WESTERN SYDNEY
UNIVERSITY
W
Centre for
Smart Modern Construction

CENTRE FOR
SMART MODERN
CONSTRUCTION
ROUNDTABLE

THE
JOINING UP
CONSTRUCTION
CONVERSATION

DEVELOPING AN OFFSITE
AND ONSITE CONSTRUCTION
SKILL AND CAPABILITY
MATURITY SCALE FOR SMC
PROJECTS

WSU TEAM

PhD Candidate – *Mrs Buddhini Ginigaddara*

Supervisory Panel

 - *Prof Srinath Perera*

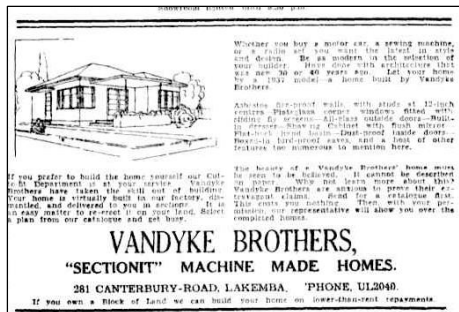 - *Dr Yingbin Feng*

 - *Dr Payam Zekavat*

WHY CONSTRUCTION JOBS ARE IMPORTANT?

- Each construction job results in two jobs in one economy

- 7.5% of European employment

- 28.1% of industrial employment across EU

- 3.33 million construction businesses in Europe with 93% hiring less than 10 employees.

REBIRTH OF OFFSITE PRODUCTION

Portable Colonial Cottages (1840)

Vandyke Brothers "Sectionit" Machine Made Homes (1937)

Poor Quality

Cheapness

Prefab Continued at Component level

Entrance of Game Changers

TEKTUM SPACE2.0

- **minimised energy and water demand**
- **high performance insulation**
- **double glazing**
- **cross-ventilation**
- **large roof eaves**
- **dual water piping**

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HOW DO SMC JOBS LOOK LIKE?

Vs

IT IS NOT JUST MODERN CONSTRUCTION

- GIG Economy: The use of temporary labour has become a permanent workforce strategy for all large businesses

WHERE TO BEGIN?

- Post World-War II Mechanisation

WHERE TO BEGIN?

Transformation of Existing Skills

WHERE TO BEGIN?

- Paralympics

WHERE TO BEGIN?

Creation of Non-Existing Skills

WHERE TO BEGIN?

- Globalisation, Diversity and Equivalence of Skills

WHERE TO BEGIN?

Cultivation of Existing Skills in Non-Classic Artisans

THE SKILL ANTICIPATION EXERCISE

- Step 1: Existing data and reports

- Step 2: Field research (Survey, Scenario development, Case study, econometric models)

- Step 3: Focused group meeting

- Step 4: Overall verification though interview with employers

PRODUCTS AND OUTCOMES

- Quantitative forecasting models including soft skills, numeracy and ICT, problem solving, safety awareness, and green skills

- Training needs

- Policy changes

- Proactive plans

UNLIMITED.

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