CONSTRUCTION STRATEGY GROUP
BUILDING INDUSTRY VALUE

Skills Training – Future Change

This paper proposes potential changes to lift the skill sets of people available, and already within, the New Zealand building industry with the objectives of: Increasing industry productivity, generating greater numbers of competent and appropriately-qualified employees, improving quality of delivery in commercial and residential construction and enhancing the contribution of the industry to the country's GDP. The scale of change proposed will require joint private and public-sector action, in recognition that a number of workmanship and training issues exist in areas subject to Government regulation. New Zealand is not alone in facing these issues:

- **World Economic Forum Report, May, 2016[1]:** Urbanisation and Housing crisis: 200,000 people are added daily to urban areas and need affordable and healthy housing; 50 percent of general contractors are concerned about finding experienced crafts workers for their workforce.
- **PriceWaterhouseCoopers (PWC), September, 2016[2]:**The Government should consider changes to policy settings to increase labour supply during industry shortages
- **McKinsey&Company, February, 2017[3]:** Construction related spending accounts for 13 percent of the world's GDP but sector productivity has increased only one percent over the past 20 years. Construction firms and workers need to continuously reskill and train to use the latest equipment and digital tools.

The annual spend in New Zealand on residential, commercial and civil infrastructure is approximately $37 billion. The McKinsey productivity improvement paper identified skills training and project management improvement as being fundamental elements in securing productivity improvement. If improved training could be delivered in New Zealand we believe that productivity could be boosted by a minimum of five percent. That is a saving of $1.86 billion annually or the equivalent of delivering two Transmission Gully projects at $850 million each or another Waterview project at $1.4 billion, every year. The required sustained investment in education and training falls into four categories: University/Polytechnic; Apprenticeships; the on jobs skills recognition (stackable credits); and Continuing Education (eg project management for tradespeople, engineers, quantity surveyors etc).

[1] World Economic Forum: Shaping the Future of Construction – a Breakthrough in Mindset and Technology; May, 2016

[2] Report to the Construction Strategy Group: Valuing the role of construction in the New Zealand economy; September, 2016

[3] McKinsey Global Institute: REINVENTING CONSTRUCTION: A ROUTE TO HIGHER PRODUCTIVITY; February, 2017

Recommendations:

Early reviews by a Government-Industry task group of:

- The legislative framework applicable to the BCITO, with objectives to allow the implementation and operation of standardised training programmes by the organisation, with recognition by the TEC of qualifications achieved by trainees.
- The training subsidy programme by way of a cost-benefit analysis and introduction of more effective ways and means of stimulating attractiveness to trainees (pre and post-graduate/certification) and employer participation
- The 1992 Industry Training and Apprenticeship Act with a view to modernising provisions in line with today's practices and building industry environment.

Introduction

PWC in September 2016 identified the construction sector as New Zealand's fifth largest by employment, comprising around 178,100 FTEs, with another 53,600 FTEs in construction-related services. Together this accounts for 10 percent of total employment across the economy. Construction and construction related industries contributed 8 percent of the country's GDP in 2015. This has even greater impact when integration with other parts of the economy is considered. Out of the top 10 individual sectors by contribution to GDP, construction supported the highest job growth between 2012 and 2015, with core construction contributing one out of every five new jobs. In contrast the agriculture, forestry and fishing sectors, for example, contributed only 330 new jobs over the same period.

PwC noted industry participants highlighted labour shortages constraining their businesses. Labour productivity had increased only one percent since 2012. But every one percent increase in labour productivity for construction yields an increase in GDP of around $139 million, even before multiplier effects are considered. Over the long-term, gains in productivity and multiplier effects would compound to produce even larger benefits. Design and technical skills were bottlenecks. MBIE projections are that a total work force in excess of 539,000 will be needed by 2021.

While the industry is considering ways and means of fostering greater use of technology to improve productivity, it believes something must be done on the skills training side with a degree of urgency if the industry is to keep pace with needs.

Training

The Building and Construction Industry Training Organisation (BCITO) is grappling with the scale of the task. It believes careful strategies are required that will enable employers, many of them small business entities, to accept trainees for "on the job" education, and ensure this effort is facilitated by efficient, responsive administrative systems.

Initiatives

The "Hop-on; Hop-off" or "stackable credits" initiative supported by CSG and taken-up by the BCITO represents one step to creating a useful pathway for new recruits. It will be trialled via BCITO inter-action with the Tertiary Education Commission and industry figures, building on the training steps taken in conjunction with Auckland contractors on projects at Auckland Airport and in the Wynyard Quarter. Recognition by the TEC of individual credits (badges)

earned by recruits into this scheme is a significant step forward, offering them the opportunity to achieve an overall skills or competency qualification. BCITO's negotiation with the TEC to settle for a trial as a potential precursor to full implementation has been instrumental in progressing this initiative.

Offshore industry analysis has focussed on the extent to which higher level training – continuous education - to add skills beyond basic competencies may be an essential element of increasing productivity. Numerous consultancy studies refer to the value of this in such aspects as communication skills, project and site management, lean construction techniques and Building Industry Modelling (BIM). Construction Skills Queensland[4] favours a certificate qualification for the commercial sector which covers a range of trades and management skills for completion after a trade qualification has been attained.

A second initiative being contemplated embraces a suggestion that incentives should be provided to employers to accept trainees for on-the-job or higher level training in association with their skills studies at polytechnics or other training institutions. In effect, this seeks to directly encourage employers into acceptance of joining full apprentice schemes embracing the combination of tertiary and on-site training leading to a qualification. A view within the BCITO is that employer willingness to take on such schemes is dampened by state financial support being currently directed at trainees. The cost of on-site training is carried by them. In a nation of small-to-medium enterprise, this cost is considered excessive by many.

A subsidy scheme of approximately $2000 available in previous years as an annual grant to employers for taking on apprentices or trainees showed proven results, with the numbers in training jumping dramatically. This was the "Reboot Scheme". In the three years between 1 January, 2013, and 31 December, 2015, which encompassed Reboot, BICTOs number of active trainees increased by 92 percent from 4810 to 9250 (including some who would have signed up even if the scheme had not been in existence. Notably, it increased the participation of Maori and Pacifika populations. At the start of 2013 they numbered 16 percent of active trainees. But among the 7148 trainees who signed up under Reboot some 21 percent were Maori or Pacifika.

The average age of Reboot trainees was slightly older than those active at the start of 2013: 25.1 compared with 24.9. It is apparent, however, that consideration would have to be given in the event of such a scheme being re-implemented to encouraging completion rates.

This is because 82 percent of trainees active on 1 January, 2013, completed a qualification with BCITO compared with only 56 of Reboot trainees to have done so. The overall picture of the scheme is that it encouraged participation in terms of numbers and diversity but, to an extent, at the expense of completion rates.

Within industry, support exists for the introduction of a training levy on employers from which such a subsidy might be paid. Neither the scale or sum required has been estimated but detailed work might be undertaken to assess the feasibility of such a scheme. A way ahead may be gleaned by the trial methodology worked out for the stackable credits scheme. Such a trial of the impact of employer subsidy availability might be undertaken funded by surplus funds available to MBIE from the heightened amounts accumulating to them through the building levy as a result of the recent increase of residential building activity.

[4] Construction Skills Queensland (CSQ)

However, the Construction Skills Queensland model offers an alternative. It is an independent industry-funded body supporting employers, workers, apprentices and career seekers in the industry. It is an income tax exempt charitable trust. BCITF (Qld) Ltd, an unlisted limited liability public company, is the corporate business. The Minister of the Queensland Department of Education and Training is the sole member of the company and appoints the Directors who are all industry representatives. CSQ is a trading name of the company. The Fund receives its income by way of a statutory training levy established by legislation that provides for a levy to be charged on any Queensland construction project (except those performed by Federal, State or Local Government employees) with a cost of $150,000 or more at a rate of 0.1 percent of the cost of a project.

In accordance with the Trust Deed, an Annual Training Plan (ATP) must be prepared and lodged with the Minister by 30 April each year. The ATP outlines how the CSQ will invest the levy into services, programmes and initiatives that directly support the growth and development of the skills base of the Queensland building and construction industry.

BCITO and training limitations

The BCITO is hamstrung in its efforts to fully realise its potential for increasing skills recruitment and the quality of skilled trainees coming through the system. Its activities are somewhat limited by the legislation under which it operates. This prohibits the organisation from carrying out training itself. Its role is confined to securing funding streams from government agencies for training purposes and passing this through to training providers who set up tertiary courses.

The Chief Executive and Board believe that the BCITO should be given legislative authority to itself implement and operate training programmes, with recognition by the TEC of qualifications achieved by trainees. Acceptance by the Ministry of Education of the "scholastic" part of courses implemented is essential for this to happen.

A third advance in the training system is the need for standardised courses across the tertiary education sector. Opposition to standardisation springs from the academic wing of the tertiary sector which insists that each polytechnic or training organisation must be free to set its own instructional methodologies for getting trainees to the required classroom knowledge level.

Those favouring standardised courses argue that the current flexible system is too loose to ensure that all trainees enter the workforce with the knowledge and competency that they require. There is no scope for measuring the quality of courses or skills gained by trainees against 'like for like' tuition.

The BCITO's view is that were it to have an ability to implement its own courses and curriculum for use across the tertiary sector, it could back this up with a system of checks both on the best practice implementation of standardised courses and through its industry links with regular on-site scrutiny of trainee progress.

Linkages

Within the various occupational licensing boards there seems a significant degree of dissatisfaction with the extent of involvement of MBIE in administration and their ability in the face of administrative reluctance to meet requests for changes to strengthen/broaden

oversight and systems. This shows through frustration expressed by plumbing trade administrators at an inability to, in their view, adequately check on-site progress of trainees.

The LBP Board would like to broaden and strengthen its range of responsibilities. BCA consent and compliance officials are vocal about what they see as a lack of required details submitted by designers in regard to materials and products specified for use in residential builds. In the plumbing, gas fitting and drain laying sector efforts are being made in association with the regulator to achieve advancement for those with partial licensing to move to the next level – for example, those with a journeyman licence moving to tradesman level and tradesmen to a certification level. This is being done through the use of "experienced criteria" and for examination. The objective is to bring more people into the industry who can be supervised by experienced tradesmen.

Essential to dealing with these matters is recognition within MBIE, as the Ministry charged with oversight of the sector, that there are cross-linkages that need to be considered. It is industry's view that one-off moves in one area cannot ultimately be successful if negative factors remain in other areas of regulation. Improvements in skills training systems in order to be fully successful should be reflected in corresponding improvements to the occupational licensing framework.