Timber Prefab Buildings:
past, present, future – single family to multi-storey

BNZ Forest Industries Conference  Pamela Bell, PrefabNZ CEO, 7 September 2011

Your Questions:

1. What is prefab?
2. What’s PrefabNZ all about?
3. What’s going on in prefab around the world?
4. What’s coming up in NZ in the future?
5. How can we all be involved?
What is Prefab?

- **prefab / prefabrication**
  = construction off site (offsite or OSM)

- **prefab complements** traditional methods

What does Prefab look like?

Component  -  Panel (2D)  -  Module (3D)  -  Hybrid  -  Complete Building

www.prefabnz.com
Prefab through the ages:

Source: Archives

Source: De Geest
What is great about Prefab?

- potential merits:
  - increased quality (Q)
  - shorter time-frames (T)
  - cost-savings (C)
  - efficient resource use (S)
What is tricky about Prefab?

- potential challenges:
  - individual site context
  - transport box restrictions
  - misperceptions
  - limited market size
  - start-up costs

Prefab is “a critical agent in invention in architecture, formal and material research, and sustainability.”

MOMA, New York, ‘Home Delivery’ exhibition text 2008 (Bergdoll and Christensen).
Current Drivers to Use of Prefabrication/Modularization (By Player)

- **Improve Productivity**
  - Contractor: 92%
  - Owner: 70%
  - Architect: 68%
- **Competitive Advantage**
  - Contractor: 88%
  - Owner: 60%
  - Architect: 52%
- **Generates Greater ROI**
  - Contractor: 70%
  - Owner: 43%
  - Architect: 40%
- **Owner/Client Demand**
  - Contractor: 31%
  - Owner: 51%
  - Architect: 35%


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Level of Decrease in Project Schedule Due to Prefabrication/Modularization

- **1 Week**: 7%
- **2 Weeks**: 14%
- **3 Weeks**: 10%
- **4 Weeks or More**: 35%

Level of Decrease in Project Budget Due to Prefabrication/Modularization


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Value Added Wood Products

Source: PMA 2010
What is PrefabNZ?

- a **catalyst** for prefab collaboration,
- a front-door **portal** for prefab information,
- an **incubator** for prefab innovation.

What is driving PrefabNZ?

PrefabNZ aims to increase the uptake of prefab in NZ by 40% by 2020

(17% by cost, residential and non-residential building, measured by BRANZ 2010)
What is PrefabNZ doing?

• National Prefab Directory
• Prefab Cost-Benefit Toolkit
• Monthly PrefabNZ Newsletter
• Informative Networking Events
• Key Stakeholder Relationships
• Marketing Opportunities
• PrefabNZ.com Website
ABOUT US / PREFABNZ

You have told us there is a clear need for a prefabrication industry hub to connect, catalyse, inform and promote prefabricated building solutions. Here it is.

What is prefab?

Prefab is a way to create innovative high-quality buildings on time and within budget. Your home probably has profile roof trusses and steel frame. Your shop might be an expandable building. Your workplace may use precast concrete elements.

Prefab is short for prefabrication. It refers to any part of a building that is made away from its final building site, which is why in can also be referred to as offsite construction.

Prefab is a complementary system to traditional construction. Prefab comes in all shapes and sizes, from small components such as pre-routed wall panels, to panels, larger modular (5-D volumes) or even complete buildings. Hybrid prefab is a
NEWS / PREFABNZ, NZ & ABROAD

A few interesting news items are listed below, along with links to our previous newsletters. You may also be interested in About PrefabNZ, Events and our Members section for more detailed information.

Upcoming BRANZ PrefabNZ Green Event in Waikato

You are hereby invited to the BRANZ PrefabNZ Green Event, hosted by SaiTek at the Centre for Sustainable Practice, Otago Polytechnic, Friday, September 16th in Waikato. Feel free to stay on and enjoy spring skiing and hiking in the Southern Lakes. Read More

Canterbury Innovation Park Update

PrefabNZ is working on bringing an Innovation Park to the Canterbury region before Christmas. The Innovation Park will be a showcase of high-quality, environmentally sustainable houses made using prefabrication techniques. Read More

New PrefabNZ Board Members

PrefabNZ welcomes incoming board members Harriet Rillingham and Paul O'Brien. Read More

EVENTS / UPCOMING EVENTS

Prefab events happening locally and abroad

BRANZ PrefabNZ Green Event

The 2017 BRANZ PrefabNZ Green Event will be held on Friday, September 16th in Waikato and focused on prefabs and the environment. Full Details

Canterbury Innovation Park

PrefabNZ brings you the Canterbury Innovation Park – a showcase of well-designed sustainable permanent homes by different teams of designers/manufacturers. Please arrive early and available for sale. Full Details
What are our Members doing?

- First Light Team
- Cottages NZ
- Stanley, Assembly Architects + Dunning Thornton
- Laings Homes
- PLB + Metrapanel
- ISJ, Jacks + XLam
- KHH + Architex
First Light Team + industry:
Cottages NZ +
John Key:
Stanley Group, Assembly Architects + Dunning Thornton:
Laings Homes
+ Wilson Hill:

PLB + Metrapanel:
ISJ, Jacks + XLam:

KHH + Architex:
What’s happening abroad?

- Worldwide resurgence of interest in architect-designed contemporary sustainable prefabs, eg. ‘green modern prefab’ movement California

- Worldwide housing shortage is causing manufacturers to use prefab methods to meet demand, eg. Pretek, UK
• The prefab world is getting smaller – large international prefab manufacturers are extending their reach, eg. Sekisui Japan moving into Australia

• Multi-storey structural timber buildings are an option to steel and concrete structures, eg. Murray Grove, UK
• Factory manufacture
  eg. Unite Modular Solutions, UK
  [Link](http://www.youtube.com/watch?v=SyZN9ZleLNw&feature=player_embedded)

• Bespoke architect-designed solutions
  eg. Marmol Radziner Prefab, USA
What’s coming up locally?

• The NZ government is working with design and construction industry leaders to focus on productivity, eg. Productivity Partnership

• Looking offshore for inspiration – educating public and industry through exhibition and book “Home Delivery”, MoMA, NY
  www.momahomedefiery.org
• Cottage to Cutting-edge: Prefabricated Homes in NZ
  national prefab events, exhibition and book – from March to September 2012

• Puke Ariki museum and gallery in New Plymouth, Taranaki – opening Friday 30th March 2012
• History -
  over 200 years of kiwi prefabs – featuring icons like the Treaty House, Railway Houses + Hydro-scheme houses

• Contemporary -
  full-scale houses, eg. iPad, Folding Whare, Port-a-bach, K-bach, Lockwood Homes and Habode
• Future - cutting-edge provocative works from the edge of research and industry, eg. First Light House, Click-raft, Jigsaw House, Studio 19…

• Looking offshore for inspiration – educating public and industry through a housing park eg. BRE Innovation Park
  www.bre.co.uk
• **PrefabNZ Canterbury Housing Innovation Park**
  – opening this summer

- CERA
- CCC
- NZGBC Homestar
- Lifemark
- Meridian
- Octa Associates
- Gardenmakers
- Anthony Harper Lawyers
- Infinity Developments
- Belfast Village

www.prefabnz.com

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**How can we all be involved?**

- Create new prefab perceptions
- Specify / use prefab products
- Tell someone about PrefabNZ
- Be informed, read newsletter
- Come along to an event
- Get in touch with your ideas…

www.prefabnz.com
Summary:

1. Prefab = anything built off site
2. PrefabNZ = front-door to prefab industry
3. International = link prefab + green + productivity
4. Local = Canterbury Housing Innovation Park and Cottage-to-cutting-edge Exhibition 2012
5. PrefabNZ + timber industry = opportunity to share, network + collaborate