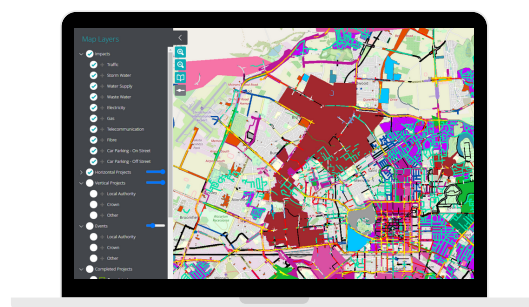OPEN PLAN

# NZ FORWARD WORKS VIEWER

## Common good technology to build a better New Zealand

Nationwide mapping of future work programmes

A platform to drive collaboration and assist programme deconfliction

Supported by a National Advisory Group including Waka Kotahi NZTA & InfraCom

**info@forwardworks.co.nz**

# THE PROBLEM WE SOLVE

Delivery of large programmes of work within urban centres requires a careful balance between the pace of delivery, maintaining an effective transport network, supporting economic activity and minimising community disruption. Infrastructure is being developed all over the country, but by multiple different organisations with no single oversight or controlling authority.  Add to this that New Zealand is facing a national infrastructure crisis and needs to spend many billions of dollars in the coming years to renew public water infrastructure alone – and the potential for chaos is huge.

But - so is the opportunity to collaborate.

The National Forward Works Viewer is a platform for all nationwide stakeholders to publish their forward works programme:
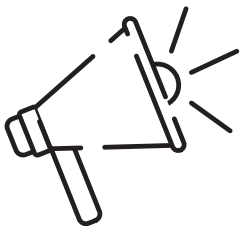
- Gives visibility of organisation assets and project plans
- Identifies project clashes and opportunities to allow efficient planning
- Provides contact details of Project Managers to encourage communication and collaboration
- Contextual map layers contain information to improve awareness of the area, for example public transport routes, parking zones and underground service networks
- Easy to use and upload your programme data

Having visibility of national infrastructure forward works programmes means that you have  more control over your own project planning – you can confidently plan your work around other organisation's programmes and events. You can also collaborate with other organisations to improve sequencing.

The NFWV also contains helpful data such as public bus routes, haulage routes and other such publicly available information, with the ability to load much, much, more.
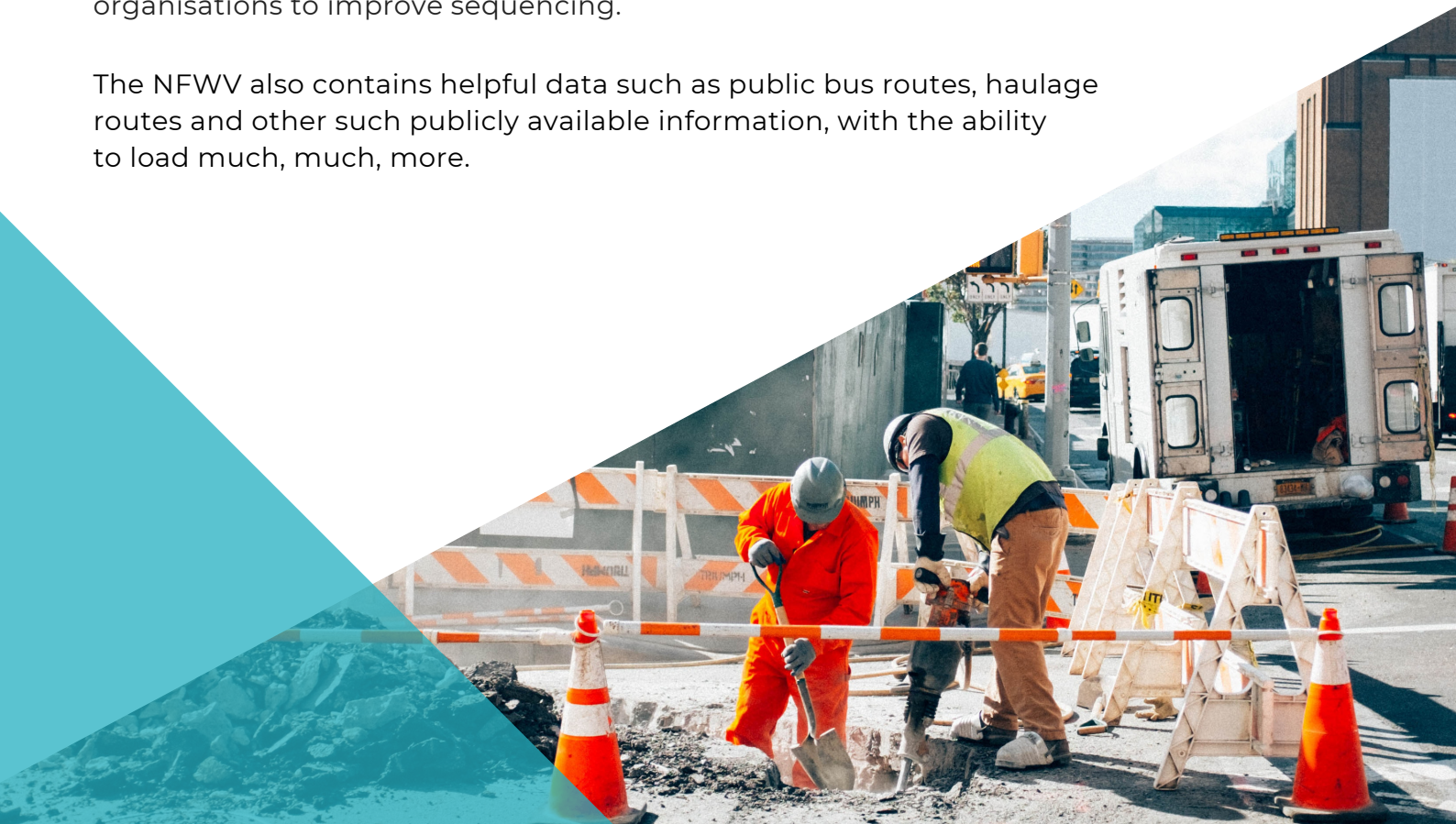
# TRIED AND TESTED

After the Christchurch 2011 earthquakes, much of the city's infrastructure was damaged beyond repair. Areas of the city needed a complete rebuild. At times there were over 120 different crews working on the roads in the city, so it was pivotal that works were organised efficiently to keep morale high, offer value for money, and public disruption low.

Developed with input from various government and rebuild agencies, the NFWV was developed with the aim of creating a single, integrated view of the forward works footprint. It allowed multiple agencies working on the Christchurch Rebuild to coordinate works efficiently, supporting up to $40bn of capital renewals, repairs and recovery.

It's since been adopted as business as usual in Auckland, Christchurch, Wellington and Queenstown with more regions to come.

## Keeping Wellington moving

Multiple projects from multiple contractors were planned on a heavily trafficked, critical connector route in Wellington, right outside Parliament. The NFWV highlighted the clashes and opportunties, and works were able to be coordinated in such a way that it minimised the impact of the works on parliamentary functions, pedestrian access, local businesses and traffic flow. Data collected from the Wellington NFWV has also been used to create heatmap models identifying areas which face significant coordination risks.

## Reputational savings

Franklin Road, an important connector route in Auckland, required multiple infrastructure upgrades. Watercare, Vector, Auckland Transport and Chorus realised the benefit of working together on shared trenching and temporary traffic management through using the NFWV. They utilised a 'one dig' approach and completed the works collaboratively. The reputational savings were priceless – if each of these projects went ahead independently, the disruption and public frustration would have been significant.

## Preventing a near miss

After four years of a semi-rural course due to the city rebuild, the Christchurch marathon returned to the central city in May 2015. However, it was scheduled for the very same day as the demolition of the Christchurch Central Police Station, and the route went right past it. The Council Events team loaded the route into the NFWV which alerted them to the clash, and were able to liaise with the demolition team, who rescheduled the demolition for later that day - ensuring the public's safety.

# HOW DOES IT WORK?

It's pretty simple!

- We engage with your programme planners and heads of departments to ensure that the NFWV is right for your organisation
- We work you through an onboarding process where together we:
  - identify key stakeholders and programmes
  - obtain samples of your single source of truth programme data
- Our technical specialists work some magic to extract the data into a format that the NFWV can read. Once this is worked out, you can either email the data through on a regular basis and we'll upload, or depending on your systems, we can work some automations which will pull your data through to the NFWV seamlessly.
- We provide you with access to the NFWV, and you can log in at any time to view your programme and others on the system.

Once your programme is uploaded, the NFWV system will automatically work out if there's any clashes or opportunities with your projects. A clash is defined as a project happening in the same location and same timeframe as another project, and an opportunity is defined as a project happening at the same location, but a different timeframe as your project.
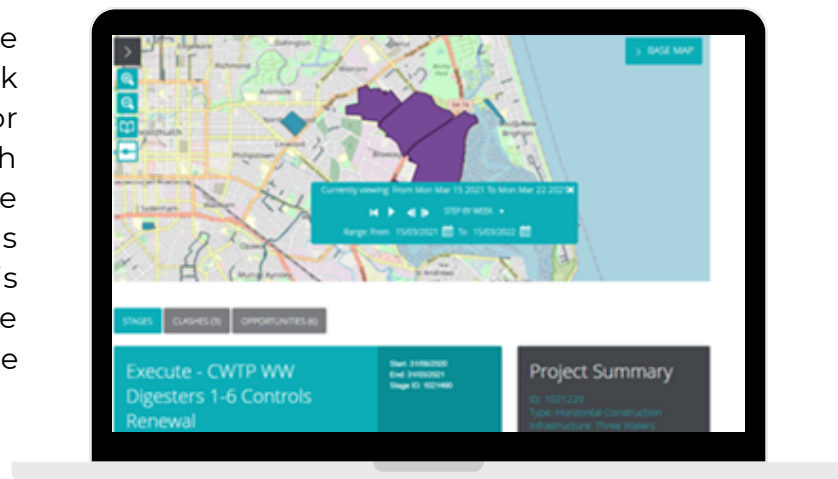
You're also able to view the contextual layers loaded on the NFWV – these are map layers which can be toggled on or off, and consist of information such as public bus routes, haulage routes, parking zones etc which can help in your programme planning.

We currently charge public sector organisations on a monthly subscription basis, which covers an unlimited number of users for the region, including any organisations which have a valid and legitimate reason to use the NFWV (eg. developers, consultants, construction companies etc). The cost is worked out as a lump sum, considering factors such as how many rate payers are in the district, the population of the district, how large the public sector organisation is, and the affordability of the NFWV.

If you're interested in viewing the planned programme for your region, you can sign up for a free NFWV account on our website – www.forwardworks.co.nz
or email info@forwardworks.co.nz for more information.

# NATIONAL FORWARD WORKS VIEWER BENEFITS MATRIX

| *including: Comms and Community Engagement, Elected Members, Asset Owners, Consent Officers, Call Centres, Executive and Unit leads, Programme Owners  **including road users, local residents | Economic Benefit | Council* | Utility Company | Developer | Contractor | Design Engineer | Event Planner | Business Owner | Member of public** |
|---|---|---|---|---|---|---|---|---|---|
| Increased safety to workers and motorists | $$$ | x | x | x | x | x | x | x | x |
| Less negative publicity (reputational benefit) | $$$ | x | x | x | x | | x | x | |
| Increased productivity (improved planning and coordination) | $$ | x | x | x | x | x | x | | |
| Improved certainty of single authoritative repository | $$ | x | x | x | x | x | x | | |
| Certainty of work (pre-approvals) | $$$ | x | x | x | x | | | | |
| Improved performance monitoring of programmes and networks | $$$ | x | x | x | x | | | | |
| Improved & informed decision making from public (advanced information leading to better behaviour leading to better demand management) | $$$ | x | | x | | | | x | x |
| Minimise travel disruption to public | $$$ | x | x | | | | | x | x |
| Improved access to local businesses | $$$ | x | | | | | | x | x |
| Improved asset lifetime (dig once, correct sequencing) | $$$ | x | x | | | x | | | |
| Improved efficiency of public transport | $$$ | x | | | | | | x | x |
| Improved asset protection (service strike reduction) | $$$ | x | x | | | | | | |
| More efficient public-sector decision making | $$$ | x | x | | | | | | |
| Improved risk management – improved accuracy of contingency and mitigation | $$ | x | x | x | x | x | | | |
| Improved coordination of work sequencing between projects competing for space (project vs project) | $$ | x | x | x | x | x | | | |
| Improved knowledge sharing of new and potential asset locations and timing (asset vs project) | $$ | x | x | x | x | x | | | |
| Improved efficiency of freight including high-productivity motor vehicles | $$ | x | x | x | | x | | x | |
| Increase confidence in programme delivery (improved allocation of resource and timeliness of delivery) | $$ | x | x | x | x | | | | |
| Technology agglomeration effects (network effect and open-data principles) | $$ | x | x | x | x | | | | |
| Improved resilience to unplanned events (improved time-to-recover) | $$ | x | x | x | x | | | x | x |
| Improved communication with public (improved access to information) | $ | x | x | x | x | | | x | x |
| Reduced costs for project management, permitting and consenting | $ | x | x | x | x | x | | | |
| Reduced project costs (for example shared traffic management) | $ | x | x | x | x | | x | | |
| Standardisation of data and processes | $ | x | x | x | x | x | | x | x |
| Easier contractor management | $ | x | x | x | x | | | | |
| Improved response and management of unplanned events (incidents) | $ | x | x | | x | | | x | x |
| Improved management of special events and VIPs | $ | x | | | | | x | | x |