The Material Matrix is a guide to the different variations of prefabrication that are available in our industry. Acting as a beginning point for designers and interested parties to understand the different options available to them.

### Categories

#### 2D
- Component
- Panels

#### 3D
- Volume
- Hybrid
- Complete Building

### To Start

Addressing the number one question of **Cost**

"Is it cheaper?"

For more information see the PrefabNZ Value Case for Prefab at prefabnz.com/resources

### 1. Time Savings

**Simplified Design + Build Timeline**

- When you should begin considering how to incorporate prefab.
- The build process is able to overlapped onsite and offset. Meaning twice as much work done in the same period of time.
- Design process is longer when prefabrication is included.
- Offsite and onsite elements come together on onsite.

### 2. Save time = save money

- 60% of construction time can be reduced through offsite construction
- 15% saving = $32,000

### 3. Cost Savings

Prefab delivery can mean a saving of about 15% in total construction cost: $32,000 for a 157m² house.

PrefabNZ Value Case 2014

Saving = $32,000

157m²
**An overview of some of the key considerations when designing for offsite construction.**

### Relevant Building Code Clauses

<table>
<thead>
<tr>
<th>Component</th>
<th>Panels</th>
<th>Volumes</th>
<th>Hybrid</th>
<th>Complete Building</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

### Considerations

<table>
<thead>
<tr>
<th>Structural connection to adjacent components</th>
<th>Durability of particular component</th>
<th>Bracing integrity of each panel</th>
<th>Lining selection</th>
<th>External weatherproofing / internal waterproofing</th>
<th>Pre-installation of services pipework &amp; electrical cabling</th>
<th>Method of termination / reconnection</th>
<th>Transportation / lifting</th>
<th>Fire safety design / active and passive fire protection</th>
<th>Safety from falling</th>
<th>Finish level / specification at internal junctions</th>
<th>Tolerances in design and with other components</th>
<th>Timing of joinery installation</th>
<th>Protection of other properties</th>
<th>Modification during construction</th>
</tr>
</thead>
</table>
for more a full list of PrefabNZ members visit http://www.prefabnz.com/Directory

WHO

Industry snapshot
A brief selection of prefabricated elements developers available throughout New Zealand.

Areas of Measurement

<table>
<thead>
<tr>
<th>Component</th>
<th>Panel</th>
<th>Volume</th>
<th>Hybrid</th>
<th>Complete Building</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHH WoodProducts</td>
<td>Plywood (Panels)</td>
<td>Cross laminated / mass timber framed construction, custom panels and volumes</td>
<td>Working with Tall Wood</td>
<td>Laing Homes</td>
</tr>
<tr>
<td>Pryda</td>
<td>XlAm</td>
<td>Cross laminated timber</td>
<td>James Hardie</td>
<td>Haven Transportables</td>
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<tr>
<td>W+R Jack</td>
<td>Spanbild</td>
<td>Closed panel production at Concision factory - walls, floors and roof elements</td>
<td>Metra Panel</td>
<td>Keith Hay Homes</td>
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<tr>
<td>PlaceMakers</td>
<td>Altus</td>
<td>Fast easy window systems installation</td>
<td>NZ SIPs</td>
<td>Genius Homes</td>
</tr>
<tr>
<td>NZ Steel</td>
<td>Apex</td>
<td>Apex wiring solutions And Ke Keill NZ for plumbing</td>
<td>UNipod</td>
<td>Matrix Homes</td>
</tr>
</tbody>
</table>

KEYWORDS

word definition

See glossary for more prefabrication terms at prefabnz.com/resources

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The heart of innovative construction