

# Peak performance

Interviews of stakeholders in the Canterbury construction sector have identified productivity improvement opportunities and impediments.

BY KELVIN ZUO AND SUZANNE WILKINSON UNIVERSITY OF AUCKLAND AND JEFF SEADON, SCION



**CANTERBURY OFFERS** a unique opportunity to implement improvements in productivity since the region is undergoing rapid changes to its construction sector. A study interviewed stakeholders in the life cycle of residential buildings in Christchurch to get their views.

## Identifying contributing factors

The top factors affecting productivity in three categories are:

- External factors beyond management control.
- Internal factors within management control relating to technology and labour.
- Internal administrative factors within management control.

## Beyond management control

Factors affecting reconstruction progress and productivity in Christchurch that are beyond management control include:

1. possible aftershocks - the uncertainty has slowed progress on land zoning, damage assessment and insurance settlements
2. skilled labour availability
3. the size and complexity of the project.

## Controllable – internal labour and technology

Focusing on technology and labour, the main internal factors affecting productivity within management control include the

quality of work, quality control and quality assurance practices, wages and benefits, and worker attitude and morale.

Quality is critical for project success. Declining quality decreases productivity due to the need for rework and extra waste. Good processes are needed, along with training, to ensure the required quality is achieved, especially as the rebuild increases pace. Interviewees thought standardisation was a way to control and improve quality.

Comments were negative than positive about current workers' attitudes and morale. There is frustration from perceptions that pay rates are low and the repair and rebuild work is disorganised. Poaching and constant changes in companies affects company morale.

## Controllable – internal administration

The top three internal administrative factors within management control affecting productivity were identified as:

1. changes in drawings and specifications
2. lack of cooperation and communication leading to difficulties coordinating subcontractors
3. lack of detailed planning.

## 20% by 2020 – getting there

To reach the Productivity Partnership's goal, fundamental changes are necessary, such as new ways of thinking, constructing and educating and new processes.

Practices with the potential to improve productivity include:

- prefabrication
- management training, for example, lean project management
- collaboration and the acceptance of new ideas
- training more skilled labour
- standardisation
- innovation and technology.

### ***Opportunity for prefab***

Prefabrication will increase construction productivity, but difficulties in achieving more market share are acknowledged, such as shifting views of prefab buildings from 1980s classrooms to modern residential building. Quality and materials availability are requirements.

### ***More training, collaboration and sharing***

The reconstruction is a chance for training and the adoption of techniques such as lean project management delivering better value with less waste was mentioned.

There is also the opportunity for new ideas and more collaborative contractual arrangements, such as the alliance model for project delivery - used on more complex projects.

The rebuild has supported sharing and solving problems and improved networking, benefiting future construction.

### ***Skilled labour and standardisation***

Smarter training and education will produce more skilled labour, and better wages and benefits will attract and retain labour.

Standardisation in design, quality control, building methods and procedures are also possibilities for productivity improvements. The recovery is a chance to trial more innovative technologies. ◀

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