
By:

Professor John Tookey

Centre for the Urban Built Environment (CUBE-NZ)

Built Environment Engineering, AUT University
1. **The ‘What’**

- AUT developing presence in construction academe in NZ
- Based on the Master of Construction Management (MCM)
- Steady growth since 2007
  - 38+ MCM
  - 36+ Master of Engineering Project Management (MEPM)
  - 14+ PhD efts (current)
- Circa $2.5m funds attracted over 7 years.

1. The ‘What’

- CUBE-NZ established as a research entity in 2012. Undertaking funded research with industry
- 7 Appointed academics, plus adjuncts
- 10 additional staff expected over next 4 years
- Dept of Built Environment Engineering (BEE) established November 2014
  - New BE (Hons) Construction Engineering / Architectural Engineering approved for delivery from 2015.

2. The ‘Who’ at AUT

Prof John Tookey
Head of Dept /
Director CUBE-NZ

S/L Dr James Rotimi
Programme leader
MCM

S/L Dr Dave Moore

S/L Dr Nicola Naismith

Dr Jeff Seadon
Snr Research Fellow,
CUBE-NZ

Dr Fei Ying
Snr Research Fellow,
CUBE-NZ

Dr Ali

Key capabilities covered include:-

- Productivity and economic evaluation
- Construction economics
- Supply chain management
- Health and Safety
- Disaster response
- Procurement
- Logistics
- Sustainability
- Waste minimisation / waste reduction
- Facilities Management
- Asset Management
- Pedagogy
- BIM / design
- Green design / green building
- Corporate Social Responsibility
  - etc
3. Why?

Aspiration for BEE / CUBE-NZ:-
- Grow capability
- Add value to Industry
- Add value for stakeholders
- Use research to inform programme development and delivery

Wide range of current research both funded and unfunded including:

- Innovating towards Zero-Waste Value Chains in the Building Industry
- Building Materials Supply Chains: An Evaluative Study of the New Zealand Residential Construction
- Exploring the potentials for the application of simulation methods in construction projects delivery in New Zealand
- A transportation investment decision support tool for Auckland
- The effectiveness of the newly introduced risk-based building inspection scheme within Councils in New Zealand
- Impact of Procurement System on Transaction Cost Economics: Future Organisational Structure in the construction industry
- Corporate social responsibility agenda for international oil companies (IOC's) - New Perspectives from Stakeholder Engagement in the Niger Delta Region (NDR) of Nigeria
- A rational basis for setting up a monetary retention regime for construction contracts
- Developing World Class Service Quality for the Indonesian Construction Industry
- The potential for Lean and Six Sigma implementation in SMEs operating within the manufacturing industry in New Zealand
- Mapping the economic value of a zero-waste policy for construction materials in New Zealand

In addition ongoing research with partners includes:-

- Continued mapping of Auckland construction logistical flows
- Housing productivity / affordability
- Waste minimisation – designing out waste
- Facilities management / asset management themes

Key themes currently addressed through research will be reinforced.

New staff appointments will grow capacity and research emphasis
- Structures
- Materials
- Building services
- Geotech
- BIM / Architectural design
- Building methods

New investment in infrastructure will grow capacity and output
- New city campus engineering facilities
- Options for AUT South growth and development
- Increased internationalisation options
AUT/CUBE-NZ are in a state of flux

Wide range of research capabilities proven and expanding

New programmes create new opportunities in both ‘hard’ and ‘soft’ subject matter

New investment in infrastructure will grow capacity – expected to be circa $80+m over the next 3 years

Interesting times.