

2015 Malaysia University-Industry Green Building Collaboration
(2015 MU-IGBC) Symposium

20-21 January 2015, Universiti Putra Malaysia

Theme:

'Facilitating University-Industry Partnerships'

***Challenges and Opportunities
In Green Building Collaborations***

by

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'Facilitating University-Industry Partnerships'

Intention

To provide the basis to **identify areas** needing **additional research**, and weave existing and needed research into a vision for strategic engagement of funding organisations, researchers, practitioners, manufacturers, building owners and others.

Aim and Aspiration

The aim is to catalyse **a new era** of expanded, effective and creatively **collaborative research for green buildings**. The aspiration for this symposium is that it provides the basis for discussion; one which will facilitate organised and constructive dialogue among green building stakeholders and contribute to its **impact** and evolution.

PRIME MOVERS OF GREEN BUILDINGS AND ASSESSMENT TOOLS IN MALAYSIA

- ❑ Malaysia Green Building Confederation (**MGBC**) - 2008
(member of World Green Building Council – WGBC)
- ❑ ***PAM** and ***ACEM** launched **Green Building Index (GBI)** in 2009
2009-2014 : 100 million sq ft floor area of GBI Rated Buildings
- ❑ **JKR** launched **pH JKR** in 2012
- ❑ **CIDB** launched **Green Pass** (Construction)
- ❑ **REHDA** launched **GreenRE** in 2013
- ❑ **LEED** (USA) and **Green Mark** (Singapore) have been used in Malaysia

* PAM = Institute of Architects Malaysia * ACEM = Association of Consulting Engineers Malaysia

GBI EXECUTIVE SUMMARY AS OF 15 DECEMBER 2014

GBI RATED PROJECTS BY CATEGORIES

Update on Green Building Index	TOTAL as of 15 DECEMBER 2014	NRNC Non Residential New Construction	RNC Residential New Construction	INC Industrial New Construction	NREB Non Residential Existing Building	IEB Industrial Existing Building	Townships
Applied	636	324	256	19	20	3	14
Registered	595	297	245	18	19	2	14
Total Certified	265 (100%)	124 (47%)	122 (45%)	5 (2%)	7 (3%)	1 (1%)	6 (2%)
Provisional Certification after DA	234	110	110	2	5	-	6
Final Certification after CVA	30	13	12	3	2	1	-
Renewal Certification after RVA	1	1	-	-	-	-	-

DA – Design Assessment, CVA – Completion & Verification Assessment

GREEN BUILDING INDEX (GBI) RATING SYSTEM

BUILDINGS WILL BE AWARDED THE GBI RATING BASED ON 6 KEY CRITERIA:

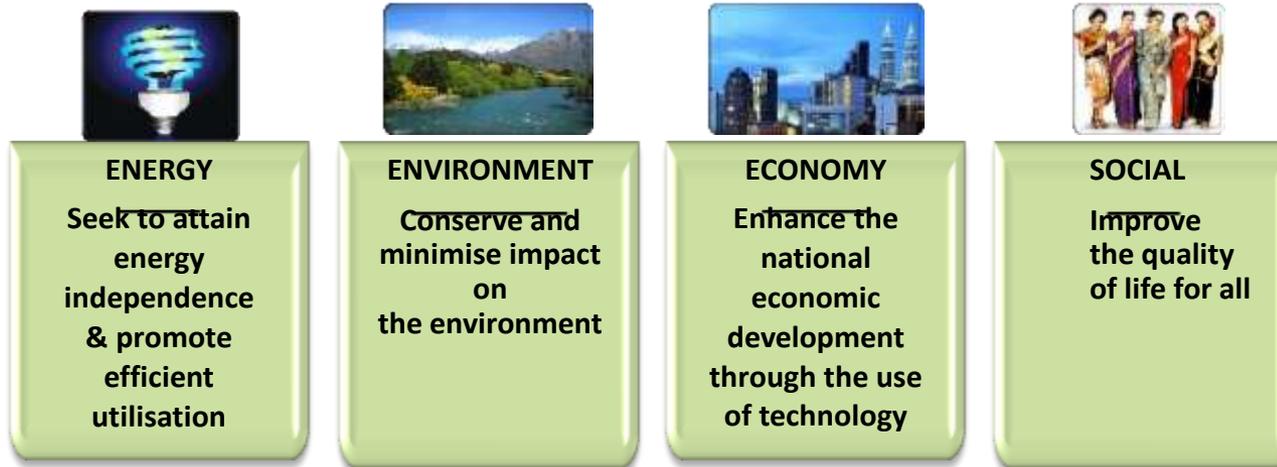
		<u>Residential</u>	<u>NR</u>
1	Energy Efficiency (EE)	23	35
2	Indoor Environmental Quality (EQ)	11	21
3	Sustainable Site Planning & Management (SM)	39	16
4	Material and Resources (MR)	9	11
5	Water Efficiency (WE)	12	10
6	Innovation (IN)	6	7
		<u>100</u>	<u>100</u>

POINTS	GBI RATING
86+ points	Platinum
76 to 85 points	Gold
66 to 75 points	Silver
50 to 65 points	Certified

National Green Technology Policy

Launched by the Malaysian Prime Minister on 24 July 2009

Four Pillars of Green Technology Policy



Policy Statement:

Green Technology shall be a driver to **accelerate the national economy and promote sustainable development.**



Scaling Up from Green Buildings

By greening our built environment at the neighborhood and city scale, we can deliver on large-scale economic priorities such as climate change mitigation (**GHG**), energy security, resource conservation and job creation, long-term resilience and quality of life.

THE BUSINESS CASE FOR GREEN BUILDING

Executive Summary

This report investigates the business costs and benefits of green building in **five vital categories** and finishes with an exploration into both the impacts that a greener built environment can have at a **macro scale** and how this can be achieved.

- Design and Construction Costs
- Asset Value
- Operating Costs
- Workplace Productivity and Health
- Risk Mitigation

• Workplace Productivity and Health

... improved worker productivity and occupant health and well-being, can result in bottom line benefits for businesses.

Despite evidence of its impact, improved **indoor environmental quality (IEQ)** has not been a priority in building design and construction, and resistance remains to incorporating it into financial decision-making.



THE BUSINESS CASE FOR GREEN BUILDING (2013)

www.worldgbc.org/business-case



WORLD GREEN BUILDING COUNCIL

THE BUSINESS CASE FOR GREEN BUILDING

What These Findings Mean

The report points to an increasingly compelling business case for green buildings – **not just about saving the planet.**

Design decisions made at the start of a project will impact the long-term value of the building and its return on investment, ... from design through building operation.

In order to effectively transform the global marketplace, there is a need for **more data** and for **more case studies** from around the world.

This presents an excellent **opportunity for businesses to partner with each other, and with academia and government, to better understand the financial implications of a more sustainable built environment.**

... due to a lack of financial metrics, many businesses have ignored the **potential to improve indoor environments** and are now missing a **major opportunity** to use buildings to leverage broader organizational success.

... green is now becoming the status quo.



Health, Wellbeing & Productivity in Offices

The next chapter for green building
Executive Summary



Exemplar, London, Wood Sage



HEALTH, WELLBEING & PRODUCTIVITY IN OFFICES

The next chapter for green building

This report puts forward the best and latest information on the **building design features** that are known to have positive impacts on the health, wellbeing and productivity of office building occupants and points to financial implications where possible.

It provides a **high-level framework** for building owners, occupiers and their advisors to start tracking the impacts of buildings on employee health, wellbeing and productivity in order **to use that information in financial decision-making**.

The report findings undeniably affirm that **buildings can maximise benefits for people, and leave the planet better off as well**. Low carbon, resource efficient, healthy and productive – fundamentally, this is about **higher quality buildings**.

Health, Wellbeing & Productivity in Offices

The next chapter in green building (2014)

www.worldgbc.org



WORLD GREEN BUILDING COUNCIL



WORLD GREEN BUILDING TRENDS

The results in this report are drawn from survey respondents from **62 countries**, with statistically significant results on **9 countries** (Australia, Brazil, Germany, Norway, UAE, UK, USA, SA, Singapore).

There are some universal lessons affirmed by this study:

- **Globalization** and **government interventions** can influence markets.
- **Business benefits** matter at driving green building activity levels.
- Higher-performing, **green buildings**, are **only one part of the solution toward a greener economy**.

However, the ways these factors materialize is not universal.

More research is needed to understand how **different countries** will address this **new way of looking at green building**, but it is clear that despite our differences globally, nations do have some collective interests in helping each other be successful in creating a built environment that transforms the places we live, work, play and learn into communities that foster improvements financially, environmentally and socially. To help facilitate this change, **partnerships and models** will help us move both individually and collectively toward those goals.



MALAYSIA GREEN BUILDINGS INDUSTRY OUTLOOK to 2018

- Rising Energy Costs and Depleting Natural Resources to Drive Sustainable Development (2014) by Ken Research

- **Urban population** will influence growth of green building (22.1 million in 2013 to 25.0 million in 2018).
- **Increasing awareness** for climate change and government initiatives is driving sustainable development, but **consistent effort needs to be made** to spread the knowledge of green building **across the nation**.
- Intangible benefits of **IEQ is being ignored**.
- In **2012, 5%** of firms incorporated green architecture in 60% of their development projects; expected to rise to **16% by 2016**.
- **Government incentives** for green building ended December 2014 (?)

Recommendations:

For a **holistic approach** to green building **all major stake-holders** need to be engaged by MGBC, esp for **neighbourhood** and **city-scale greening** and for up-scaling to large scale economic priorities such as **climate change mitigation**.

Ensure MGBC representation in **government green initiatives**.

Develop **data base** of local research work and resources related to green building.

Research and/or actual implementation of **Green Campus** should be a natural priority by Academia; a concerted effort for campus EE&RE implementation with IEQ focus can produce far-reaching **impact**.

For collaborations to work well, each party must recognize **priorities** and **limitations** of partners; clarify **intellectual property** issues and reduce/remove areas of **conflict**.

IEQ



GHG

Have enjoyable
green collaborations !

