June 2011 confidently predicted that their $100 million contract with Fujitsu would deliver 65,000 homes/lots passed and 40,000 connections in new estates. Last May Mr. Quigley told the estimates committee about 300 greenfield homes had been connected and "three to four times that number "passed. Now rather than confidently predicting greenfield progress Mr. Quigley points to the logistical challenge of connecting many thousands of new homes, spread over hundreds of sites nationally when he doesn't actually have a network to connect the new estates to!

One would have thought it fairly obvious that building greenfield infrastructure would have been an unacceptable challenge to a start up company but NBN Co accepted the responsibility in a cavalier fashion. And that ready acceptance of responsibilities without any underlying understanding of the inherent challenges suggests a systemic failure within NBN Co., namely an inability to fully recognize and then plan for the risks inherent in building a completely new national access network.

The risks and uncertainties are massive and many are not as yet fully identified. Nevertheless the budget available to NBN has been set. As I outlined in an initial submission even access to Telstra ducts, which is supposed to be the key to the low cost build of the NBN, has considerable risks. With some 90,000 kms of local access fibre to be deployed underground in a duct network 50% of which is at least 40 years old, costs could soar if the existing ducts cannot be remediated. The cost of new capital works involving trenching, horizontal boring etc. would rapidly consume the budget that has been set. The condition and utility of ducts won't be known until they have been inspected and the scope for disputes between Telstra, NBN Co and contractors about the need for and responsibility for remediation, particularly of existing copper plant, are obvious. Such disputes will cause continued delays and disruptions.

Mr. Quigley has already acknowledged one significant and seemingly unexpected problem that has caused delay in brownfield sites. The geospatial data that determines addresses often proves to be inaccurate meaning that streets must be physically surveyed before planning can commence. But even when the location of premises has been determined, planning of the network is being delayed because of another 'risk' that NBN Co failed to understand and address - shortage of skilled planning staff. Prior to NBN Co.'s formation the FTTH 'industry', although highly competent, was small scale. In 2010 before the anti cherry picking' legislation distorted the market it commissioned less than 20000 premises with fibre. Clearly although core competencies are available the scale is not available in Australia to ramp up FTTH deployments from 20000 in a year to NBN Co's hoped for 6,000 per day, of which 4,000 would need to be connected. NBN Co. have had three years to address skills development to match labour supply with their expected demands, yet little if anything seems to be happening.

In summary the picture that is now emerging is of delay and inactivity and the problems cannot be blamed on external factors over which NBN Co has no control. The delays that have already emerged and which on even a cursory consideration of the monthly rollout, or so called ready for service numbers, are t growing would seem to be inevitable, given the nature of the NBN.

As a start up company NBN Co were given a responsibility no start up company in the world has been given, They were asked to build a completely new local access network, some 120,000 kms., in under a decade. They were charged with this responsibility in the absence of any detailed understanding of the costs of the project and without any support that would deliver the skilled labour they would need. As yet it would seem they don't even have the systems or project management skills needed to even start, let alone sustain a volume rollout. As the committee's previous review noted contractors have been paid penalties because the work they were contracted to do can't be scheduled or managed by NBN Co.

Whilst Mr. Quigley may continue to blame others for the company's failings, after three years, with some 1500 employees and over $2 billion in equity NBN Co can no longer make excuses. NBN Co framed its initial corporate plan and got it badly wrong. They and missed the core objective of homes passed with fibre by a massive 90%. The corporate plan was in essence the company's prospectus. Had a listed company issued and then failed to meet the targets in its prospectus by such massive margins the officers would be the subject of an ASIC inquiry. Unfortunately NBN Co. seems to be immune from such sanctions.