CURRENT STATUS OF TIMBER CONSTRUCTION INDUSTRY IN MALAYSIA
NATIONAL TIMBER INDUSTRY POLICY (NATIP)

Officially launched in 2009

Export 2020 = RM53 Billion

6.4% annual growth

60 (Value added)  40 (Primary)

Bumiputera Participation  Industry Structure
Funding & Incentives  Raw Material
Human Capital  Innovation & Technology
Marketing & Promotion

MTIB

Malaysia Wood
Standing on Excellence
MALAYSIA: EXPORT OF TIMBER & TIMBER PRODUCTS, 2004 – 2013

Source: MTIB, DOSM
Overview

• Under the Construction Industry Master Plan (I Master Plan 2006-2015), Malaysia’s construction sector is envisioned in eight years time to be a highly efficient and productive industry. By 2015, it should be an industry that employs highly skilled workers adept at utilising modern techniques and technology which can deliver high quality products and services.

• IBS was well known in many developing countries as it provides high level quality construction, more cost competitive, rapidly increases construction period, reduces dependence on foreign labour, reduces wastage, environmental-friendly and maintains cleanliness at construction sites.
Overview

- Based on statistics provided by the Department of Statistics (DOS), the use of timber and timber products as construction materials for 2010 was valued at **RM 4.02 billion** which comprised mainly of sawn timber **RM 2.46 billion (61.3%)**, plywood (water proof) **RM 689 million (17.2%)** timber door and window frame **RM 464 million (11.6%)** and other timber materials **RM 333 million (8.3%)** and gypsum plaster board **RM 66 million (1.6%)**.

- In 2010, a total of **RM 629 Million** of IBS building materials were used by the construction sector in Malaysia.

- Out of which, a value of **RM 86 Million (13.6%)** was IBS timber frames (pre-fabricated timber, beams and columns).
OBJECTIVES

1. To sustain the existing momentum of 70% IBS content for public sector building projects through to 2015

2. To increase the existing IBS content to 50% for private sector building projects by 2015
Project 3: Timber IBS (Industrialised Building System)

Status of Construction Industry in Malaysia

Construction Contract
RM 7 8.55b

43%

GOVERNMENT
RM 33.77b

Housing
RM 1.84b

6%

Non Housing
RM 20.72b

61%

Infrastructure
RM 11.21b

33%

57%

PRIVATE
RM 44.78b

Housing
RM 13.69b

31%

Non Housing
RM 21.83b

49%

Infrastructure
RM 9.26b

20%

Apartment, Terrace Houses, Condominium, Bungalow, hostel, quarters etc.

Shopping complexes and Offices, factory, hotel, police station, etc.

Infrastructure such as tunnel, bridge, jetty, highway

Reference:
1. Info from CIDB, June 2009
2. Scenario is based on construction contract value in 2008.
Examples of Timber IBS

Roof Trusses

Column

Flooring
PORTAL FRAMES
GALERI GLULAM JOHOR BAHRU

This centre is actually a straight-forward building. However, due to the nature of the design, which calls for an iconic form and the usage of glue laminated timber, it creates interests in the building industry.

I believe lots of talk and discussion have been conducted on the benefits and advantages of glulam. However, in Malaysia it is still at infancy stage i.e. in the timber industry. We all highly anticipate that this project may become an opening and creates opportunities to our local timber industry that we can actually venture further into this time-tested technology.

Timber is actually a contemporary building product and it is timeless. Timber is the material of the future.
INSTALLATION OF GLULAM
GALERI GLULAM JOHOR BAHRU

[Two images of a crane lifting a glulam beam, with workers nearby]
ENGINEERED TIMBER PRODUCTS (ETP)

Glued Laminated Timber
(Eden Project, UK)

Laminated Veneer Lumber
Atsushi Imai Memorial Gymnasium, Akita Japan

Waitomo Caves Visitor’s Centre, Nelson, New Zealand, Constructed using Curved and Twisted LVL
APPLICATION OF TIMBER IN CONSTRUCTION INDUSTRY

2010

Total:RM 4.88 Billion

RM 4,015,784,000
(82.4%)

RM 85,514,000
(17.6%)

Bahan-Bahan IBS Kayu

Kayu & Keluaran Kayu

• Kayu gergaji
• Papan lapis (kalis air)
• Rangka pintu kayu dan bingkai tingkap
• Papan plaster gypsum
• Bahan kayu lain

Sistem kerangka kayu pra-siap
(Tiang dan rasuk kayu pra-siap dan kerangka bumbung)

Sumber: Banci Ekonomi 2011; Pembinaan Jabatan Perangkaan Malaysia
Timber IBS (Industrialised Building System)

Case for change

• Timber IBS is still at infant state in Malaysia.
• Currently there are 21 licensed fabricators of Timber IBS. Number of CIDB registered as supplier for timber IBS is far lesser than other IBS material
• The use of timber in construction is gradually being eroded by alternatives materials such as steel, concrete and PVC, hence timber IBS is not considered as a competitive sector
• Lack of appropriate education to specifiers and consumers in the use of our timber resources which caused a negative perception on local timbers.
Project 3: Timber IBS (Industrialised Building System)

Target

- To bring the construction costs down by some 15%

- To increase the application of timber IBS in domestic market/local projects from 13.6% to 20% (currently total IBS for construction industry is approximately 0.005%-based on RM 78.55 Billion construction cost value in 2008).
GALERI GLULAM JOHOR BAHRU (GGJB)
The Malaysian Pavilion - Milano EXPO 2015
Spin Off Effect From Galeri Glulam Project

The construction of the Galeri Glulam Johor Bahru and publicity of the building made by several mass media such as TV, Magazines and Newspapers had created a lot of interests among the stakeholders and specifiers in the utilisation of glulam in several projects in Malaysia and overseas.

Jabatan Kerja Raya (JKR) is convinced to use timber as structural members after JKR directly involved in the GGJB project and subsequent to that several projects under the supervision of JKR as well as private projects have been identified to use glulam with an approximate investment costs of RM 20 million.
## IBS ROADMAP FOR T IMBER (2013-2023)

### ACTION PLAN FOR TIMBER IBS DEVELOPMENT PROGRAMME

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>IMMEDIATE</th>
<th>MEDIUM TERM</th>
<th>LONG TERM</th>
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<tbody>
<tr>
<td>IBS PROMOTION COMMITTEE</td>
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<tr>
<td>Conduct Road shows, Seminars, Workshops, Exhibition</td>
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<td>Produce Guidebooks</td>
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<td>Conduct design competitions for the Architects, Public and Students</td>
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<td>Build a show house</td>
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<td>Produce Show house Documentation</td>
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<tr>
<td>IBS TECHNOLOGY/ R&amp;D&amp;C CCOMMITTEE</td>
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<td>Establishment of Testing Facility for Timber Infra Structure</td>
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<td>Establish Stress Grading Database</td>
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<td>Develop Modular for Non Structure Timber Component</td>
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<td>R&amp;D&amp;C in Timber IBS Systems (Roof/Wall/Floor)</td>
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<td>Develop products from indigenous resources (Rotan/Bamboo/Forest Plantation Timber)</td>
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<tr>
<td>Develop Integrated Architectural/ Timber Engineering Design Database System</td>
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<td>Technology Transfer</td>
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<td>Develop competitiveness index for IBS manufacturers</td>
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<tr>
<td>Establish standards related to structural and non-structural timber design (e.g., timber framing, fire performance)</td>
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<td>Establish Timber Design Guidelines</td>
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<td>Establish Timber Design Manuals</td>
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<td>Training Module &amp; NOSS</td>
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<tr>
<td>IBS TRAINING AND TECHNICAL SUPPORT COMMITTEE</td>
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<tr>
<td>Develop IBS Training Modules for manufacturers/professionals and builders/installers</td>
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<td>Carry out training for suppliers on responsibilities and accountabilities</td>
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<tr>
<td>Carry out training for professional, manufacturers, installers</td>
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<tr>
<td>Carry out training on Business Management</td>
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<tr>
<td>Carry out upgrading training programme for IBS manufacturers</td>
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<tr>
<td>Provide training on timber IBS</td>
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<tr>
<td>Develop Quality Assurance Systems</td>
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<tr>
<td>Develop programmes for Timber Engineering and Design (IPTA/IPTS-Degree Program)</td>
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<tr>
<td>Carry out “twinning programmes” with international timber IBS centres/Universities</td>
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<tr>
<td>Develop training modules on timber engineering and design in IPT (IPTA, IPTS, Community Colleges)</td>
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### GAP Analysis & Report

- Establish Timber IBS Village (Business Centre, Training Centre Testing, Lab, Build Show units)
Timber IBS (Industrialised Building System)

HIGHLIGHT

• To encourage manufacture of the IBS timber products
• To promote IBS timber compliant product to developers, contractors, architects and engineers
• To foster vendor development programme (VDP) for timber IBS
• To create innovative timber design for IBS
• To carry out research to obtain data on suitability of Malaysian Hardwood for Engineered Timber Products (ETP) such as glulam, LVL, CLT, etc.
• To further develop Malaysian Standards (MS) for Structural Timber
ROLES OF MTIB TO STRENGTHEN TIMBER IBS

1. MTIB has a total of 128 Quality Control Inspectors (PKK) who are trained and qualified to carry out the grading and verification of the structure of wood and wood products including Timber IBS;

2. MTIB ACT 105 have provisions in performing quality control and enforcement services in ensuring compliance to product specification and quality;

3. MTIB is also a Standard Development Agency (SDA), appointed by Standards Malaysia (SM) to ensure the product meets the quality and specifications required by the market; and

4. MTIB is a Certification Body (CB), which can expand its role to issue certificates to a variety of products required by the market, including IBS Timber (roof truss, portal frame, beam, floor, etc.).
MTIB was a Standards Writing Organisation (SWO) appointed by SIRIM Berhad 25 May 1999.

MTIB - the first Agency appointed by Standards Malaysia as an independent Standards Developments Agency (SDA) for timber based products effective from 1 September 2013 under the new Act 2012,(A 1425) Section 10 2 (aa)
Signing of an Agreement between Standards Malaysia and MTIB on 22 August 2013
<table>
<thead>
<tr>
<th>Scopes</th>
<th>Timber</th>
<th>Timber Structures</th>
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<tr>
<td>• Standardisation in the field of panels such as fibreboards, particleboard and plywood based on lignocellulosic materials (derived from wood or other materials)</td>
<td>• Standardisation of round, sawn and processed timber materials and for use in all applications</td>
<td>• Standardisation concerning structural applications of timber, wood-based panels, other wood based products and related lignocellulosic fibrous materials</td>
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<tr>
<td>• Including terminology, classification, dimensions, test methods and quality requirements</td>
<td>• Including terminology, specifications and test methods</td>
<td>• Including requirements for design, structural properties, performance and design values of materials, products, components and assemblies, test methods and requirements to establish related structural, mechanical and physical properties and performance</td>
</tr>
</tbody>
</table>
CURRENT STATUS ON MS ON TIMBER, TIMBER PRODUCTS AND TIMBER STRUCTURE

Total : 113 MS
Developed by MTIB : 38 (1999-2012)
CONCLUSION

• Timber IBS provides plenty of opportunities for specifiers as well as contractors for use in construction as long been practiced by the developed countries

• Malaysia needs to take proactive measures to re-visit some of these regulations with the view to make necessary changes in line with evolving environment.

• Adequate R&D is required to capitalise on the positive attributes of timber. In this regard it is pertinent that all parties concerned such as the research institutions, enforcement agencies, and promotional bodies to work together to formulate strategies and action plans to achieve specific targets for use of Timber IBS in construction.

• MTIB will continue to work closely with PAM, JKR, CIDB, MWPA, MBAM, University as well as other relevant government and private organizations to encourage the utilization of quality timbers with correct specification and preservative used in domestic market especially for Timber IBS structural application as outlined in the Timber IBS Roadmaps.
THANK YOU