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Ministry of Economic Development  
Digital Dividend: Opportunities for New Zealand  
**Discussion Document**

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## NZCID Submission on the Digital Dividend

The New Zealand Council for Infrastructure Development (NZCID) welcomes the opportunity to submit on the Ministry of Economic Development's (MED) Digital Dividend discussion document.

### General

NZCID congratulates the Ministry of Economic Development on the release of a clear and concise discussion document.

NZCID views the release of spectrum in the 700 MHz band as a rare and important opportunity to both lower mobile broadband costs to the end user and greatly improve levels of service. Efficient allocation of the spectrum towards mobile broadband represents a genuine opportunity to lift New Zealand's productivity, competitiveness and standard of living.

NZCID is unaware of any other use for the available spectrum which will provide superior value to New Zealand and New Zealanders than mobile broadband.

In order to achieve the maximum benefit of mobile broadband in the 700 MHz band, NZCID emphasises the importance of competition. The history of telecommunication services in New Zealand has been characterised by poor competition and as a direct consequence, in the view of NZCID, poor levels of service relative to comparable nations. NZCID considers that the principal objective of MED and the wider government through the release of 700 MHz spectrum to be the facilitation of long term competition between mobile broadband providers.

To ensure long term competition, NZCID recognises that mobile broadband providers must not only have access to adequate spectrum, but that also wider regulation neither favours nor inhibits competitive outcomes. NZCID's specific interest in this regard is that mobile broadband infrastructure regulation also facilitates competition.

This submission to MED is consequently divided into two parts. Firstly, NZCID wishes to highlight the importance of robust infrastructure policy to support competition in mobile broadband services. Secondly, NZCID wishes to respond to the Digital Dividend discussion document directly.

## Integrated cell tower policy

NZCID is unaware of any work by MED or another government agency to address infrastructure provision issues in relation to new mobile broadband services. NZCID perceives limited merit in guaranteeing fair and equal access to the 700 MHz spectrum if anti-competitive behaviour is not precluded through the provision of the infrastructure necessary to deliver those services.

The concern of NZCID predominantly relates to the cell towers required to transmit and receive radio signals providing mobile services.

Opening the 700 MHz spectrum to mobile broadband services will necessitate the nation-wide distribution of a large number of cell towers, in addition to those which already exist. Two issues which emerge from this need which NZCID would like to highlight are the impact of large capital investment on potential competition and the urban design implications of cell towers.

Firstly, in order to lower the barriers to market entry and promote competition, it is of the highest importance that the cost of delivering cell towers and associated infrastructure is minimised. Anti-competitive behaviour to raise the costs of infrastructure delivery to other providers must be prevented wherever possible.

NZCID supports investigation by MED, the Commerce Commission, local government and other public bodies into opportunities to lower the costs of mobile broadband infrastructure provision for all providers. NZCID recognises that the operability of existing assets must be protected, but that neither should the function of these assets be used as a means to raise capital costs for competitors.

NZCID supports the investigation into co-location and co-siting of cell towers and other means to reduce capital costs, thereby facilitating competition and lowering costs to end users.

Secondly, the proliferation of cell towers impacts urban design and is causing some anxiety within communities. NZCID does not support broad restrictions upon the number of towers able to be located in a given area, but encourages MED and the Government at large to investigate ways to limit the visual and community impact of cell towers. Again, co-location, co-siting and other options should be considered where existing services can be shown to be unaffected.

In addition, NZCID is aware that different consent requirements and other regulations which concern the location, height and general appearance of cell towers are enforced across the country. Within districts and cities, in contrast, blanket regulations are often enforced which do not sufficiently recognise different land uses. NZCID considers it appropriate, for example, that different standards for cell towers are required in suburban areas than in rural or industrial zones. NZCID supports further investigation into the streamlining of these regulations and the development of nationwide guidelines.

NZCID supports the immediate progression of work into the infrastructural requirements and implications of mobile broadband services and considers that this work and according regulation needs to be in effect before the 700 MHz spectrum is opened for use.

## The Digital Dividend discussion document

NZCID supports the use of the 700 MHz spectrum for mobile broadband services.

NZCID maintains no fixed position in regard to whether FDD or TDD technology, nor whether the APT band plan should be promoted. However, NZCID strongly supports the alignment of New Zealand's mobile

broadband policy with other relevant nations, notably Australia. NZCID also acknowledges the importance of aligning New Zealand's mobile broadband technology with a larger partner as a means to containing technology costs.

NZCID maintains no fixed position in relation to either the question of larger guard bands or the use of 700 MHz spectrum for public safety purposes. However, NZCID does observe a significant economic and social benefit to the maximum utilisation of the 700 MHz band for mobile broadband services.

NZCID finds the provisions to facilitate competition in the mobile broadband market as described in the discussion document insufficient. Consequently, NZCID perceives a substantive risk that anti-competitive behaviour may not be constrained through existing legislation and policy settings.

Given the high value of 700 MHz spectrum for mobile broadband services, NZCID supports band allocations which optimise competition in the broadband market, leading to superior service and cost savings for end users, including government.

NZCID does not believe that MED's proposal for spectrum auction will lead to the best outcome for New Zealand. NZCID's principal concern is that by permitting one provider to purchase a greater proportion of spectrum than its competitors MED will indefinitely and negatively impact competition in mobile broadband services.

As described on page 22 of the discussion document, a larger block of spectrum permits potentially faster broadband services. One provider with 2x20 MHz of spectrum will therefore be guaranteed better service provision in the 700 MHz frequency range until 2031, when existing cellular spectrum rights are reviewed. At best, such an allocation will allow that provider to attract customers with superior service. That is, there will not be equal competition across the most desirable spectrum for mobile services.

At worst, and of considerable concern to NZCID, is that a larger allocation of band may not lead to superior service provision by that provider, but a decision to deliver fewer cell towers. Such an approach would enable that provider to deliver similar speeds as its competitors for less capital investment rather than superior speeds which maximise use of the spectrum. That provider would thus be given a cost advantage while consumers would get no greater level of service.

NZCID recognises that access to other spectrum bands are an important consideration and that sub-1GHz frequencies in particular should in principle be viewed as a whole. NZCID remains open-minded to options for the reallocation of other spectrum bands but would need to consider these on a case by case basis. NZCID reiterates that the primary objective for the Government in allocating spectrum should be to support competition.

## **NZCID band allocation proposal**

NZCID considers that the principal objective of MED in determining the allocation of band to be facilitating competition. Unless mobile broadband providers are forced to compete for customers in an impartial market environment, the balance of experience suggests anti-competitive behaviour will prevail, delivering a poor outcome for New Zealand.

Assuming implementation of the APT band plan, NZCID proposes an allocation which maximises competition and incentivises early investment:

NZCID proposes that the three incumbent mobile broadband providers be each initially allocated 2x10 MHz on the assumption that if, by an agreed date (e.g. after five years), no fourth

competitor has arisen, the remaining spectrum be allocated according to market needs as determined at that time.

The advantage of this approach, as understood by NZCID, is that it would permit greater scope for MED to review progress at a later date on the basis of merit. If one of the three incumbents, for example, has withdrawn from the mobile broadband market, 2x25 MHz of band will be available for either redistribution among the two remaining providers and/or provision made for a new entry.

Equally, if the three incumbents remain in a competitive environment, with no imminent arrival of a fourth competitor, reviewing the spectrum at this time will allow the entire 2x45 MHz band to be evenly distributed across the market, substantially improving peak broadband speeds without favouring any provider. There may also be opportunities to re-farm other spectrum holdings at this time.

Also of potential application, is that if any mobile broadband provider has failed by the review date to sufficiently provide expected levels of service, the remaining 2x15 MHz of band could be distributed exclusively between the two remaining providers. This approach would act as a mechanism to drive investment in mobile broadband technology at the earliest stage, advancing the Government's broadband policy objectives.

Although NZCID acknowledges that this proposal would limit indicative peak speeds as described in the discussion document in the short term, NZCID does not consider this a significant challenge for two reasons.

Firstly, NZCID observes that both Sweden and Germany have limited allocations to 2x10 MHz (page 21), indicating that those two mobile leaders do not consider 2x10 MHz to provide insufficient levels of service.

Secondly, NZCID considers that indicative peak speeds provided by 2x10 MHz band allocations will in any event provide adequate levels of service over the short-medium term as 4G services are rolled out. Remaining spectrum (assuming no new entry) would then be delivered at a time when additional speeds may be required.

## Allocation methodology

NZCID notes that the primary goal of the Government is "not to raise revenue, but rather to determine the party who values the spectrum most" (page 25). NZCID considers that the primary goal of the Government should be to ensure competition in quality mobile broadband services and thus also agrees that revenue raising is of minor importance.

However, NZCID does not support the Government's declared goal of using an auction to determine which party values the spectrum most. In the view of NZCID this approach will directly lead to anti-competitive behaviour by better resourced parties who will be incentivised to prevent competitors obtaining spectrum. NZCID makes a distinction between the party who values the spectrum most and the party which is willing to pay the most.

NZCID recognises that a charge is appropriate for use of the spectrum both to incentivise utilisation of that spectrum and to provide a source of revenue to the Government, but notes that this charge will be passed on to consumers. In a competitive environment, NZCID does not anticipate a significant advantage to the Government nor to New Zealand competitiveness from high charges for spectrum.

NZCID considers that the optimal allocation of incentives for spectrum owners to compete and provide superior mobile broadband services far exceeds the value that the Government can derive from selling spectrum.

NZCID thanks MED for this opportunity to submit on the Digital Dividend discussion document