

# CONSTRUCTING GREAT NEW ZEALAND PROJECTS

**Every Build since late 2008 has included an article summarising the innovations found in at least one Pathfinder project. Looking back, were there any common themes of best practice that influenced success to deliver really great New Zealand projects?**

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The New Zealand Construction Clients' Group established the Pathfinder programme in 2008 with funding from the Building Research Levy. The aim was to share ideas and pool knowledge – the keys to innovation. Despite plenty of evidence for best practice and innovation around the world, New Zealand was short of good examples. There was lots happening, but it was often happening in isolation. Pathfinder set out to turn this situation around by:

- connecting innovators with each other
- encouraging a 'sharing' culture of knowledge across the industry
- building a body of knowledge around innovation.

Participants have been highly complimentary about the projects and say that they 'encourage a faster shift to best-value practices in the industry' and 'ensure that we take positive learnings on to the next project'.

Projects that have implemented some or all of the best-practice themes are achieving delivery to time or early, within and under budget, while meeting the desired quality outcomes. Further benefits include an improved product, added value, greater predictability, a fulfilling environment, development of a learning culture and enhanced leadership skills.

Early in the programme, key themes emerged as to what influences a project to succeed and deliver the benefits described above. With 13 projects completed, we can now document these as a key learning output for the industry.

## Keys to a really great project

Several success criteria have emerged and most of the case studies describe how the project implemented some, if not all, of them. These criteria are distilled into four key themes (see Figure 1) that form the backbone of the recently

published Construction Client Protocols. The themes are:

- client leadership
- commitment to people
- procurement and integration
- commitment to quality.

The biggest influences on the outcome of the projects are the people and the team, in particular, how the client has set the team up at the outset.

Often clients feel disempowered by their organisation's policy for procurement, but the criteria for establishing really great projects can be independent of the procurement and delivery model, as long as leadership is involved.

## Strong client leadership

Strong client leadership is essential. This means having a clear vision of the successful outcomes desired, presenting a single point of contact, rapid and efficient decision-making and visibility to the team from the outset. Good leaders will be fair and flexible and will be actively involved throughout the project delivery.

Pathfinder clients can be described as 'informed' or 'intelligent'. They clearly articulate their requirements and key drivers and are active throughout the whole project delivery and in all key decisions. They are people- and project- focused and make timely decisions.

Intelligent clients are aware of the advantages of being transparent and proactive in creating open dialogue with stakeholders. They also foster a commitment to sustainability and demonstrate leadership.

## Commitment to people

Pathfinder clients are seeking individuals who demonstrate openness, honesty and innovation, are articulate, have a good sense of humour and can think on their feet. Therefore, careful team selection is fundamental. Successful projects have teams chosen for their ability to work together, their skills and experience, their attitude and that of their company to their people.

Aligning project and team members' goals is key. If the client speaks to everyone about their personal goals and drivers, people feel more a



Figure 1: Four key themes of success criteria emerging from Pathfinder project reviews.

part of the team. The Whanganui UCOL Pathfinder project client, Jule Einhorn (*Build* 113, August/September 2009 pages 32–33), achieved great loyalty from her supply team this way.

Top companies show their commitment to their people by:

- upskilling interpersonal skills or technical knowledge
- running prestart and induction workshops
- allowing regular ‘offline’ workshops to review progress
- celebrating key milestones
- adding post-evaluation workshops
- coaching and mentoring
- establishing excellent health and safety procedures
- providing improved welfare facilities.

Companies that make these sorts of commitments to their greatest asset attract A-list individuals.

## Procurement and integration

Early involvement of the contractor and key subcontractors is essential to a really great project. The growing complexity of building demands collaboration. No one discipline has sufficient skills or knowledge to understand the consequences of the whole process, particularly with today’s driver of environmental sustainability demanding constantly evolving innovation. Integrating design and construction improves efficiency, shortens construction periods and reduces waste. Contractors can provide construction expertise during development of design documentation, particularly around buildability issues.

To help establish a collaborative approach, it is ideal that the delivery model, selection method and form of contract matches the way of working. The next best step is to create an informal charter that overrides the contract on a day-to-day basis. With either method, a healthy collaborative environment is supported and sustained by:

- transparent and open communication
- open book accounting
- a flat hierarchy, where facilitative leadership is encouraged
- a ‘no blame’ culture
- continuous reporting
- collaborative planning (using lean construction, Last Planner™ and building information modelling (BIM) technology.

Collocation is helpful where practical, but in the absence of a shared physical environment, a

shared virtual environment can be created with project websites and data-sharing vehicles.

Pathfinder clients are not always in the position to take advantage of modern procurement routes. This doesn’t deter them from working to establish an integrated team – it just makes the process a little more time-consuming.

## Commitment to quality

Quality begins with people and encompasses process and product outcomes. Process quality includes the use of best practice in risk management, change control, open book cost accounting and collaborative programming. The triple bottom line of sustainability is social, economic and environmental.

Key to alignment towards quality is developing a performance measurement culture. Establishing key performance indicators is part of this process. Basic performance indicators are time, cost, quality, client and team satisfaction, and health and safety.

Performance indicators are vitally important in a collaborative procurement model. They form the tool that demonstrates whether the project is achieving best value and allay people’s fears about moving away from lowest price, lowest quality.

## Sustainability based on whole of life cycle approach

When objectives include a commitment to sustainability, costs are based on a whole of life cycle approach rather than on initial costs of construction. For every \$1 spent on capital construction, \$5 is spent on maintaining the building through its life, and \$200 is spent on the resource housed by the facility. Only \$0.1 is spent on the design process.

Best practice shifts this equation so that more is spent on the design and construction phase to receive a bigger pay-off during the life of the building. BIM models are now capable of maximising whole-of-life development and can model scenarios in advance of designing permanent features.

Studies have shown that the two most important building design factors influencing productivity in the workplace are natural light and air quality. Therefore, spending more in the design and construction stages is a further example of sustainability planning by leading clients. This is a long way from the concern of the lowest-priced contractor. Leading clients

are seeking innovative companies who can bring intelligence and creativity to the party. The downstream pay-offs are far greater than the relatively small (and often illusory) potential saving if choosing the cheapest price.

## Success starts early

The Pathfinder projects to date have shown that a consistent suite of best-practice themes and success criteria have contributed to their success, as described above. Consistently, the best outcomes are achieved when contractors and key subcontractors become involved early in the process.

The procurement route is not a barrier to implementing these best-practice themes. Clients and their supply chain can retrospectively implement collaborative and team-building activities on any form of contract. Some models are designed to encourage best practice whereas others are not. Even with the least integrated procurement model (lowest price competition), it is still possible to achieve an excellent outcome with good client stewardship.

There is an underlying assumption that clients and their supply chain partners are capable of working in a more integrated and collaborative fashion. This is not always the case. Work is necessary to establish a high-performing team – a 2-hour workshop with half the team and a partnering charter do not result in world-class outcomes. Clients and suppliers should objectively examine their capability to support collaborative and integrated working with a view to investing in their people’s skill and experience.

## A challenge for the industry

The challenge for the New Zealand construction industry is to assess itself against these emerging best practice themes and develop tools, models and training to upskill its people. We need key leaders to drive this process. It will be interesting to see how long it takes for ‘constructing great New Zealand projects’ to become the norm and for New Zealand to be at the top of the game internationally.

See [www.clientsuccess.org.nz](http://www.clientsuccess.org.nz) for more on these themes and detailed reports on individual projects. Download the *Build Pathfinder* articles from [www.buildmagazine.co.nz](http://www.buildmagazine.co.nz) under *Ongoing Build Series*. ♦