



Research

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Innovation levels on the rise

An insight into the construction industry's innovation performance

The latest Australian innovation statistics released by the Australian Bureau of Statistics (ABS) give contractors a useful insight into the strengths and weaknesses of the industry in terms of innovation performance.

The statistics cover all Australian businesses which employ more than five people. "Innovation" is defined as the use of new or significantly improved goods, services, or processes.

Growth in contractor innovation keeps pace with other industries

Chart 1 below shows that in 2002-2003, 27.2% of contractors were undertaking innovation, while in 2004-2005 this figure rose to 30.8%. This increase of 3.6% over a two year period is roughly equal to the average growth over the same period for businesses across all Australian industries, which was 3%.

CHART 1: PERCENTAGE OF BUSINESSES INNOVATING, BY INNOVATION TYPE, BY INDUSTRY, 2002-2003 AND 2004-2005

	2002 - 2003	2004 - 2005	Increase in % points
Goods and services innovation			
All industries	13.4%	19.4%	6.0
Construction industry	7.8%	16.5%	8.7
Operation process innovation			
All industries	18.9%	21.6%	2.7
Construction industry	17.3%	22.0%	4.7
Managerial process innovation			
All industries	18.4%	24.9%	6.5
Construction industry	19.3%	26.2%	6.9
Any innovation			
All industries	29.6%	33.5%	3.9
Construction industry	27.2%	30.8%	3.6

Source: Dr Karen Manley, CRC for Construction Innovation, based on ABS (2006) Cat. 8158.0

Data on the types of innovation undertaken (ABS 8158.0, 2006) shows that contractors put more effort into innovation in managerial and operational processes, with less effort going into developing new goods and services. This is a logical emphasis for contractors given that efficiency in the delivery of constructed assets is their key concern.

Data on innovation by consultants and suppliers serving the construction industry would no doubt show the opposite emphasis, with their focus being new goods and services. Despite contractors' greater emphasis on process innovation, their involvement in goods and services innovation is growing rapidly.

Looking at growth in different types of innovation

Chart 1 shows that between 2002-2003 and 2004-2005 the incidence of innovation in goods and services in the construction industry* more than doubled, increasing 8.7% from 7.8% of contractors innovating to 16.5% of contractors innovating.

The average increase for all Australian industries was lower at 6%. During the same period, contractor innovation in operational processes increased 4.7% and only 2.7% across all industries. The construction industry also showed marginally higher growth for innovation in managerial processes at 6.9% compared to the all-industries average of 6.5%.

Despite superior growth in individual innovation categories, overall growth was slightly lower, indicating that at least some of the contractors, who undertook innovation, did so in more than one category.

The challenge ahead

Despite the ABS statistics showing some positive construction innovation outcomes, the inter-industry ranking of contractors remains poor, as shown in Chart 2.

Other ABS data shows the industry is ranked third last across all Australian industries in terms of the proportion of expenditure on innovation, and second last in terms of the proportion of income generated from innovation (ABS 8158.0, 2006). Both findings reflect the industry's relatively low level of innovation activity in goods and services.

Financial data may not reflect as clearly, the progress made in process innovation, which dominates the construction industry and is required to improve project performance.

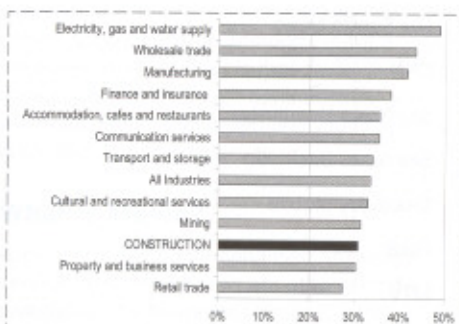
It is difficult to attribute income to process innovation, and happily for contractors, could cost less to fund than goods and services innovation. It would appear that the expenditure and income data is less concerning than the overall incidence data in Chart 2.

The relative performance of the construction industry in terms of different types of innovation-related expenditure can also be reviewed. Examination of ABS data reveals a similarly low ranking in terms of intellectual property, training and marketing expenditure. However, construction's performance for machinery and equipment expenditure is better, with a middle ranking across all industries (ABS 8158.0, 2006).

The CRC for Construction Innovation (www.construction-innovation.info) is a national collaboration of 21 industry, government and research partners focused on creating technologies, tools and processes for the property, design, construction and facility management sectors. The BRITE Project other Construction Innovation projects are actively engaged in assisting medium-sized contractors and other construction industry participants to achieve their innovation potential. Visit www.brite.crccl.info for assistance in improving your innovation performance.

*The construction industry is defined by the ABS as main and trade contractors in the civil and building sectors. Consultants and construction suppliers are allocated to other industries.

CHART 2: AUSTRALIAN INDUSTRIES BY PERCENTAGE OF BUSINESSES INNOVATING, 2004-2005



Source: Dr Karen Manley, CRC for Construction Innovation, based on ABS (2006) Cat. 8158.0