



Malaysia's International Green Benchmark

Greening Malaysia one building at  **PAM** PERTUBUHAN AKITEK MALAYSIA
MALAYSIAN INSTITUTE OF ARCHITECTS



PAM

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Why have MALAYSIAN Green Rating Tool? / Why develop Malaysia's own Green Building Rating Tool?

- Most available tools are for temperate climates. Apart from Green Mark this will be the **FIRST TROPICAL GREEN TOOL**
- Identify **PRIORITIES & LOCAL NEEDS**
- Take advantage of Local **RESOURCES**
- Recognize Local **CHALLENGES**
- Suit our local **CLIMATE & CULTURE**
- Reflect local **PRACTICES & STANDARDS**
- Include all Local **STAKEHOLDERS**
- Recognize **GLOBAL CHALLENGES**



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Compliance with Malaysian Laws and Industry Practices

GBI has incorporated the following Malaysia's own building bylaws, codes of practices, building standards and guidelines into the tools:

- Uniform Building By-Laws(UBBL), incl Amendment 2012 by law 38A,
- Local Authorities' Structure Plans,
- Malaysian Standards such as MS1525,
- MSMA,
- CIDB's IBS and QLASSIC,
- DoE Act,
- KPKT's Guidelines on SWM,
- RE Act



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Background of Green Building Index





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Aug 2008

- PAM Council formed Sustainable Committee with initial funding of RM100,000
- Briefed and obtain full support from BIPC
- Invited ACEM to join Committee to develop tool

Oct/Nov 2008

- Visited BCA Singapore to study Green Mark
- Visited GBC Australia to study Green Star



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Oct/Nov 2008

- Introduced GBI at Green Design Forum at KLCC CEC
- Launched www.greenbuildingindex.org
- PAM/ACEM registered GREENBUILDINGINDEX SDN BHD

Dec 2008

- Decided to draft both GBI Non-Residential & Residential buildings simultaneously

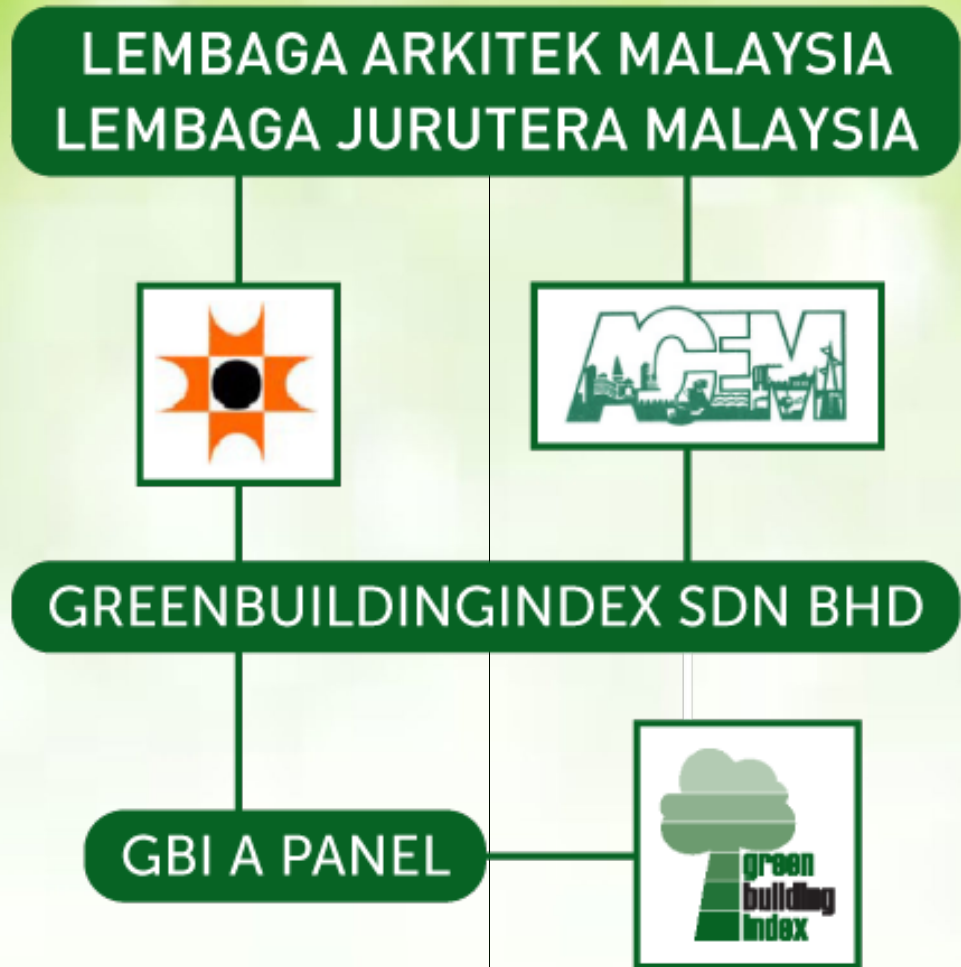


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Briefing & Other Activities

- Briefed CIDB (QLASSIC incorporated in GBI)
- Briefed USM and UPM – to incorporate GBI into their curriculum
- Commenced regular MS1525 seminars in Feb 2009
- Detail GBI seminar commencing 31/3/09
- Briefing to KTAK, MIDA, JKR, FIABCI etc
- Launch of GBI in April/May 2009. The Prime
- Minister of Malaysia has been invited to officiate the launch



PUBLIC TRUST

RELATIONSHIP	BUILDING INDUSTRY SUPPORT. PUBLIC & GOV SUPPORT
REPUTATION	SET UP & MANAGED BY PROFESSIONALS
RESULTS	TRANSPARENCY IN GBI TOOL DEVELOPMENT & ASSESSMENT METHOD



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More about Green Building Index

- **Non-Profit Organisation**
- **Recognised by the World Green Building Council (WGBC)**
- **Recognised by Malaysia Government**
- **Recognised by many local Government authorities**



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GBI Tool Development

- By Volunteers representing stakeholders
- To suit Malaysian conditions
- To benefit Malaysian environment
- To incorporate Malaysian laws and code of practice



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Recognition



**YAB DATO' SRI MOHD NAJIB
BIN TUN HAJI ABDUL RAZAK**
PRIME MINISTER OF MALAYSIA

I wish to congratulate Pertubuhan Akitek Malaysia (PAM) and the Association of Consulting Engineers Malaysia (ACEM) for the launch of the new Green Building Index (GBI) tool to help property owners to upgrade their existing buildings to become more "Green" and sustainable.

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In addition, GBI Malaysia is a good example of how the private sector, professionals and NGOs can work together to come up with an internationally accepted standard for Green Buildings in the tropics. We appreciate and encourage more of such innovation and creative input.

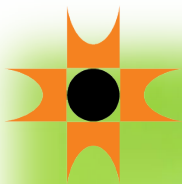
I support and wish you every success in its implementation.

"1 MALAYSIA" People First. Performance Now.

YAB DATO' SRI MOHD NAJIB

"1 MALAYSIA" People First. Performance Now.

YAB DATO' SRI MOHD NAJIB



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GBI's formation was supported by members of the Malaysia Building Industry Presidents' Council (BIPC) which comprises the Presidents representing the following organizations:-

- Architects (PAM),
- Engineers (ACEM),
- Developers (REDHA),
- Contractors (MBAM),

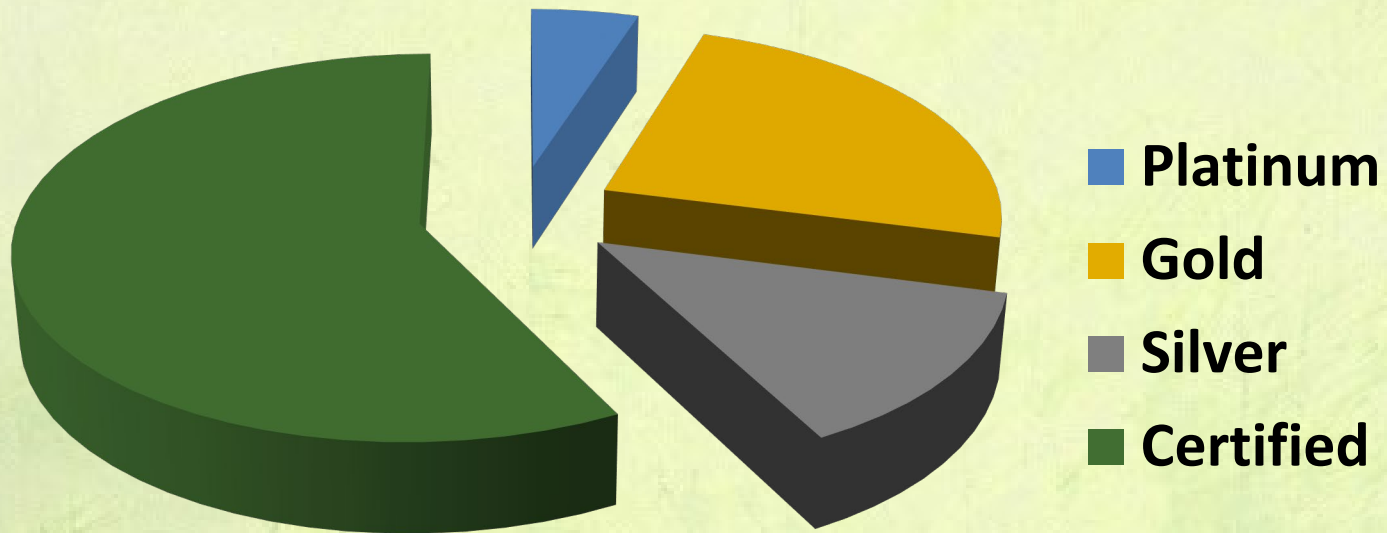
- Town Planners (MIP),
- Interior Designers (MIID)
- Surveyors (RISM)
- Engineers (IEM)



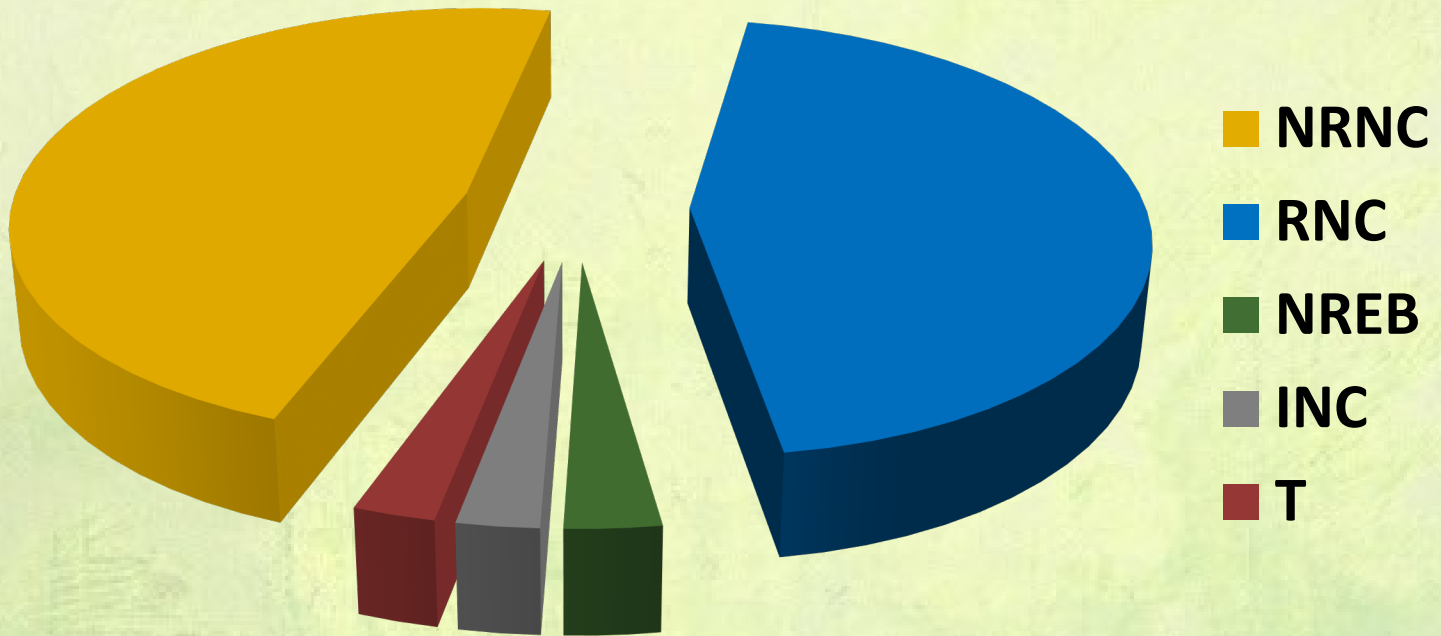
Accreditation Panel & Process

- GBI Accreditation Panel (GBIAP) is formed to accreditate certified buildings and GBI Facilitators.
- GBIAP is an independent body consisting of industry recognised professionals consisting from PAM, ACEM, RISM.
- Volunteers are appointed by PAM and ACEM, on a yearly basis, and are non-permanent
- Most members of the GBIAP are members of the tool development committees, hence are very knowledgeable about the tools and the accreditation process.

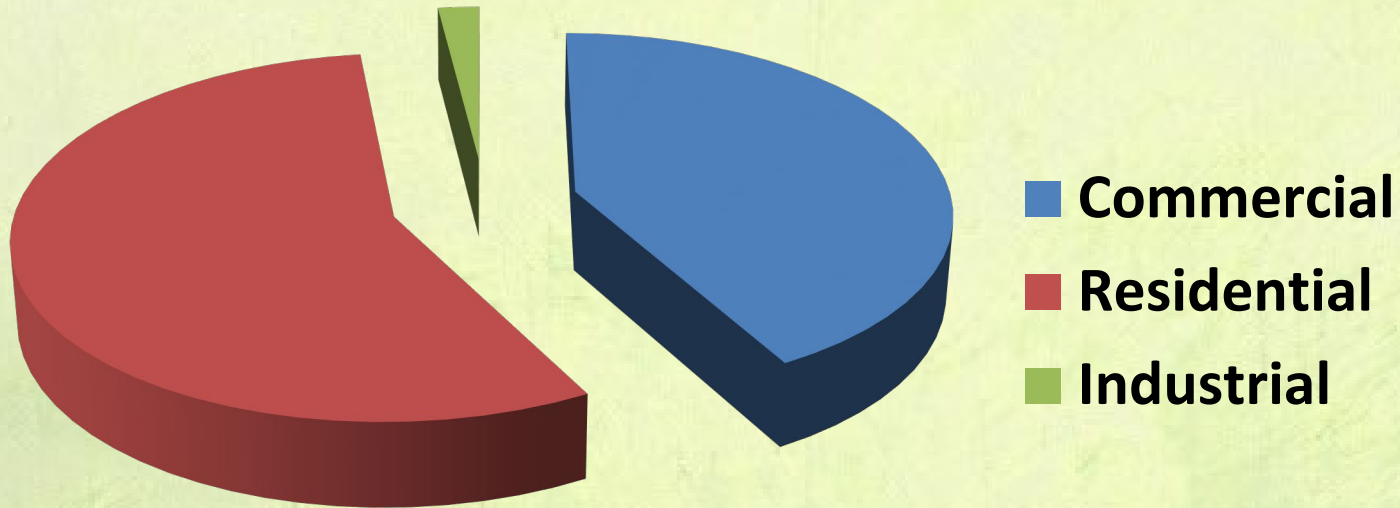
GBI RATINGS



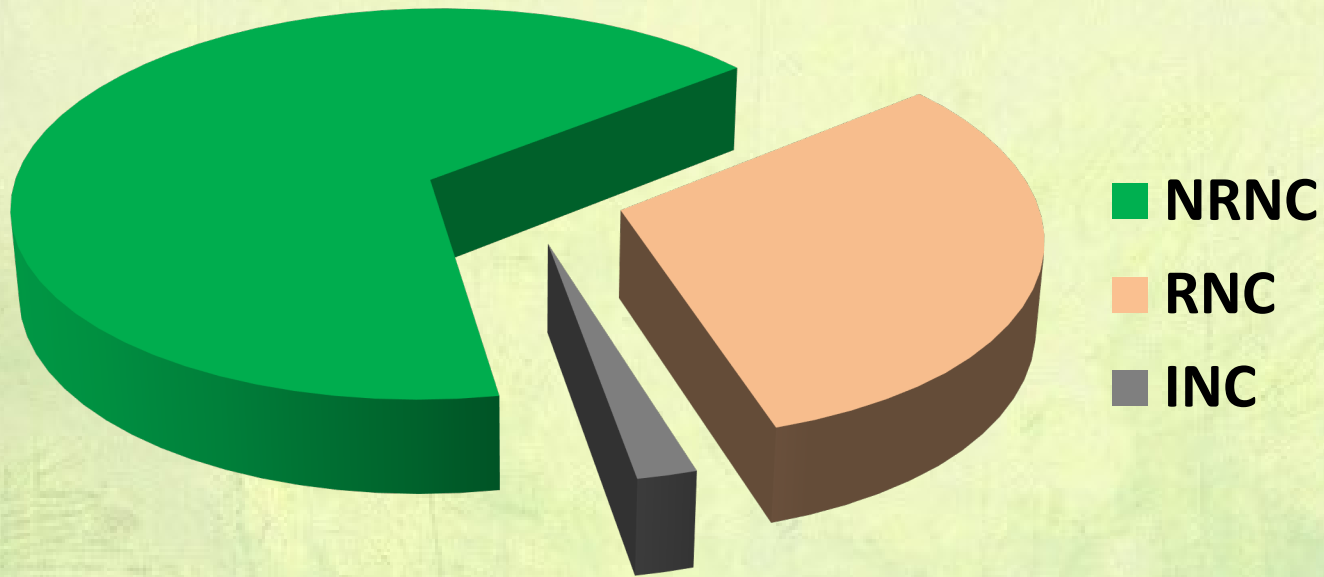
GBI TOOLS



GBI BUILDING TYPES



GBI CO2 reduction





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Number of Rating Tools

Existing Rating Tools:-

- Residential New Construction (RNC) version 3.0
- Non-Residential New Construction (NRNC)
- Non-Residential Existing Building (NREB)
- NRNC: Data Centre
- NREB: Data Centre
- NRNC: Retail (developed with PPK)
- NREB: Retail (developed with PPK)
- Industrial New Construction (INC)
- Industrial Existing Building (IEB)
- Township Tool
- Hotel & Resort Tool (developed with MAH/MAHO)
- Interior Tool (developed with MIID)
- Hospital Tool
- Residential Existing Building

One Rating Tool under development:-

- Heritage Tool



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COLLABORATION with INDUSTRY

INC, IEB TOOLS

in collaboration with FMM

NRNC RETAIL, NREB RETAIL TOOLS

in collaboration with PPK

TOWNSHIP TOOL

in collaboration with KeTTHA's LCCF

NRNC RESORT, NREB RESORT TOOLS

in collaboration with MAH

HOSPITAL TOOLS

in collaboration with Health Industry Partners

GBI INTERIORS TOOL

in collaboration with MIID



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GBI TRAINING

- **34 GBI Facilitators' Courses conducted**
Over 3,200 GBI Facilitators trained
- **852 qualified GBI Facilitators listed on website**
- **24 CxS listed on website**
- **10 GBI Facilitators' FAQ Sessions conducted**
- **Many Consultation Sessions held fortnightly**

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GBI PROJECTS LISTING

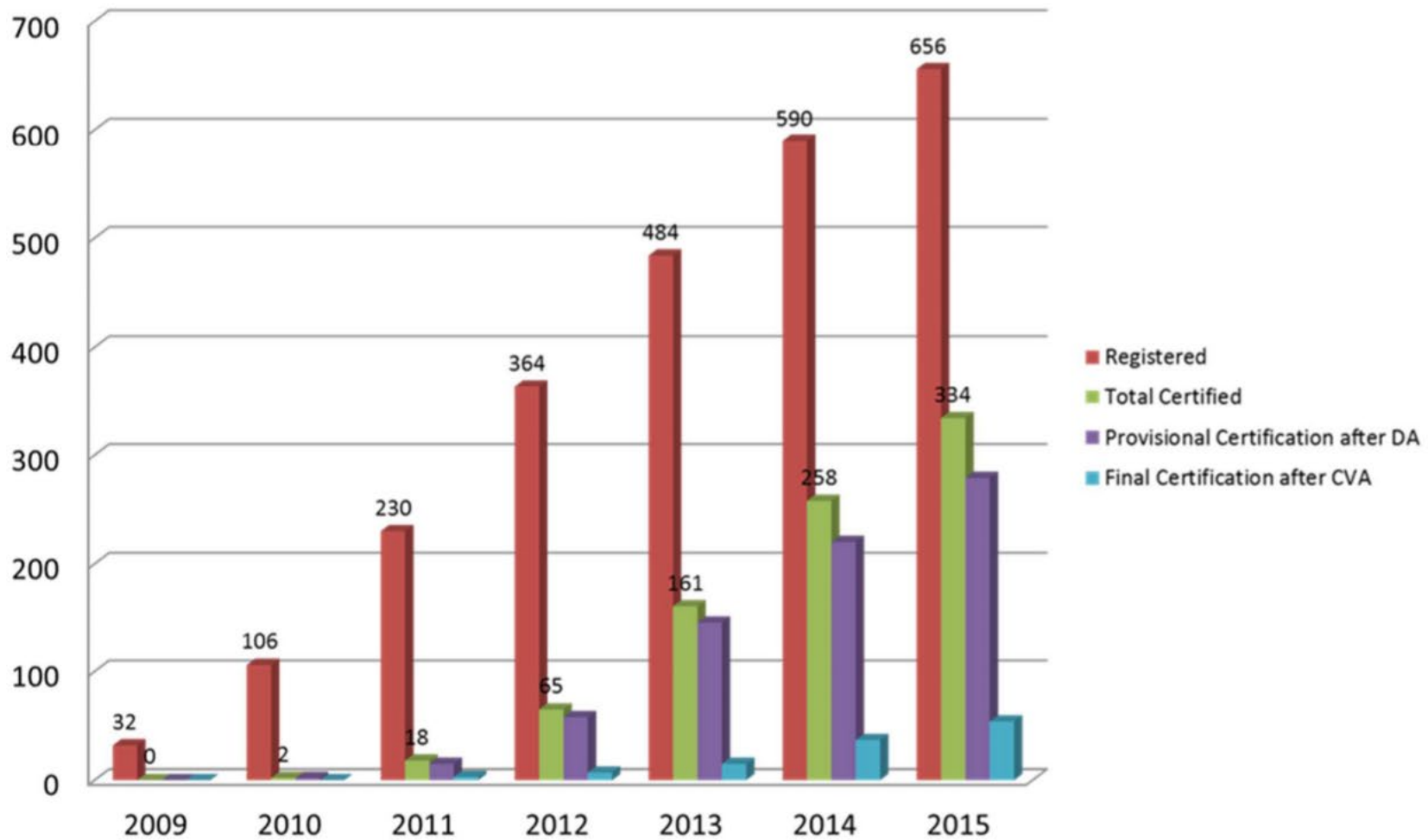


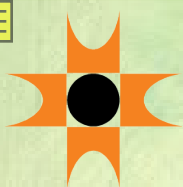
	NRNC	RNC	NREB	INC	IEB	T	Total
Applied	443	303	22	27	5	20	820
Registered	409	288	20	24	4	20	765
DA	154	137	7	5	1	10	314
CVA	35	30	6	2	2	0	75
RVA	5	0	0	2	0	0	7
Total Certified	396	194	13	9	3	10	265

As of 15 Apr 2017

Source : GBI

GBI CERTIFIED BUILDINGS 2009 - 2015





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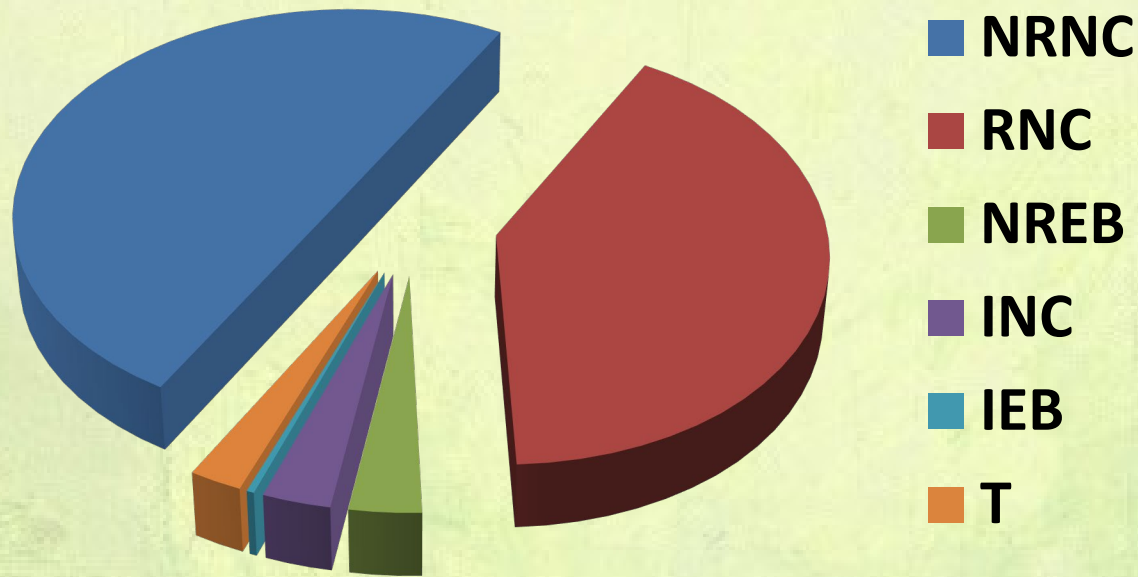
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GBI REGISTERED PROJECTS

BY TOOL

NRNC	RNC	NREB	INC	IEB	T	TOTAL
409	288	20	24	4	20	765



As of 15 Apr 2017

Source : GBI



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GBI CERTIFIED PROJECTS

BY RATING

PLATINUM	GOLD	SILVER	CERTIFIED	TOTAL
16	89	43	248	396



As of 15 Apr 2017

Source : GBI



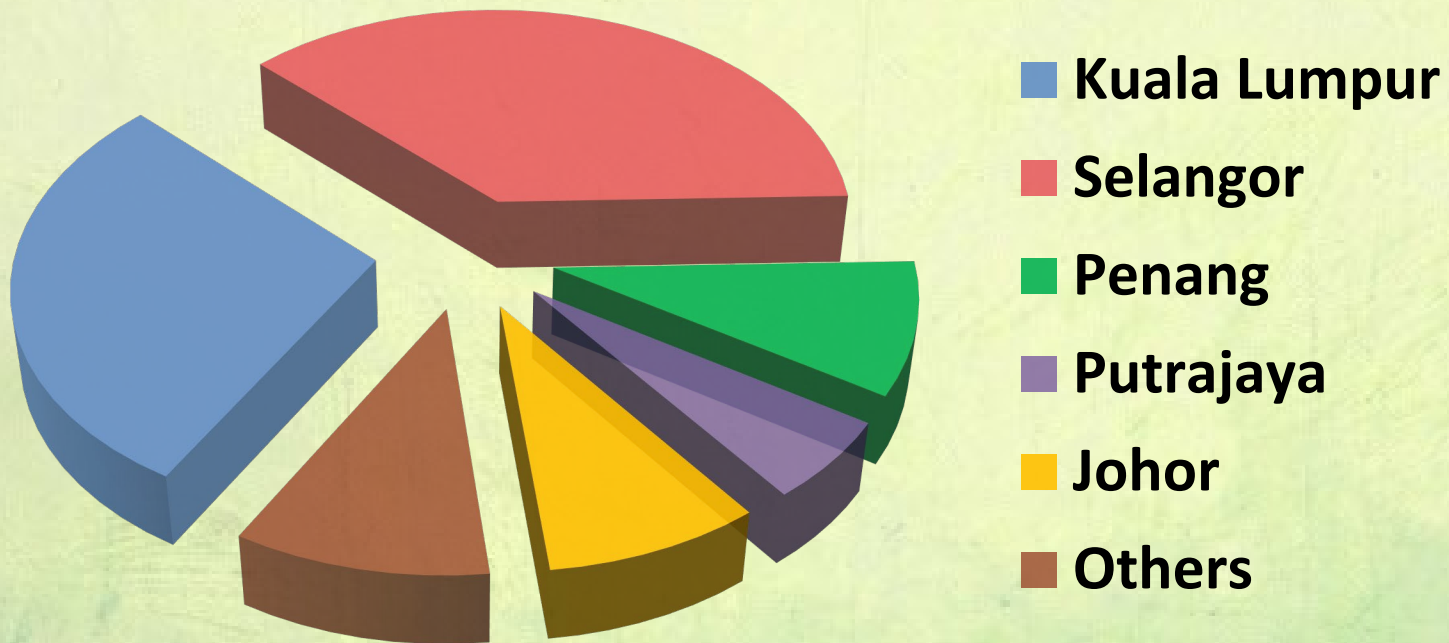
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GBI REGISTERED PROJECTS



BY STATE

KUALA LUMPUR	SELANGOR	PENANG	PUTRAJAYA	JOHOR	OTHERS	TOTAL
235	284	71	36	66	73	765



As of 15 Apr 2017

Source : GBI

MALAYSIA COUNTRY REPORT TO ACGSA

ACGSA 9th ROUNDTABLE BANGKOK 24TH FEB 2017

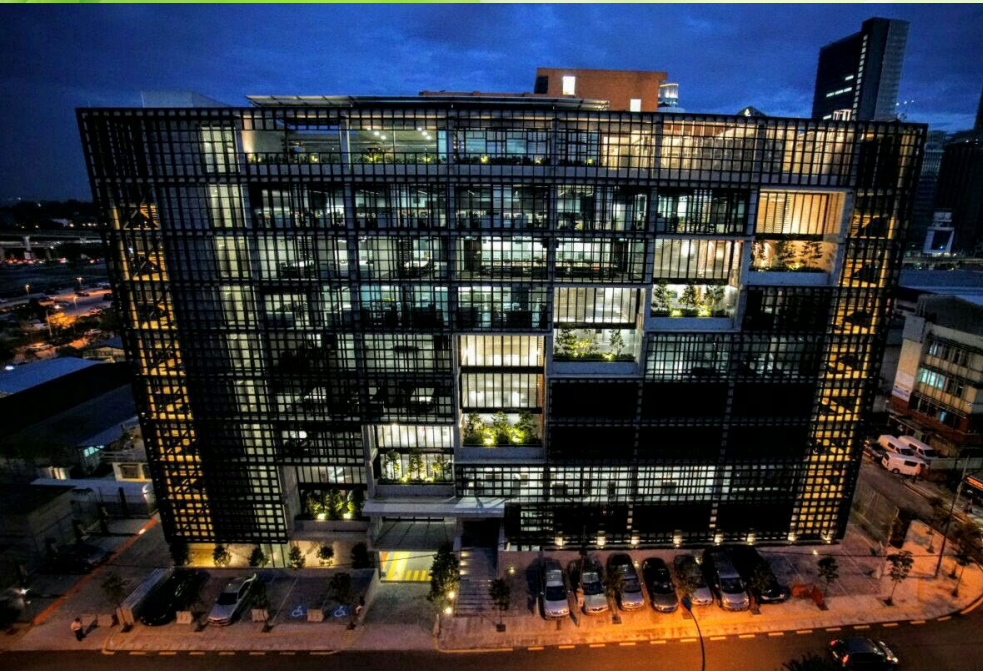
- o PAM Malaysian Institute of Architects moves into its new GBI Platinum rated Centre
- o GBI contributed to 778,346 tCO₂ e reduction in carbon to date
- o Energy Efficiency Standard MS1525 passed into Building By-law 1-1-2017
- o Government Tax Incentive for GBI Certified buildings extended to 2020



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PAM Building – GBI Platinum (Exterior & Interior)



PAM CENTRE 2016

A GBI PLATINUM RATED GREEN BUILDING KEY FEATURES

- BEI Building Energy Intensity 102 kWh/m²/yr
- Daylight allow lights to be switched off during office hours 90% of time
- Only office work area are air conditioned. Others have natural ventilation
- Roof BIPV yields 28,700 KW of electricity equal to 7.38% building energy use
- High efficiency water fittings gives savings of 38%
- Bubble slab construction allows for no columns inside the building

ENERGY EFFICIENCY STANDARDS PUT INTO BUILDING BY-LAWS

- EE Standard MS1525 in by-law 1-1-2017
- Heat gain through building fabric cannot exceed 50 w/m²
- Heat gains through roofs cannot exceed 25 w/m²
- Similar by-laws are already in operation in Singapore & Hong Kong
- **Government Tax Incentive for GBI Certified buildings extended from 2009/2014 to 2020 & tax exemption for Green Consultants for 5 years**

Promoting Businesses that Support Green Buildings 5th Edition in 2017







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Thank You!

www.pam.org.my
www.greenbuildingindex.org