

Beyond COVID-19
A brighter future through
infrastructure investment

April 2020 – New Zealand

Introduction

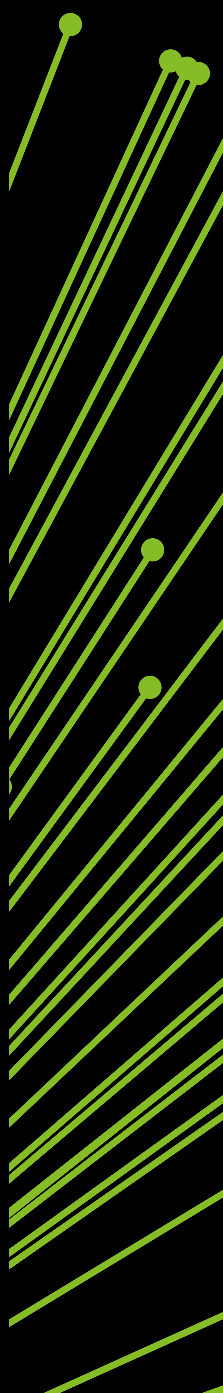
The COVID-19 crisis and Alert Levels Four and Three are having far reaching and meaningful impacts on New Zealand society and the economy. Consistent with the Government agenda, we believe investment in infrastructure provides a key opportunity to keep people employed, stimulate the regions and maintain the productive capacity of the economy – thereby enabling New Zealand to recover in the quickest time possible.

While much is unclear around how events will unfold, what is more certain is that monetary policy has reached the limit of its effectiveness. Chart 1 shows the profile of the Official Cash Rate (OCR) over the last 20 years.

Chart 1: Official Cash Rate



Source: Reserve Bank of New Zealand



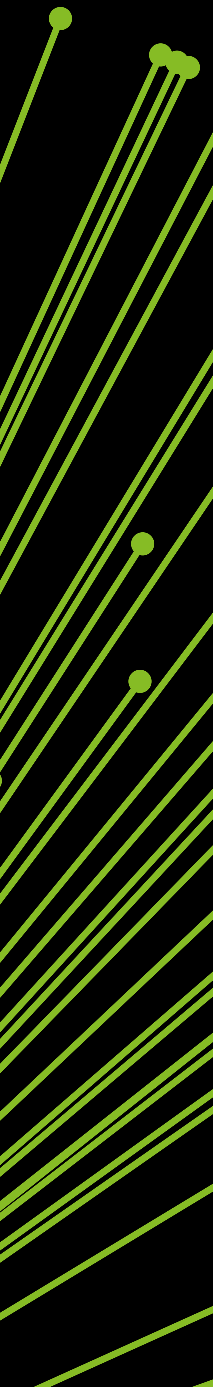
Introduction



Some specific points to note on the curve:

- March 2007 the Reserve Bank of New Zealand (RBNZ) increased the OCR by 25 basis points to 7.5%. The first increase since 2005. The change in OCR was aimed at reducing the risk of an unstable rebound in activity.
- July 2008 RBNZ reduced the OCR by 25 basis points to 8.0% as unpleasant international news emerged with the risk that the domestic economy will slow. The cut in OCR was aimed at easing borrowing costs paid by firms and households.
- RBNZ reduced the OCR by 550 basis over the period September 2008 to April 2009 to an OCR of 2.5%. The economy experienced a marked slowdown led by the domestic household sector and continued financial market turmoil globally. With inflation pressures expected to ease, RBNZ considered a less restrictive monetary policy more appropriate.
- RBNZ increased the OCR by 100 basis points over a three month period to July 2014 to reach 3.50%. The New Zealand economy showed strong growth, particularly in construction, global financial conditions remained accommodative with low financial market volatility.
- RBNZ reduced the OCR by 100 basis points over the period July 2015 to December 2015 to 2.50%. Volatility in financial markets and petrol prices increased and the fall in export commodity prices was pronounced. A reduction in OCR was appropriate given low inflationary pressures and expected weakening in demand.
- August 2019 RBNZ reduced the OCR by 50 basis points to 1.0% to meet employment and inflationary objectives.

As at 16 March 2020 the OCR has reached an historic all-time low of 0.25% as the negative economic implications of the COVID-19 virus continue to rise. This is 25 basis points from zero and with little room to move lower. Furthermore, we have seen the start of quantitative easing from RBNZ.



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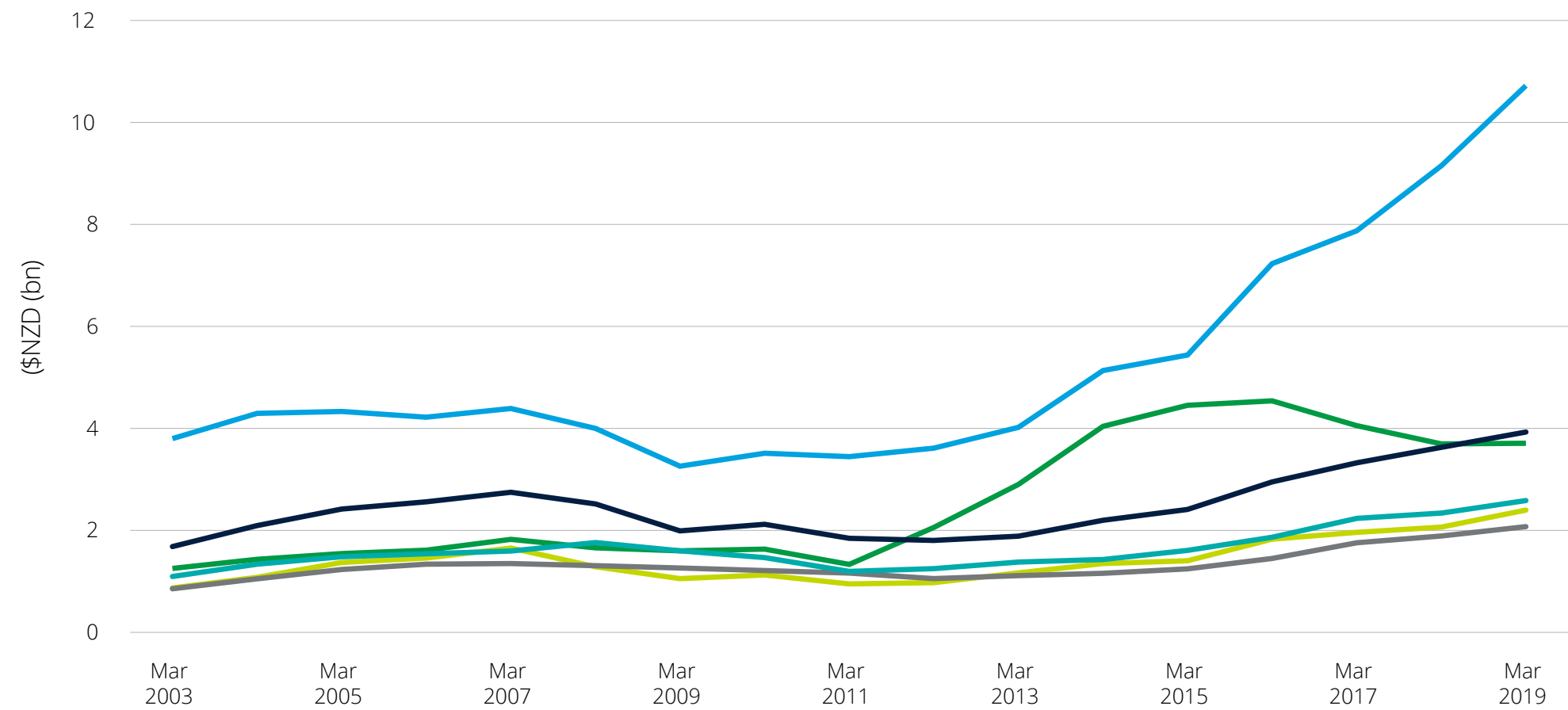
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01 — Fiscal stimulus and the role of infrastructure

With monetary policy alone insufficient to stimulate the economy, governments are looking for other ways to drive a recovery. In New Zealand, infrastructure has been signalled as one of the key opportunities to support growth. Infrastructure as an economic stimulus is not a new concept and has historically been used to help create jobs and drive economic growth.

New Zealand has had a strong construction sector for many years as evidenced in Chart 2. The value of total building has lifted considerably in recent years, particularly in Auckland, rising from approximately \$5 billion in 2015 to \$10 billion in 2019. Building expenditure in Canterbury has decreased from its peak post the 2010/2011 Canterbury earthquakes, but remains elevated at around \$3.5 billion a year in 2019.

Chart 2: Value of total building, by statistical region



- Auckland Region
- Waikato Region
- North Island excluding Auckland, Waikato, and Wellington regions
- Canterbury Region
- South Island excluding Canterbury Region
- Wellington

Source: Statistics New Zealand



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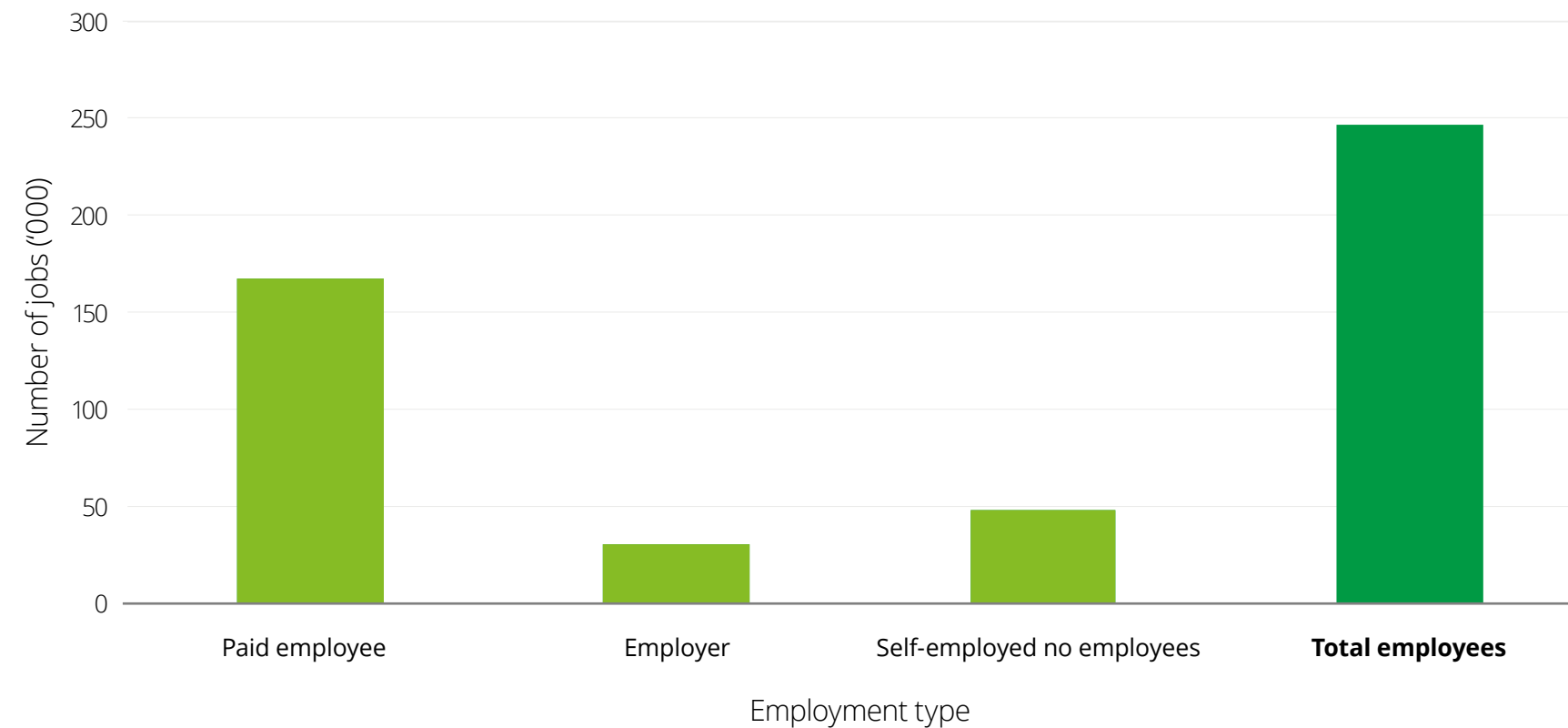
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01 — Fiscal stimulus and the role of infrastructure

The construction sector is a significant contributor to the New Zealand economy. In 2019, the sector accounted for 9.6% of all jobs in the economy and was the second largest sector (at ANZSIC Level 1). The sector has a relatively high proportion of self-employed workers, at around 25%. The sector also accounts for just over 11% of all business units – a high proportion of which are small and medium sized enterprises.

Ensuring there is a sufficient delivery capacity in the construction sector to support the government's proposed infrastructure pipeline is crucial to the recovery of the economy. Fiscal policy has stepped in to help these individuals and businesses as part of the wage subsidy package and other business support.

Chart 3: Construction employment, number of employees, Dec Qtr 2019



Source: Statistics New Zealand



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01 — Fiscal stimulus and the role of infrastructure

The Government will have to make a conscious decision to protect public sector investment – even as debt levels rise and there is a temptation to cut government investment. A reduction in spending however would be short-sighted given that public sector investment has a number of positive flow-on effects.

- 1.** Firstly, public sector investment improves the productive capacity of the nation – for example, goods can move more efficiently, labour is more productive, energy cheaper and more reliable, etc. This is important to ensure the economy recovers as quickly as possible and debt levels are reduced over time.
- 2.** Secondly, it provides a significant unemployment buffer in the short term through direct employment and increased demand for the other inputs into infrastructure development. There is also a multiplier effect as workers wages support other jobs through spending.



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02 — Current infrastructure pipeline

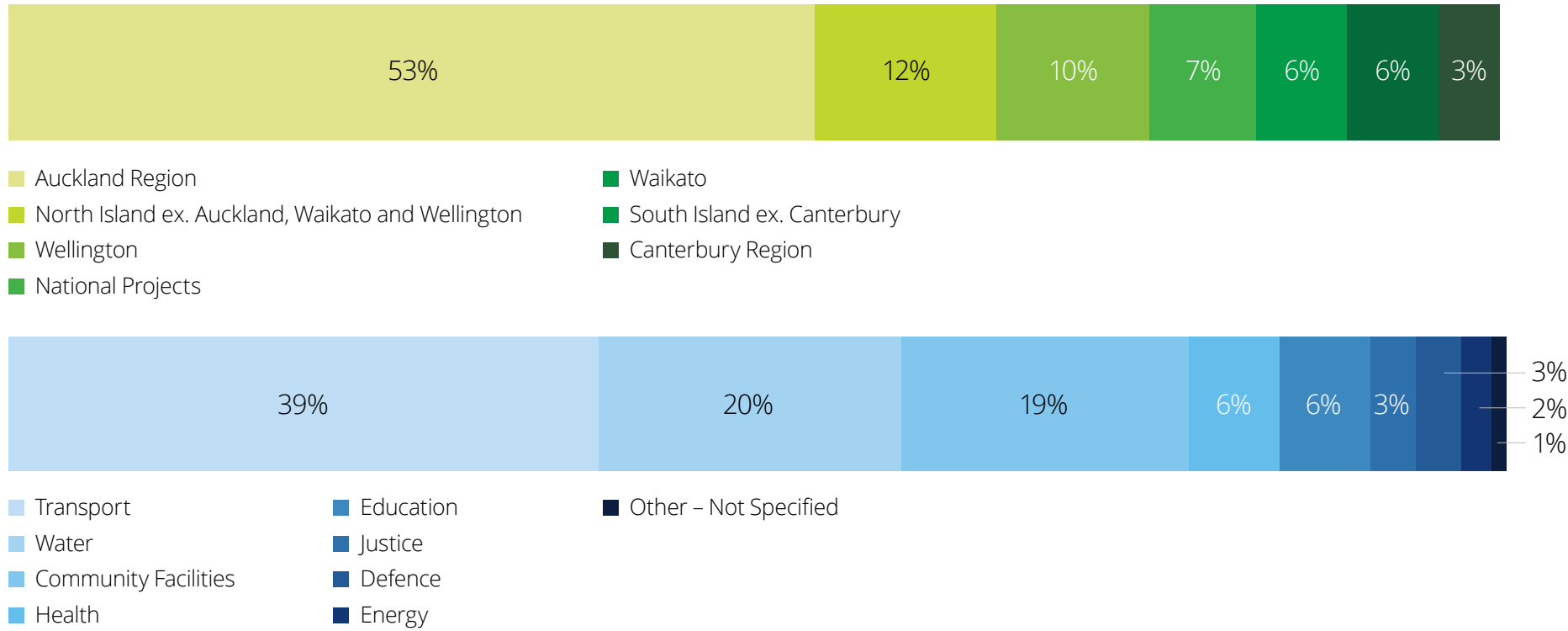
Prior to COVID-19, New Zealand was in the midst of an infrastructure boom.

Many regions are planning record levels of spending. In early 2020, the New Zealand Government announced \$12 billion of additional infrastructure spending, with the total package now \$41 billion between 2019-2023 and the remaining \$6 billion to be spent after 2023/24.

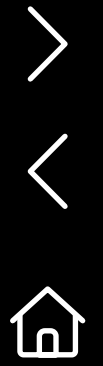
The current infrastructure pipeline is \$41 billion, including ongoing and planned projects. Approximately 53% will be invested in Auckland and a further 10% in Wellington.

Close to 60% of the pipeline is focused on key enabling infrastructure (transport 39% and water 20%).

Chart 4: Infrastructure investment pipeline by region and sector in New Zealand
(ongoing and planned projects 2011-29)



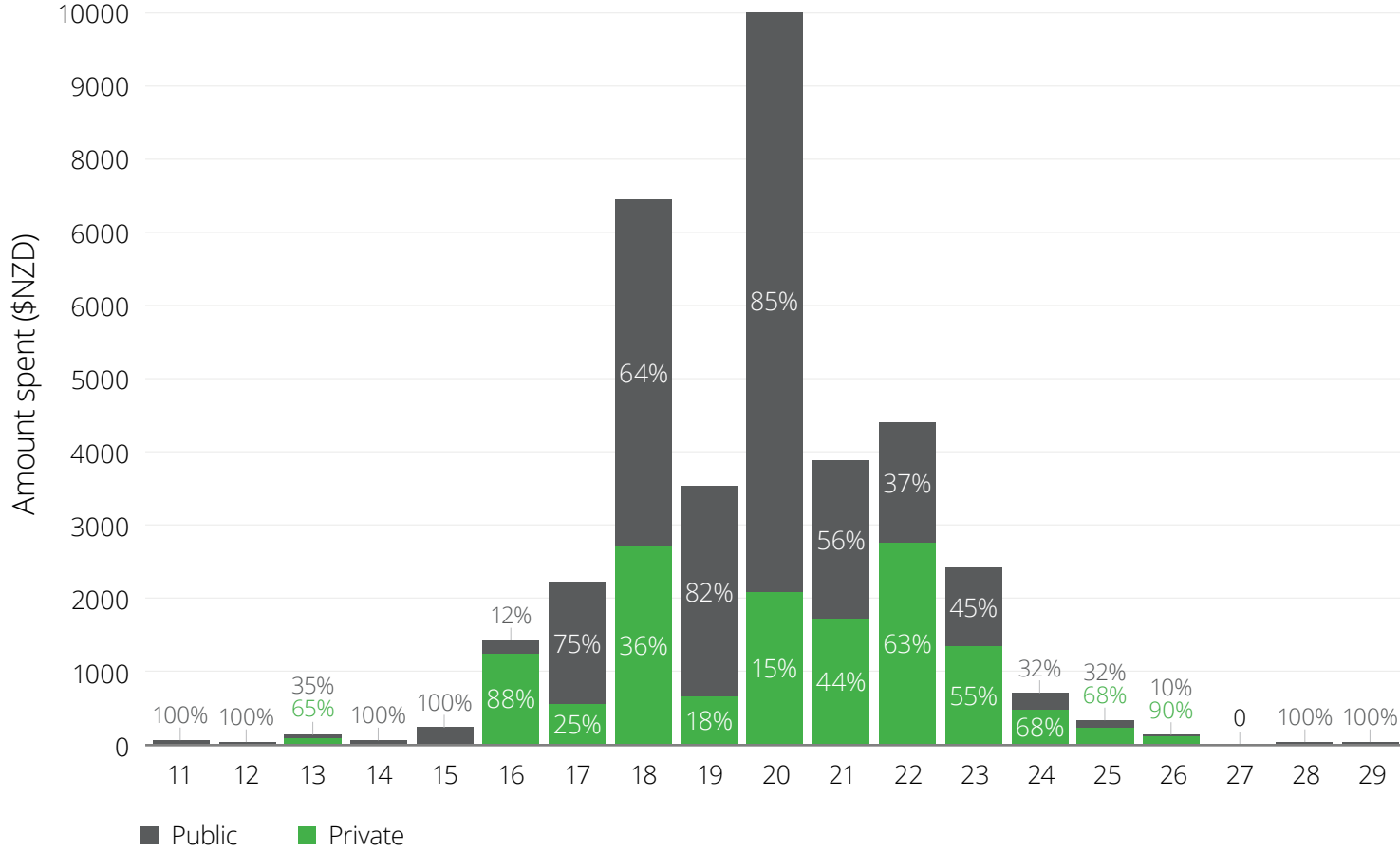
Source: New Zealand Infrastructure Commission, Infrastructure pipeline



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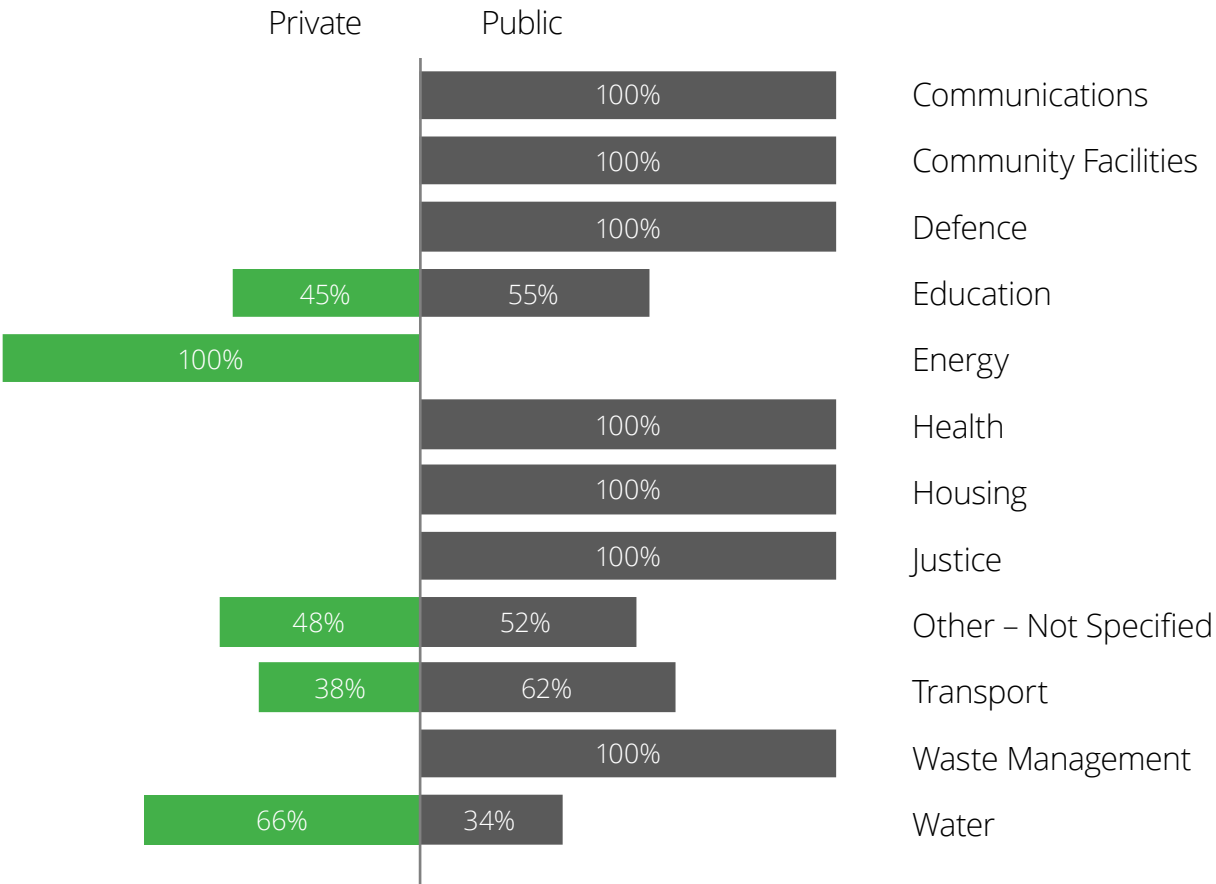
02 — Current infrastructure pipeline

Chart 5: New Zealand’s infrastructure pipeline, ongoing and planned projects, by project start date (2011-29)



Source: New Zealand Infrastructure Commission, Infrastructure pipeline

Chart 6: Private/public infrastructure spending by sector (2011-29)



Source: New Zealand Infrastructure Commission, Infrastructure pipeline



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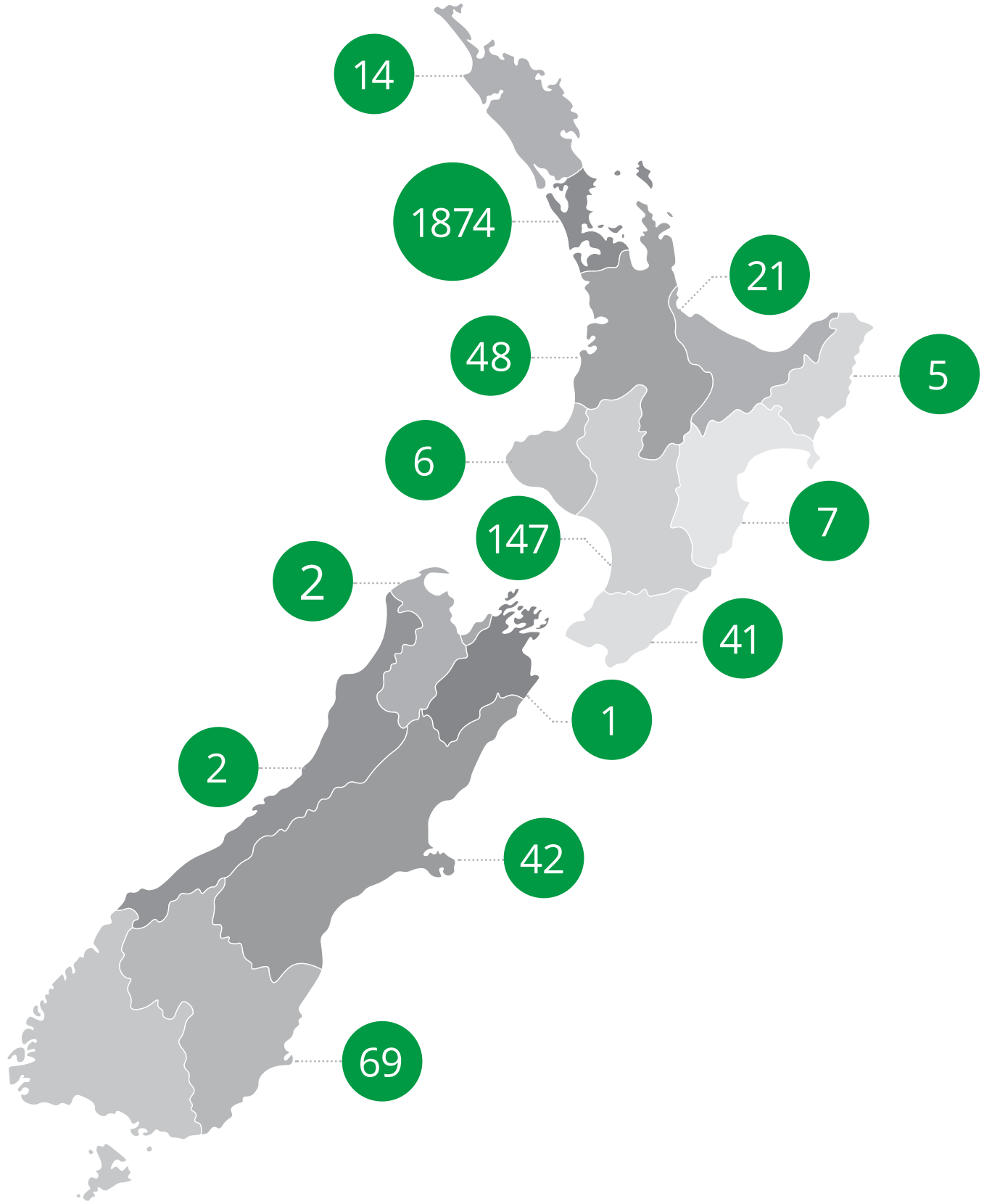
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02 — Current infrastructure pipeline

Chart 7: New Zealand’s infrastructure pipeline, ongoing and planned projects by region (2011–29)

Region	Number of projects in pipeline	Total value (\$m)
Auckland	1,874	21,895
Bay of Plenty	21	680
Canterbury	42	1,685
Gisborne	5	50
Hawke's Bay	7	75
Manawatu - Whanganui	147	2,595
Marlborough	1	5
Nationwide	10	3,000
Northland	14	1,135
Otago	69	2,420
Other	1	175
Taranaki	6	490
Tasman	2	20
Waikato	48	2,650
Wellington	41	4,175
West Coast	2	20
Total	2,290	41,070



Source: New Zealand Infrastructure Commission, Infrastructure pipeline

Navigation icons: right arrow, left arrow, home icon, and a vertical list of numbers 01, 02, 03, 04, 05. The number 02 is highlighted in white on a dark background.

03 — What can we do now?

The Government has tasked the Infrastructure Industry Reference Group to identify infrastructure projects, above \$10 million, that are ready to start in the near term, supporting the construction industry as it returns to normal, and reducing the economic impact of the COVID-19 pandemic.

However, infrastructure projects can take a long time for the associated economic benefits to be realised and may be limited in breadth of impact. The benefits that flow once a project is finished (like reduced travel time for a road) are significant, so this Group is considering ways to increase the speed of benefits realisation.

It is during construction that infrastructure projects also have a huge economic impact in terms of, for example, job creation and use of raw materials. Infrastructure projects should continue at the fastest pace possible in the current climate as they provide the base load for the sector and can shield the economy from further job loss.

This of course needs to be balanced out with what is a responsible health response to COVID-19. This sentiment is echoed by Phil Twyford, who said in a release by the Government on 01 April 2020:

“We are focused on the health and wellbeing of New Zealanders first and foremost, and we need to get through the lockdown and out the other side of this pandemic. However, the Government is also planning ahead for when that time comes”.¹

Government is also considering some of the regulatory hurdles that will inhibit or slow project delivery in the current climate. For example, local authority consenting, labour laws, planning laws – even environmental laws (however a reform of the RMA is not practical in a short timeframe). While there is clearly a balancing act, or a cautionary tale to not ignore such things, these regulatory impediments may benefit from simplification or acceleration.

The pandemic has also changed the way we work; possibly forever. COVID-19 is forcing all of us to think about different ways of working and how we need to equip ourselves to do that effectively. Clearly technology is going to play an increased role in the future of work and how infrastructure is delivered.



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03 — What can we do now?

Whilst infrastructure investment can deliver significant economic benefit, unless projects are live or in the tender phase, they are likely to be slower to show positive economic impact.

It is also important that an appropriate level of project delivery oversight is established to ensure public money is being spent on the right projects and executed effectively. In developing and delivery of significant infrastructure stimulus programmes, consideration should be had to enhancement of the existing asset base (e.g. improving efficiency, resilience); delivering broader cross-sector economic impacts through taking a precinct approach; and the use of technology to transform and de-risk deliver:

- 1. Start with existing assets.** Investment in optimising the configuration and performance of existing infrastructure assets can bring impact quickly.
- 2. Take a precinct lens.** A precinct approach can create wider social and economic benefits than traditional approaches to development and infrastructure investment. It ensures we take a broader view and invest in the right projects for our regions and community.
- 3. Digitally enabled infrastructure delivery.** The challenges associated with the delivery and operation of complex infrastructure in today's marketplace have been well documented in recent years. There are many reasons for the variability in project outcomes but one common thread in the array of solutions is effective use of real time data and analytics.

Each of these concepts is explored in more depth on the following pages.



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03 — What can we do now?

1. Increase the spend on asset management and maintenance

New Zealand has billions of dollars of assets in both hard assets and built form. What are the advantages of asset management and maintenance in the short-term?

- It stimulates the economy through improved efficiency of the existing asset base
- It leads to a reduction in operating and repair costs through strategically planned investment
- It can utilise a mix of highly skilled and unskilled labour
- Procurement processes and requirements can be met quickly and inexpensively by bidders
- The size of the investment can be scaled quickly to meet resource availability
- Opportunities can be targeted at high needs or vulnerable communities
- It provides a boost to second and third tier contractors who can't compete on major infrastructure projects.

In boom times less attention is often placed on asset management and more focus is given to acquisition and expansion. Reduced focus on asset maintenance can impact asset productivity and output rates and asset capacity declines compared to nameplate design due to maintenance strategies that have not adjusted to ramp-up initiatives. There is an opportunity now to use stimulus investment to maximise operational efficiency and improve asset performance, reliability, and profitability.



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03 — What can we do now?

This new focus will require a robust asset management plan and strategy supported by data insights that can maximise the potential of assets. Nevertheless, not all asset owners have a complete understanding of current asset condition, type of maintenance activities and budgets required to optimise costs versus performance.

Therefore, data-driven asset maintenance is an essential step towards bridging the gap between asset condition and performance. In our view there is a significant opportunity for asset owners to invest and extract value from their existing asset portfolio by taking a strategic, data driven approach to asset management.

This investment can be ramped up quickly and provide significant stimulus to the economy both in short term expenditure and efficiency gains.

Chart 8: The evolution of asset management

Few organisations



Engineering excellence

- Engineering driven – mature practice and common basis in many asset intensive functions
- Financial valuations and processes not aligned with Technical Operations.

Most organisations



Focus on cost implications

- Effective capital rationing through robust financial assessment of options (hurdle rates, NPVs)
- Financial driven
- Recognise alignment considerations of financial and operational metrics to improve efficiencies.

Few organisations



Asset efficiency and value extraction

- A holistic view of the asset's lifecycle to plan the optimal (balanced) investments, operational, and maintenance strategies required to maximise strategic value
- Supported by the integrated processes and Information Management Systems (well informed)
- Fact Based (using asset analytics and portfolio management techniques) and Business driven (ISO55000).

Source: Deloitte



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03 — What can we do now?

2. Taking a precinct approach to new opportunities

Worldwide, there is increasing political and business momentum towards the use of precincts to drive collaboration and growth.

Deloitte's recent publications, *Shaping our Slice of Heaven: Regions of Opportunity* and *The importance of place: A Cities and regions view on wellbeing*, highlighted the importance of Purpose of Place in growing the future economy.²

A precinct is the modern best-practice example of creating a purposeful place for residents, workers, commuters to mix and interact for functional and public outcomes.

Precinct approaches can create wider social and economic benefits than traditional approaches to development and infrastructure investment. The upfront planning and prioritisation can create short-term stimuli to economic growth.

Whilst much of the precinct work, particularly the property development side, is likely to be held back in the current market conditions, this should not stop the Government ensuring projects are ready to go once recovery starts by working on economic and other infrastructure that will enable development.

Why take a precinct approach?

- Investment in infrastructure is staged in order to best unlock the strategic outcomes of the precinct
- Effective planning better meets demand
- Staged delivery enables early value sharing opportunities
- Development is delivered holistically in line with the precinct plan – with a focus on creating place outcomes
- Precincts generally involve multiple infrastructure sectors and buildings which should hopefully open-up opportunities across the board rather than be concentrated in some areas such as rail or road. This should provide opportunities for a wider set of contractors.



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03 — What can we do now?



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Chart 9: The benefits of a precinct approach



Economy

- Higher wages and quality jobs for workers
- Superior products for consumers
- Higher tax revenues for government.
- More resilient to economic downturns.
- Higher than average productivity and firm growth.



Financial

- Capture more returns on public investments
- Enables value sharing through development receipts or estate fees
- Drives long term value by activated places that attract high quality tenants.



Sustainability

- More environmentally efficient than traditional sprawl
- Less urban heat effect.



Social and Community

- Create opportunities for community connectedness
- Reduces social exclusion
- Allow delivery of social and community benefits in a more considered and strategic way.



The whole is greater than the sum of its parts

- Co-ordination of investment, reform and services has a multiplicative rather than additive effect
- The whole is greater than the sum of the parts
- Avoids double counting by multiple projects
- Avoids silo-ed investments in transport, utilities, and land use planning.

Given the uniqueness of the current situation, the Government may even need to consider taking greenfield risk to accelerate activity and then resume a BAU consenting/procurement process when things return to 'normal'.

03 — What can we do now?

3. Digitally delivered infrastructure

The construction industry has an increasing number of partners and contractors engaged when delivering infrastructure projects. There is a need to increase transparency and improve collaboration throughout the supply chain, with data and insights shared more freely, processes more closely aligned and better systems integration. There is a pressing need amongst the project managers for an embedded unified data model to harness the power of the vast amount of data available in infrastructure projects. This results in a number of opportunities for project management, including safety improvement, project execution optimisation, de-risk project critical path and protecting the project value, while automating the handover to operations.

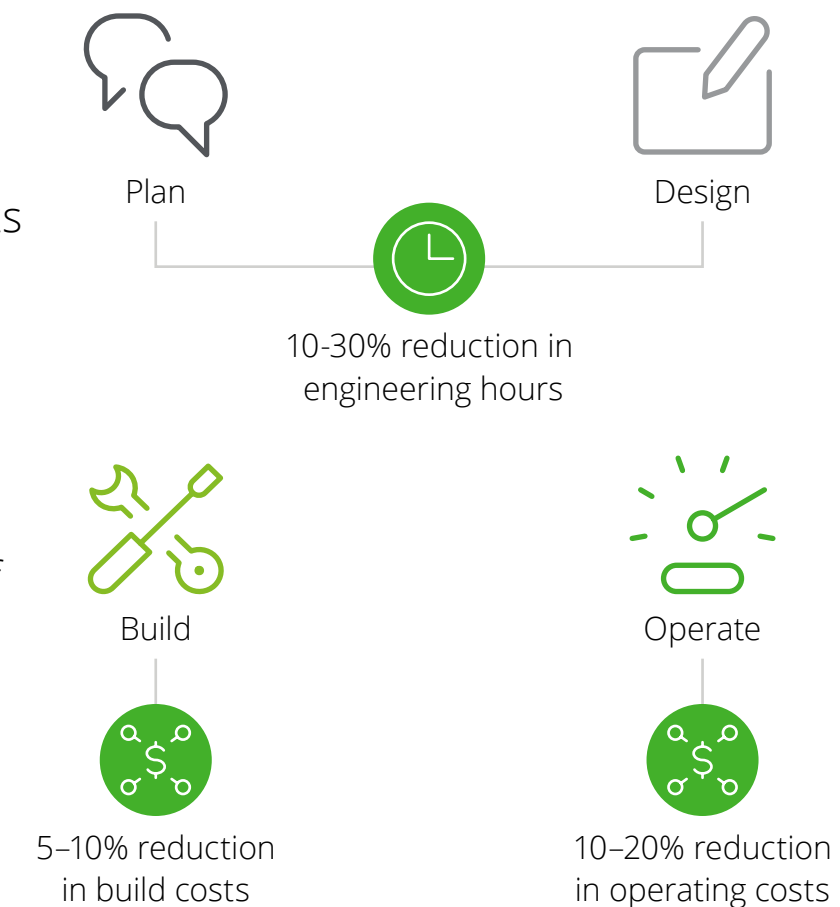
The next digital frontier is reusability and predictability, with developing a capability where every infrastructure project is better than the one before. This will generate a tremendous value for each project, all partners and contractors, as well as the construction industry overall.

By using this technology some short term economic benefits include:

- Achieve decision acceleration and bring benefits across the asset lifecycle
- Cost reduction on projects thus allowing resource dollars to be spread further
- Stimulus of the technology sector at the interface of infrastructure
- More efficient use of raw resources in a time of resource shortages
- Training and upskilling of the labour market.

Tools that consolidate disparate data to a common platform, portal and a set of products, to provide a single source of truth should be utilised.

Chart 10: Benefits across an asset lifecycle



04 — Conclusion

In conclusion, during the current COVID-19 environment, investment in infrastructure should be leveraged as an opportunity to keep people employed, keep businesses afloat and to maintain the productive capacity of the economy.

We need to shift the focus into investing in the existing asset base, improving efficiency, improving resilience, improving broader cross-sector economic impacts through precincts and using technology to transform and de-risk delivery. These logical steps can accelerate infrastructure as an economic stimulus.

So what are the key messages as we consider infrastructure as a stimulus:

- Monetary policy can no longer be effective in stimulating the economy
- Infrastructure can be used as an effective tool for fiscal stimulus but with some key takeaways:
 - Significant infrastructure projects should continue but may be slow to deliver additional benefits
 - Government should remove impediments to fast tracking infrastructure delivery, such as planning and complex procurement
 - Infrastructure can be used to drive outcomes, across all four capitals in the Treasury's Living Standards Framework
- Infrastructure improves the productivity of the nation allowing goods and resources to move throughout the economy
- Evidence-based decision-making is key to prioritise the right “shovel-ready” infrastructure projects
- Start with existing assets for ‘quick wins’ and short term stimulus
- Take a precinct approach to create wider economic and social benefits
- Technology can help us deliver infrastructure more efficiently from a time and cost perspective.



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05 — How can Deloitte assist?

For more information on the broader suite of Deloitte Infrastructure & Capital Projects services, please contact John Marker.

Asset management and maintenance

Deloitte is focussed on providing asset management and optimisation for public and private sector clients aligning investment to strategy and optimising through operations to trade off and effectively balance service, operations and cost.



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Precincts

Deloitte is focussed on the integration of strategy, policy, operations, and delivery to assist clients with delivering priority precincts and city partnerships.



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Digitally delivered infrastructure

Deloitte is focussed on technology led transformation bringing together financial, tax, operations, risk, and sustainability capabilities to modernise and improve infrastructure build and delivery outcomes.



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Sources

1 Government seeks infrastructure projects, Beehive Media release 01 April 2020

2 Deloitte Access Economics reports:

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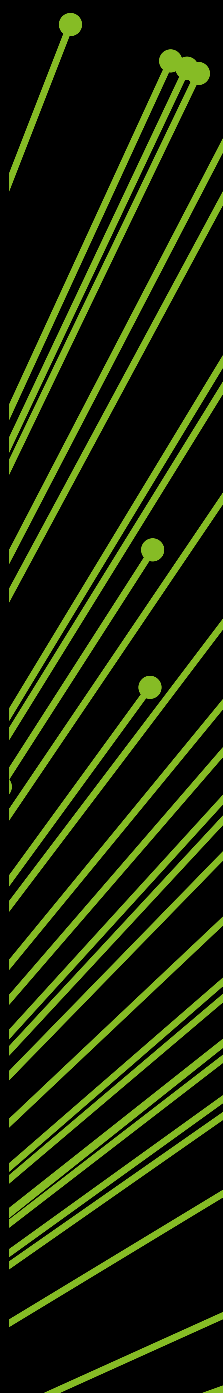
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