Turner & Townsend

Australia and New Zealand market insight report

Q3 2020

making the **difference**

Market overview

With both the Australian and New Zealand economies now in recession, private sector investment has contracted sharply, leaving many contractors concerned about their future pipeline of work. Whilst all aspects of private sector investment are to be negatively impacted from the pandemic, public sector construction is forecast to increase, driven by a sizeable pre-existing pipeline of major public projects and a boost to stimulus spending on shovel-ready infrastructure projects. This public sector activity will help to prevent non-residential activity from falling further over the remainder of 2020 and in 2021.

Over the June quarter, all states in Australia, except for Western Australia and Tasmania, recorded a decline in the value of private sector projects under construction. Victoria led this decline, falling by 6.4 percent from Q1, followed by the Northern Territory (-4.5 percent), Queensland (-3.8 percent), New South Wales (-3.7 percent), and South Australia (-3.5 percent). In New Zealand, the value of private sector activity across the country fell by 17.4 percent over Q2. Public-sector construction activity in Australia showed little improvement over this period with only New South Wales, South Australia and Tasmania recording increases of 5.9 percent, 6.5 percent and 1.3 percent respectively.

Commercial and industrial construction activity in Australia is anticipated to soften with accommodation construction likely to see the largest contraction. With international borders anticipated to remain closed over 2021, many new developments have been placed on hold until the situation becomes clearer. Similarly, office construction is also anticipated to contract sharply over 2021. Office vacancy rates across the country are on the rise following a wave of new stock recently added to the Sydney and Melbourne markets, as well as weak demand and increased uncertainty associated with the pandemic. Retail and warehouse construction is anticipated to ease over 2021 with many projects remaining on hold. Whilst warehouse construction activity is likely to be softer in 2021, the contraction is expected to be much smaller than other commercial asset classes, underpinned by the shift to e-commerce and the warehouses needed to facilitate this.

The most significant risk to the construction market outlook for Australia and New Zealand remains to be an increase in COVID-19 cases anywhere in the country and the uncertainty this generates. Whilst uncertainty remains, business and consumer confidence levels will remain subdued and will weigh in on future investment into new projects.

Figure 1: **2020 cost escalation forecast by city**

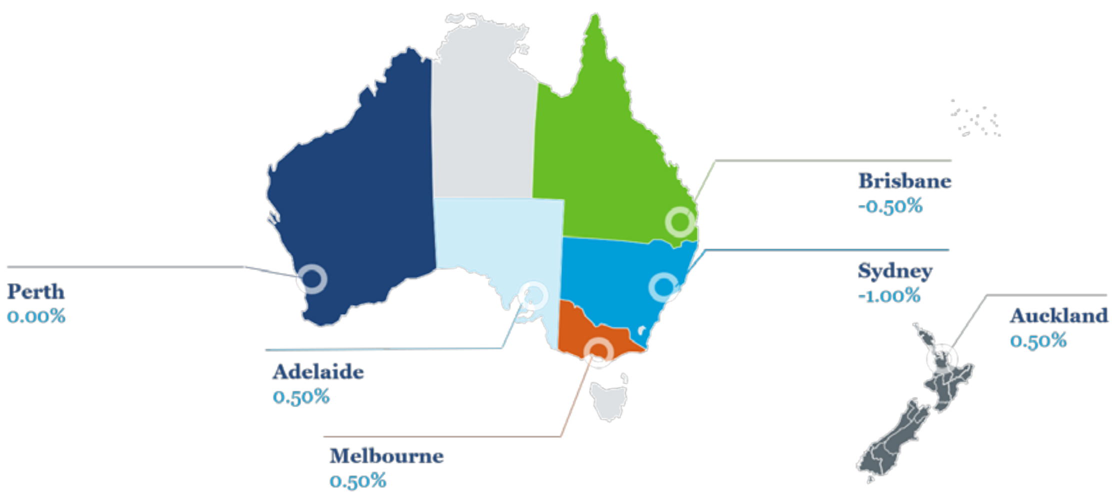


Figure 2: **Cost escalation forecast by region**

Region	**2020**	**2021**	**2022**	**2023**
Adelaide	-0.5%	0.5%	1.0%	1.0%
Auckland	0.5%	1.0%	2.0%	2.0%
Brisbane	-0.5%	1.0%	2.5%	2.5%
Melbourne	0.5%	1.0%	1.0%	1.0%
Perth	0.0%	0.5%	1.0%	1.0%
Sydney	-1.0%	1.0%	2.5%	3.0%

New South Wales and Victoria have experienced a sharp contraction in private investment over 2020, which is expected to weigh in on private sector construction activity in 2021. Significant government spending into shovel-ready projects will help to underpin activity from falling further across both states. Moving beyond 2021, New South Wales' construction activity is forecast to gradually increase, supported by a strong pipeline of major projects. Victoria, on the other hand, is forecast to experience softer activity after 2021, due to the relatively small pre-existing pipeline of major projects in the state.

Queensland's is forecast to experience a much softer contraction in private sector investment, as confidence appears to be returning to the market. , Construction activity is anticipated to remain relatively flat over the first half of 2021 before strengthening and regaining momentum in the second half of the year. Many projects that were placed on hold have now resumed in line with the state's positive response to the pandemic.

Construction activity in Western Australia is anticipated to remain relatively flat over 2021. A boost in public infrastructure spending will likely result in a modest increase in activity over 2022 and 2023.

Construction activity in South Australia is anticipated to remain relatively flat over the remainder of 2020 and into the first half of 2021. An increase in government stimulus into public infrastructure projects will help to push up construction activity over the remainder of 2021 and in 2022, which is expected to see construction costs escalate modestly at this time.

Over 2020, Auckland's construction industry contracted significantly, which has created an extremely competitive tender market and ultimately weighed in on profit margins. Whilst tender prices are low, construction costs have seen an increase due to skilled labour shortages and a constrained supply chain. This is likely going to cause construction costs to escalate, while borders to New Zealand remain closed.

**The above forecasts are for non-residential construction only. Escalation forecasts do not cover residential or civil construction.*

New South Wales

Key price indicators
Movement (%) Q3 2019 to Q3 2020

2.8%	0%	4%	0%	-35%
Site foreman /hr	Group 1 tradesman	Concrete 30 MPa/m^3	Plasterboard 13mm thick to stud wall/m^2	Main contractors margin movement

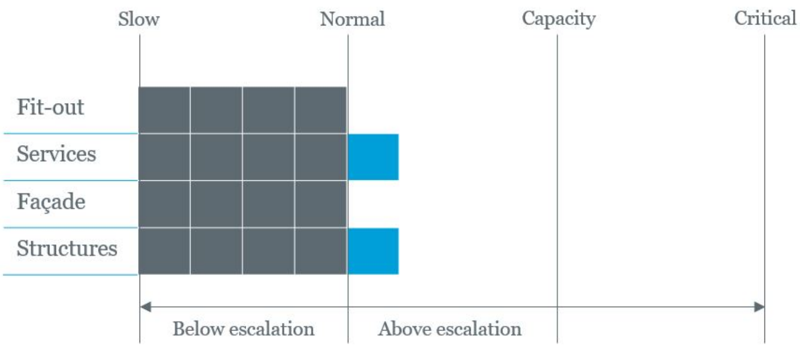
Over the last quarter, both contractors and consultants have continued to focus on tendering for public projects, following the state government's recently announced plans to fast-track shovel ready projects.

Reportedly, design consultants have since seen an increase in work from Q2, indicating that the pipeline of public work is now starting to flow through and should lead to tendering opportunities for contractors over the next six months. This will absorb some of the capacity in the supply chain which has generally moved from 'over-heating' 12 months ago to 'lukewarm' this quarter.

Government projects continue to dominate the market space with projects such as the $750m new Sydney Fish Markets securing a main contractor and a number of the Sydney Metro stations out to tender, including Barangaroo station. The $750m Royal Prince Alfred Hospital redevelopment has also been brought forward by a year after the State Government accelerated the project.

There are concerns from contractors about the push from unions to sign up to a new enterprise agreement, which would see annual pay increases of five percent per annum and a strict new rostered-days-off calendar. Builders are concerned that these additional costs will flow through the supply chain and will make projects more expensive unless efficiencies are found to offset the cost. Turner & Townsend is monitoring these developments and will be assessing the likely impact on the supply chain.

Figure 3: **Supply chain capacity in New South Wales Q3 2020**



Queensland

Key price indicators
Movement (%) Q3 2019 to Q3 2020

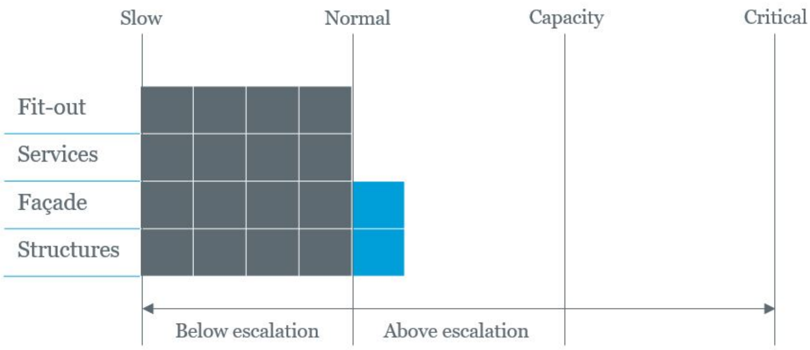
-1.9%	0%	-5.88%	0%	-25%
Site foreman / hr	Group 1 tradesman	Concrete 30 MPa/m^3	Plasterboard 13mm thick to stud wall/m^2	Main contractors margin movement

With restrictions in Queensland continuing to ease, the state has returned to relative normality. The majority of projects that were put on hold in the second quarter of the year have now recommenced. There was considerable volatility in tender pricing during the second quarter, reflecting the panic amongst contractors and sub-contractors who were keen to secure their pipeline of work during the period of uncertainty. This volatility now appears to have passed and tender pricing seems to be gradually normalising towards levels seen prior to the pandemic.

Although tender pricing has somewhat stabilised, it is anticipated that prices will likely remain lower than levels seen prior to the pandemic. This lower pricing is expected to continue to put pressure on contractors' margins and preliminary costs over the next six to 12 months.

With the Queensland Government in caretaker mode in preparation for the state election at the end of October, a number of large scale project decisions that require government engagement have been deferred until after the election. This has had an effect on both the public and private sector project pipelines, as the elected party will determine the states priorities for the next four years.

Figure 4: **Supply chain capacity in Queensland Q3 2020**



South Australia

Key price indicators

Movement (%) Q3 2019 to Q3 2020

5.9%	0.00%	-9.1%	20.00%	0%
Site foreman / hr	Group 1 tradesman	Concrete 30 MPa/m^3	Plasterboard 13mm thick to stud wall/m^2	Main Contractors Margin movement

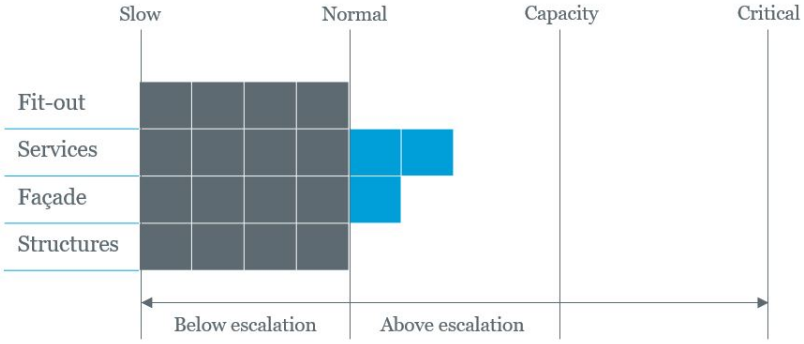
The South Australian Government's Capital Works Program includes a $1.3bn schools upgrade program. Two of the three stages of this program are well advanced, with the third stage about to commence. Given the relatively small size of the South Australian construction industry, the Capital Works Program is anticipated to uphold construction activity across the state while the economy recovers. Construction activity is not expected to show any increase, but will likely remain relatively flat in the absence of private sector investment and construction activity.

In addition to this, and showing the strength of the education sector in South Australia, the $100m Whyalla Secondary School is well advanced, as well as the $250m PPP Schools 7 – 12 at Angle Vale and Aldinga.

Further major projects in the state include the $100m Yatala Labour Prison upgrade, and the $300m 20 storey Cbus office tower, which is in the final stages of negotiations with an anchor tenant.

High rise construction activity in the CBD has slowed as private investors are cautious against moving forward in the current climate without secured anchor tenants in the office space or presales in residential apartments.

Figure 5: Supply chain capacity in South Australia Q3 2020



Victoria

Key price indicators					
Movement (%) Q3 2019 to Q3 2020	4.3%	4.3%	3%	7%	-25%
	Site foreman / hr	Group 1 tradesman	Concrete 30 MPa/m^3	Plasterboard 13mm thick to stud wall/m^2	Main contractors margin movement

Construction activity in Melbourne is estimated to have steadied through 2020 with the construction supply chain remaining ‘warm’.

The development of large infrastructure projects such as the Melbourne Metro tunnel and stations, together with the Level Crossing Removal project and the Westgate Tunnel project have provided some continuity in the industry. These major projects have substantially increased demand for resources and has essentially aided in keeping the industry afloat over Q2 and Q3, whilst heavy restrictions were in play.

Proposed government stimulus is expected to provide some relief to the industry, following a number of projects being placed on hold or cancelled as a result of the pandemic. These recently announced projects, in conjunction with the sharp contraction in private sector projects, is creating extremely competitive tendering conditions, with pricing reflecting this. Tenders for government projects are coming in anywhere up to 15 percent lower than prior to the pandemic in a bid to secure work.

The Stage 4 restriction in Victoria has weighed in heavily on the construction industry over Q3, leading to a significant loss in productivity from reduced site capacity. Extensions of time with and without costs are currently being processed across the industry. Additionally, contractors are now facing more requests to source materials locally to avoid risk of downtime with border closures. Contractors and clients appear to be working through any disputes in-house at this stage, with little involvement from industrial relations.

As the federal and state government budgets are being announced, the expectation is for significant stimulus to promote jobs, particularly in construction. Whilst the federal government focus was on infrastructure projects including Melbourne Airport Link, Geelong fast train, and Warnambool rail line, the state government budget is also likely to include projects in education, health and local government. Shovel ready projects have been proposed by a number of entities for consideration over the last three months. The State
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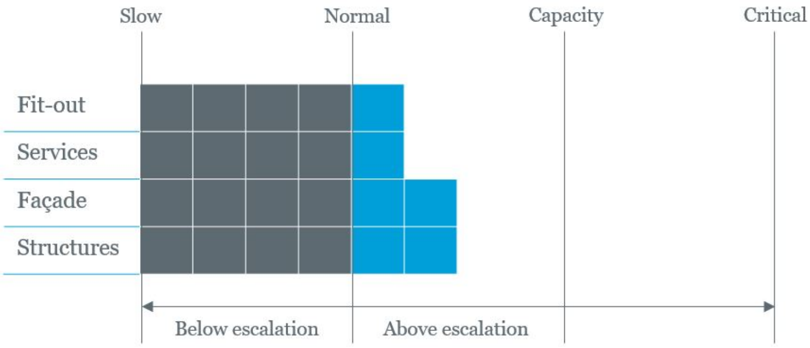
Figure 6: **Supply chain capacity in Victoria Q3 2020**



Western Australia

Key price indicators

Movement (%) Q3 2019 to Q3 2020

0%	0%	0%	0%	-10%
Site foreman / hr	Group 1 tradesman	Concrete 30 MPa/m^3	Plasterboard 13mm thick to stud wall/m^2	Main contractors margin movement

The Western Australian economy and construction market appears to have stabilised following the recent period of uncertainty. The government's easing of restrictions has assisted in the economic recovery, however it is anticipated that the recovery back to pre-pandemic levels will be slow.

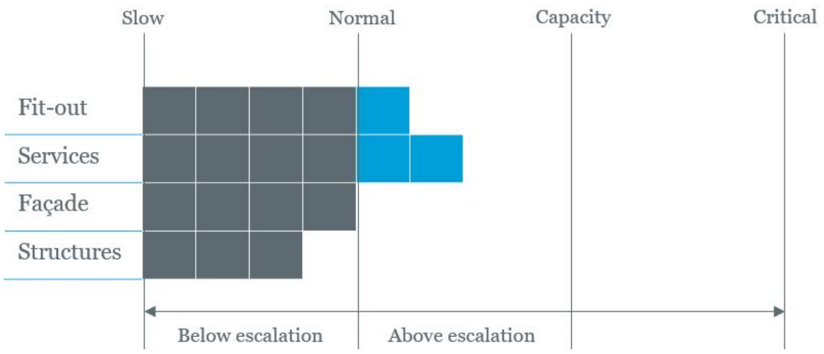
The Western Australian Government is anticipated to bring forward key infrastructure projects such as METRONET, the Main Roads portfolio and Westport to stimulate the economy. Most recently, the government formed the new Office of Major Transport Infrastructure Delivery (OMITD) to co-ordinate the key road and rail sector stimulus spend. Defence sector spend will also be key to the stimulus spend with the $300m Irwin Barracks consolidation project commencing in January 2021.

Tender pricing remains volatile and it is likely to be so for some time before the full impact of COVID-19 on pricing is visible. Turner & Townsend is tracking key metrics related to supply chain disruption, material costs, labour inputs, trade and subcontractors, future projects, construction costs to understand how this will impact tender price escalation.

The pandemic will affect each market sector and project differently, as the impact will be dictated by the sector, scale, value, complexity and supply chain for each project. The government stimulus for education and infrastructure, together with a steady progression of works in food retail will likely see tender prices moderately increase over 2021.

Aviation and university construction have cooled in recent months with numerous projects being postponed for over 12 months. Competitive tendering conditions are anticipated for any commercial projects that are still planned to commence in the coming year.

Figure 7: **Supply chain capacity in Western Australia Q3 2020**



Auckland

Key price indicators

Movement (%) Q3 2019 to Q3 2020

10%	15.4%	5.7%	11.1%	7%
Site foreman / hr	Group 1 tradesman	Concrete 30 MPa/m^3	Plasterboard 13mm thick to stud wall/m^2	Main contractors margin movement

Following a second wave of active COVID-19 case numbers, Auckland was placed under Alert Level 3 lockdown during August. The Level 3 lockdown allowed construction to continue with social distancing and COVID-safe measures in place. At the end of August restrictions eased to Alert Level 2.5, and then Alert Level 2 in September. Restrictions have since eased to Alert Level 1, which removes all restrictions except border controls.

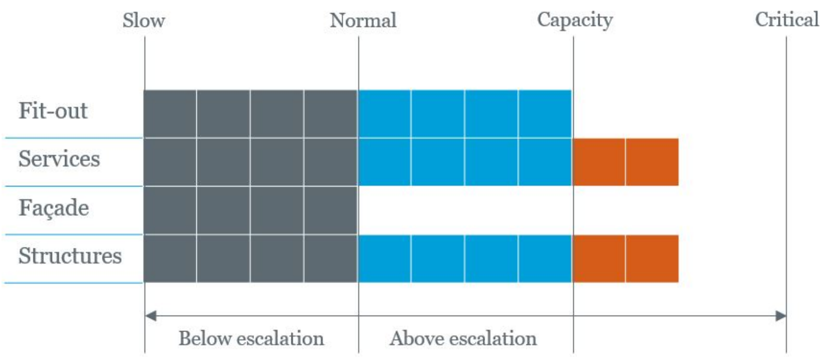
Unlike the Level 4 lockdown that occurred over March and April, all Alert Levels below Level 4 enable construction to continue, albeit with only some social distancing measures required. The recent outbreak of cases in Auckland has only had a limited impact on construction activity in the city.

Whilst construction has continued, the most considerable impact has been the low confidence environment, resulting in many projects going on hold or being cancelled. These projects have largely been from the private sector which has meant that the project pipeline for Auckland has decreased. The sectors most impacted have been aviation, hotels and tourism based projects. This impact will likely continue to be mitigated through ongoing government spend on social infrastructure projects such as schools and hospitals.

As a result of the pandemic, there have been notable changes observed across the commercial sector in Auckland. This includes commercial clients considering portfolio rationalisation and decentralising from Auckland's CBD. Additionally, the types of projects that are now coming through the pipeline include fewer large expansions and more consolidations and fit-outs. Commercial Bay has recently been completed in Auckland's CBD and this should provide fit-out contractors with additional capacity to support future projects. Retail shops have now opened and the office-fit outs are underway, which will help to maintain construction activity over the coming months.

There is anticipated growth in the high-tech sector, with international tech companies now looking at Auckland to establish data centres. This is a positive indicator of global confidence in the Auckland market. Additionally, it is anticipated that there will be several shovel-ready projects ready to break ground in 2021, those of which will proceed based on the upcoming election result in October 2020.

Figure 8: **Supply chain capacity in Auckland Q3 2020**



Australia economic overview

Australia's economy is facing an unprecedented crisis and the size of the 2020/21 Federal Budget reinstates just how bad the situation is.

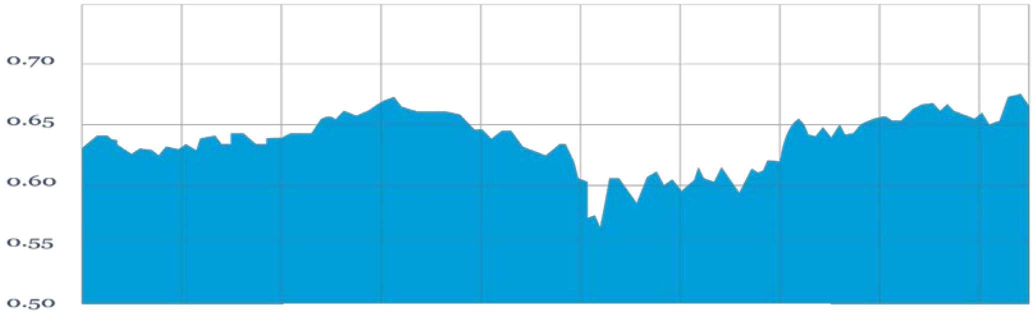
Australia's budget deficit is expected to reach a record $213.7bn in 2020/21, with the government estimated to spend 35 percent of GDP to pull Australia's economy out of recession. To put this into context, the Federal Budget that followed the Global Financial Crisis was 25.9 percent of GDP and in 2019/20 was 27.7 percent of GDP, amidst a global economic slowdown. Without the aid of further interest rate cuts, the full responsibility of recovering the economy has fallen on to the government.

The government is anticipating that GDP will decline by 1.5 percent over FY 2020/21, before rebounding to 4.75 percent growth in FY2021/22. There is also the assumption that a vaccine will be widely available by the end of 2021, and international travel will be able to resume shortly after this. However, consideration does need to be given to the lack of migration that will occur over 2020-2021 and the impact this will have on population growth. Without healthy and consistent growth in the population, fewer jobs are created, unemployment remains high, wage growth stagnates and this all weighs in on economic growth.

Unemployment showed positive signs over August, falling from 7.5 percent to 6.8 percent, representing an increase of 111,000 more people in employment. However, unemployment has since increased to 6.9 percent in September, indicating that employment had declined by 29,500 people during the month. The 2020/21 Federal Budget has forecast that unemployment is expected to peak at around eight percent in the December quarter, before gradually easing down over the following years.

Whilst the economic growth forecasts outlined by the Federal Government for 2021/22 onwards are reasonably positive, there are some considerable risks to this outlook. This includes the anticipated weak population growth from lack of migration, delays to the delivery of necessary stimulus, delays with developing and administering a vaccine globally and weaker than anticipated investment from the private sector. Additionally, other economies around the world are experiencing continued high numbers of active cases and this will continue to weigh in on global supply chains and global trade.

Figure 9: **AUD USD performance (Q1 2019 – Q1 2020)**



Forex movement of +4.7% in 12 months

Figure 10: **AUD FOREX forecasts**

	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021
USD	0.72	0.75	0.75	0.77	0.78
GBP	0.54	0.55	0.56	0.55	0.54
EUR	0.60	0.61	0.62	0.60	0.61
YUAN	4.80	4.97	5.06	5.00	4.98

Australia economic data

	Current	Previous	Change
GDP annual growth rate	-6.3% Jun 19 – Jun 20	1.6% Mar 19 – Mar 20	-7.9% Decrease
GDP quarterly growth rate	-7.0% Mar 20 – Jun 20	-0.3% Dec 19 – Mar 20	-6.7% Decrease
Inflation	0.7% Sep 20	-0.3% Jun 20	+1.0% Increase
Unemployment rate	6.9% Sep 20	7.4% Jun 20	-0.5% Decrease
Business confidence index	-4 Sep 20	0 Jun 20	-4 Decrease
Interest rate	0.25% Sep 20	0.25% Jun 20	0% Change

New Zealand economic overview

Over the June quarter New Zealand's economy fell into recession. Like many economies around the world, lockdowns enforced to prevent the spread of COVID-19 led to a dramatic decline in economic activity.

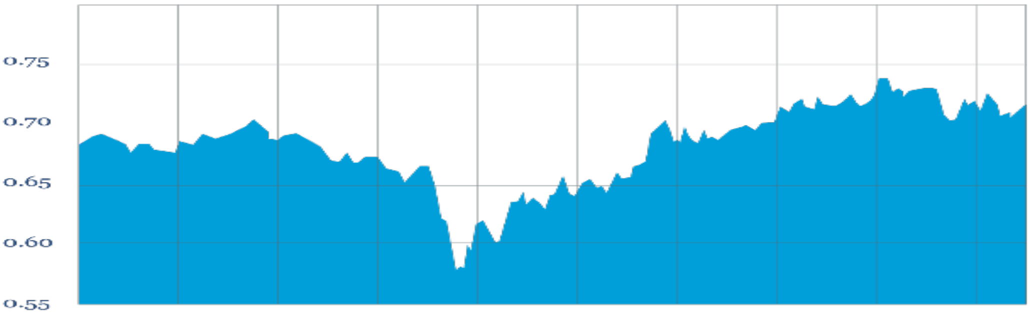
In Q1 2020 GDP contracted by -1.4 percent, followed by a sharp contraction of -12.2 percent in Q2. Over Q2 the services sector declined by 10.9 percent driven by retail trade, transport, and accommodation, and the goods-producing industries contracted by 16.3 percent, driven by construction and manufacturing.

To combat the spread of the virus, the government adopted a hard lockdown by implementing a four-level alert system following the initial outbreak in the country. Alert Level 4 was in place from the end of March to the end of April, which was then reduced to Alert Level 3 until mid-March. The restrictions under these two levels significantly weighed in on the economy and ultimately caused the sharp contraction in GDP growth in Q2.

The entire country is now on Alert Level 1, where restrictions only include international border controls. Business confidence has been improving since April, only falling over September, amidst Auckland's second spike in case numbers. Consumer confidence remains subdued, with household spending remaining much weaker than levels seen in 2019. Overall, consumer and business confidence will be the key to driving economic growth. Despite very limited community transmission occurring domestically, deteriorating conditions in trading partner economies will continue to weigh in on New Zealand's export dependent economy.

In response to the economic crisis, the New Zealand Government has announced significant stimulus to support the economy. These include a wage subsidy scheme to keep workers paid and in their jobs, tax relief for businesses, business finance support, as well as other fiscal stimulus. In the May 2020 Budget, there was a $50bn COVID-19 Response and Recovery Fund (CRRF) which focuses on meeting cost pressures and supporting public services to fight and rebuild from COVID-19.

Figure 11: **NZD USD performance (Q3 2019 – Q3 2020)**



Forex movement of -1% in 12 months

Figure 12: **NZD FOREX forecasts**

	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021
USD	0.65	0.65	0.65	0.65	0.63
GBP	0.50	0.51	0.51	0.51	0.50
EUR	0.56	0.56	0.56	0.56	0.56
YUAN	4.35	4.35	4.35	4.35	4.35

New Zealand economic data

	Latest data	Previous data	Change
GDP annual growth rate	-12.4% Jun 19 – Jun 20	-0.1% Mar 19 – Mar 20	-12.3% Decrease
GDP quarterly growth rate	-12.2% Mar 20 – Jun 20	-1.4% Dec 19 – Mar 20	-10.8% Decrease
Inflation	1.4% Jun 20	-1.5% Mar 20	2.9% Increase
Unemployment rate	4.0% Jun 20	4.2% Mar 20	-0.2% Decrease
Business confidence index	-28.5 Sep 20	-34.4 Jun 20	+5.9 Increase
Interest rate	0.25% Sep 20	0.25% Jun 20	0% Change

Re-affirming the importance of life sciences in Australia

There has been a significant reduction in pharmaceutical and manufacturing in Australia over recent years and the volume of medicines imported into the country has seen a sharp year-on-year increase totalling 500 percent over the last ten years.

The emergence of the COVID-19 pandemic has highlighted Australia's dependency on imported medicines from overseas. According to DFAT statistics, medical supplies were imported into Australia from over 100 countries in 2018-2019, with the US and Europe alone representing circa 68 percent.

The pandemic has emphasised the need for our country to become more self-sufficient by increasing our importance in the global value chain, improving the resilience of our local supply chain and providing health, economic and security benefits for Australia's future population which is projected to reach 35.9 million by 2050.[1]

The 2020/21 Federal Budget included investment of $1.3 billion for the Modern Manufacturing Initiative, which includes medical products, as well as increased funding for the CSIRO.

To support a step change in life sciences in Australia, we have identified five key enablers which can strengthen and re-affirm Australia as a valuable life sciences market.

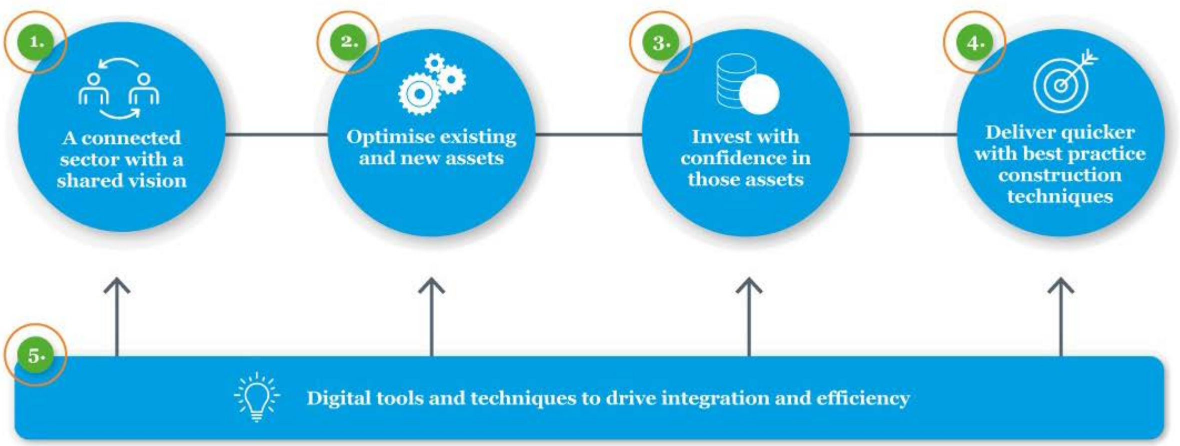
1. A connected Australia life science sector with a shared vision

Key to achieving this step-change is the collaboration between the universities, sector pioneers and Australia government, with these relationships becoming more formal in response to COVID-19.

The strong connectivity between universities and global corporations has established clusters of health and pharmaceutical R&D, design and engineering solutions which has supported these institutions' pivotal role in the fight against COVID-19.

Efforts from the University of Queensland to develop a COVID-19 vaccine highlights a collaboration between some of the leading players in the life sciences sector players in research, development and vaccine manufacturing.

Another example is AstraZeneca and CSL who have collaborated with Oxford University in the UK to develop a vaccine. Production is now



underway in Victoria and, subject to clinical trails and approvals, will be available to all Australians in the first half of 2021.

These networks can improve connectivity and maximise opportunities in linked industries within Australia, from manufacturing and logistics to exports and trade.

If a vaccine successfully launches from here, it will further highlight Australia's opportunity to enhance its manufacturing capability to support production.

It is imperative that this initiative is backed by Government as part of its 'levelling up agenda' for the economic recovery. The government's support in the last budget into manufacturing and research and development is a step in the right direction. So too are emergence of new science parks that are being planned nationally.

2. Asset management and optimisation with flexibility

The next enabler is to support flexibility, which is essential to the creation of life science assets. As COVID-19 has demonstrated, demands within the industry can shift quickly and the real estate model needs to remain just as agile as the R&D.

As lead times for construction are typically too slow to respond to an emerging need and, depending on size and requirements, can take two to three years to construct, the sector needs to plan ahead. Most importantly, this means developing assets in anticipation of requirements.

The emphasis for the client is preparing a state-of-the-art facility which has the agility to bring a range of different products to market.

At the same time, we need to look at how to repurpose existing assets to maximise efficiency. Globally, we have seen a number of existing facilities that have been enhanced and converted to next-generation life science parks which bring together R&D and manufacturing teams.

This provides the ability to research potential new targets and seamlessly manufacture them into new medicines. Combined with using the same equipment, data and analytics, efficiencies can be realised that reduce the overall time to produce a new medicine.

3. Control and predictability in investments

When it comes to construction costs, the life sciences sector has a different dynamic compared to most other industries. Maintaining cost efficiency is, of course, important and the sector is far from immune to the economic shocks we are seeing at the moment – where over the counter medical sales and GP administered products, for example, are seeing a major fall.

However, the overriding consideration is not keeping investment costs low, but making sure they are predictable and carefully controlled without comprising safety or regulation.

Guaranteed performance of major construction programs linked to such investment is key. With the ability to predict cost and schedule outturn earlier, products can be supplied to.

Access to sector-relevant data and expertise within Australia is fundamental to the sector setting realistic baselines to control and measure performance against.

4. Best practice construction techniques to enable quicker delivery

Adopting and developing a shift in mentality will be critical to expanding Australia's life science industry. Although there are best practice examples, we are still seeing a traditional approach to major program and project delivery.

Embedding proven advances in construction within the sector can facilitate quick wins, through:

- **Excellence in design for manufacturing and offsite construction.** Ensuring speed to market through efficient construction offsite must be a priority for the sector.
- **Lean practices within an Integrated Project Delivery (IPD) environment.** The sector is familiar with the IPD concept and has realised some improvements specific to project level delivery. However, the step change is being able to use this as a framework – a repeatable approach, delivering multiple projects in a standardised way alongside industry experts in the IPD team.
- **Effective use of building information modelling (BIM) technology.** BIM-facilitated clash detection improves the ability to get it right first time and increase productivity.
- **Efficient progress measurement and valuation of works.** More than ever, digitisation is crucial in monitoring progress and reviewing quality, reducing time on site while creating a digital record of progress.

5. Supporting digital advancements to achieve efficiency

The sector is going through a period of technological change to enable faster decision-making and provide greater control over manufacturing operations and quality.

A key enabler for the sector to improve speed to market is Industry 4.0 which is the transformation of traditional manufacturing and industrial practises combined with the latest digital technologies, data analysis and skillsets.

Embedding Industry 4.0 will facilitate a step-change within the life sciences sector – it could even reshape the global economy.

The life science sector's own contribution to the global ambition – Pharma 4.0 – is already taking shape and continues to be a core theme within International Society for Pharmaceutical Engineering events.

The main consideration for the sector is how new tools can be adopted with consideration for the specialist regulations of the good manufacturing practice (GMP) environment, and how we establish the specialist skills needed to do so.

Australia can support this step change by working with universities and global corporations now to understand and address the skills gap.

Most obviously, the major pharmaceutical companies in the sector will need to train and hire specialised individuals to manage huge amounts of data from connected objects on the plant floor. However, these broader skillsets will also be needed in the supply chain too.

Architectural and engineering design firms will need people who are versed in technological advancements and can design adaptive, connected, compliant and flexible facilities.

Building and general contracting firms will in turn then require skills in digital and technology so they can construct and commission these complex and highly automated smart facilities.

Reaffirming importance

The global life sciences sector is going through a period of huge investment, collaboration and innovation. The above enablers provide a big opportunity for Australia's life sciences sector to become a key player on the global stage.

Additionally, through manufacturing medicines locally, it will ensure that Australia is less reliant on importation of medicines from overseas and can effectively support global industry and drive continuous improvement.

Turner & Townsend's global life sciences project controls index launches this year. The new publication provides cost and schedule index data for pharmaceutical manufacturing projects across global regions.

1. Department of Foreign Affairs and Trade, Composition of Trade Australia 2018-19 - includes import of 'Pharm products (excl. medicaments), 'Medicaments (incl veterinary)', Medical electrodiagnostic apparatus' and 'Medical instruments (incl. veterinary)'

About Turner & Townsend

We are an independent professional services company specialising in program management, project management, cost and commercial management and advisory across the real estate, infrastructure and natural resources sectors.

With 111 offices in 45 countries, we draw on our extensive global and industry experience to manage risk while maximising value and performance during the construction and operation of our clients' assets.

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