



WORLD
GREEN
BUILDING
COUNCIL

Better Places for People

*How to use Better Places for People to
generate activities for your GBC*



**BETTER PLACES
FOR PEOPLE**

**PUT WELLBEING AT THE
HEART OF YOUR BUILDING**



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Objectives

To present the past and future activities of the Better Places for People project

To hear how BPFP has benefitted other GBCs and how new GBCs can get involved



Agenda

- *Better Places for People* Overview (10 mins)
- Felipe Faria, Managing Director, GBC Brasil (5 mins)
- Julie Hirigoyen, CEO, UK-GBC (5 mins)
- Pat Barry, Executive Director, Irish GBC (5 mins)
- Q&A (20 mins)



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Better Places for People

Project Overview



WorldGBC Projects



Purpose of *Better Places for People*

Increase the demand and supply
of **green buildings** that support the **health, wellbeing**
and **productivity** of those inside them

GBCs



27 overall
participating

Sponsors



Contributors



Campaign to date

June 2015

October 2016

Offices
Report

Campaign
Launch

Retail
Report

Offices
report 2

Resi
Report



October 2014



Feb 2016



March 2017

Scoping for 2017/2018

1. Collateral
2. Case Studies
3. Campaign Engagement
4. Marketing Campaign
5. GBC Certification Tracking and Development
6. Wellbeing Labs
7. Productivity Study

How do you get involved?

Contact me at cpowell@worldgbc.org to join our email list

Connect with other GBCs who have excelled in this field



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Health and Wellbeing in Research, Green Building Certification and the Market

Dr. Joseph Allen, Harvard University
Anna Braune, DGNB
Ilari Aho, Uponor



October 19, 2016
13:30



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Better Places for People

Felipe Faria, Brasil GBC



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SCIENTIFIC RESEARCH

1) Perception Metrics

- ✓ Indoor air quality and ventilation;
- ✓ Thermal comfort;
- ✓ Lighting;
- ✓ Acoustic;
- ✓ Ergonomic;
- ✓ Bio philia;
- ✓ Finishes;
- ✓ Transport;
- ✓ Amenities.



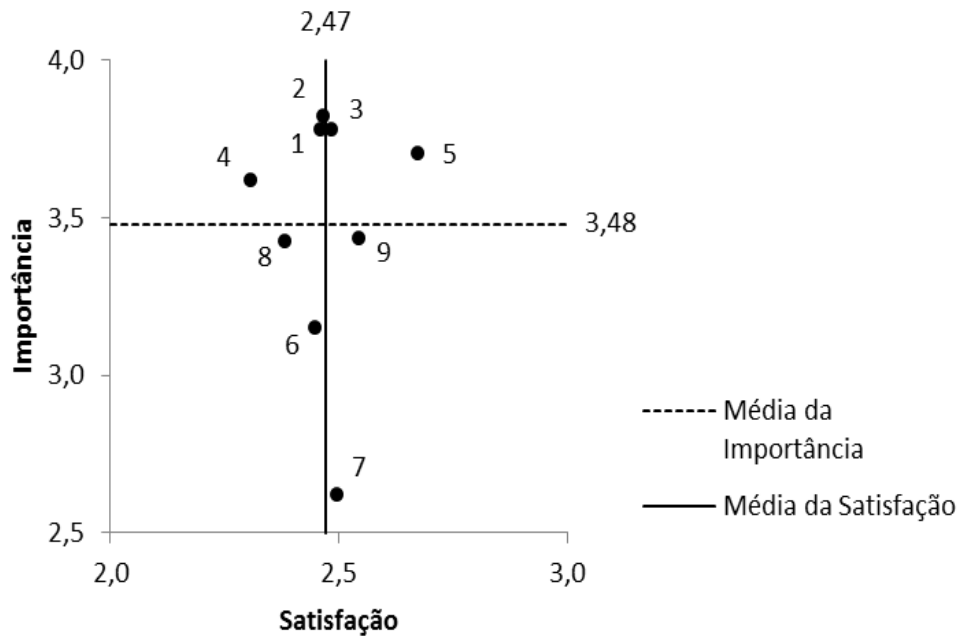
285 participants LEED CI + 284 no certified

Total of 84 characteristics variants

ISSO 7730 – ISO 10152 - ISO 10551 – ISO 28802:2012 – ASHRAE 55/2013

2) Measurements and Verifications by the Institute of Technology and Research



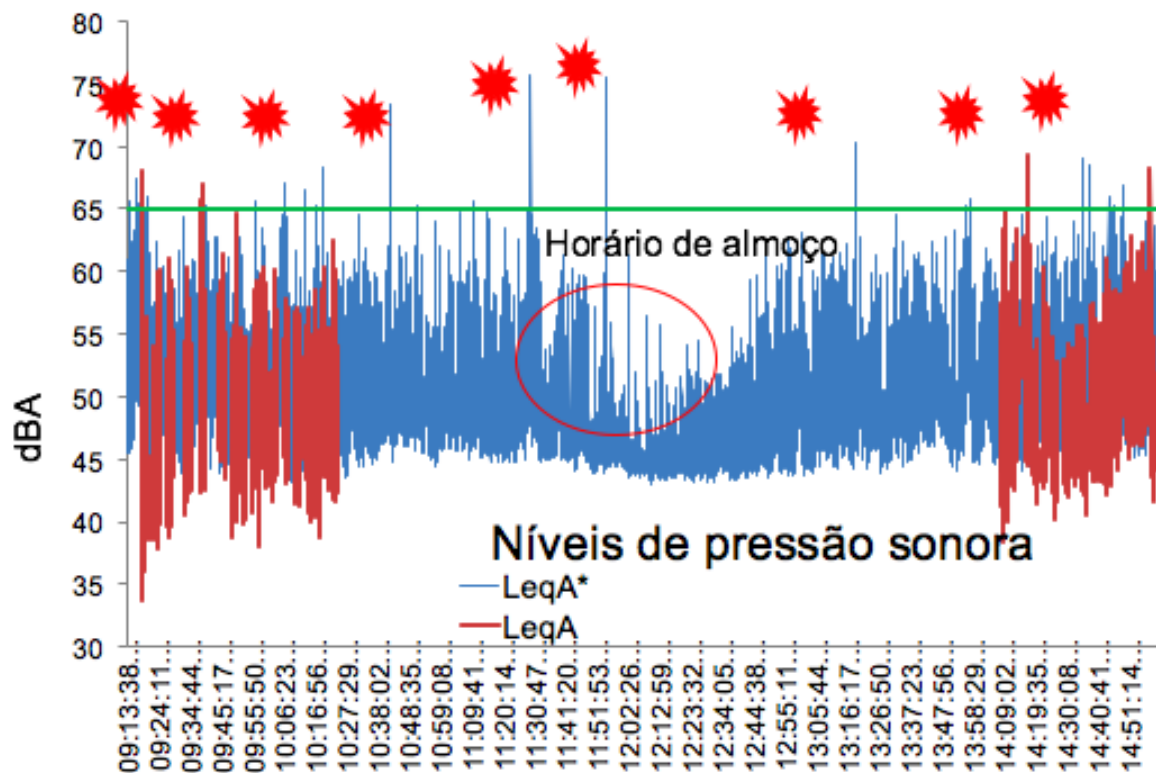


1. Indoor Air Quality and Ventilation
2. Thermal Comfort
3. Lighting

4. Acoustic
5. Ergonomic
6. Biophilia

7. Finishes
8. Transport
9. Amenities

Acoustic Measurement





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Better Places for People

Julie Hirigoyen, UK-GBC





Health & Wellbeing activities



CAMPAIGN FOR A SUSTAINABLE BUILT ENVIRONMENT

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UK-GBC ACTIVITIES: FROM THEORY TO ACTION

- Bite-size briefings targeting key audiences
 - HR Managers
 - Facilities Managers
 - Occupiers
 - Landlords
- Webinars
- Masterclasses
- Wellbeing Labs
- Practise what we preach – own office refurbishment

WELLBEING LABS



WELLBEING LABS

Cohort One: Offices



BUROHAPPOLD
ENGINEERING

Standard Life
Investments



MAX FORDHAM



SKANSKA

ARUP



CAMPAIGN FOR A SUSTAINABLE BUILT ENVIRONMENT

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WELLBEING LABS WORKPLAN



UK-GBC WELLBEING LABS: TIMELINE AND WORKPLAN

PHYSICAL

Procure IEC monitors. Participants may already have sensors available or may choose to purchase. Sensors should measure common IEC parameters like temperature, humidity, CO2, etc. UK-GBC will provide guidance on selection.

Identify placement of monitors. Identify placements in diverse areas: perimeter, core, meeting rooms, reception, etc. Since monitors may be moved you do not need to purchase a monitor for each separate area, just make sure you have good coverage.

BEGIN DATA COLLECTION

Install devices and begin data collection.

Data review and evaluation. Review data daily if possible and no less than weekly. Where data is outside of normal parameters try to isolate cause and make changes to rectify performance.

END OF DATA COLLECTION: BEGIN PREPARATION OF RESULTS FOR INTERNAL WELLBEING LAB REVIEW

Results and analysis. Produce an analysis of sensor performance and assess trends over time, including results from any interventions.

IDENTIFICATION OF WELLBEING LAB (COLLECTIVE) RESULTS AND NEXT STEPS

PUBLIC PRESENTATION OF WELLBEING LAB WORK: FINDINGS AND RECOGNITION OF PARTICIPANT EFFORTS

PERCEPTUAL

Develop survey. Participants will be provided with guidance on how to conduct a survey, what questions to consider, and tools for administering. If surveys have already been conducted, participants may have sufficient data to not need a new survey.

ADMINISTER SURVEY

Review survey results and ensure good data.

Results and analysis. Participants to report survey results in chart/graphic format.

FINANCIAL

BEGIN DATA COLLECTION

Gather organisational data. Participants to identify and collect organisational metric data (turnover, staff turnover, financial turnover, medical costs, medical complaints and building complaints).

Assess historical data. Participants to review data and benchmark against known national/industry statistics where possible (UK average absenteeism, staff turnover, etc.). Participants to review FM data for building complaints associated with poor performance (lighting, temperature, etc.).

Results and benchmarking. Participants to present results from within their organisation, and, where possible, benchmarked against relevant statistics.



CAMPAIGN FOR A SUSTAINABLE BUILT ENVIRONMENT

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Better Places for People

Pat Barry, Irish GBC



**BETTER PLACES
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IRISH GREEN BUILDING COUNCIL

IGBC

Better Places for People
WorldGBC Congress Members' Day



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Warmth and Wellbeing Scheme

IMPACT

Not available

START DATE

19th Oct 2018

The Department and Sustainable Energy Authority Ireland (SEAI), in conjunction with the Department of Health and the HSE, led a pilot project to demonstrate the value of using energy efficiency to achieve improved health outcomes in an Irish context. Under this scheme, HSE staff can refer eligible patients directly to SEAI to receive free energy efficiency improvements to their homes. The exact measures required are determined by an SEAI survey and aimed at delivering a significant improvement in the overall energy efficiency of participating homes at no cost to the household.

[Read more](#)

RESPONSIBLE ORGANISATION(S)

Department of Communications, Energy and Natural Resources

Living City Initiative (LCI)

IMPACT

START DATE

January 2019



RESPONSIBLE ORGANISATION(S)

CONTACT AN EXPERT

by John O'Sullivan





Health and
Wellbeing



Economic



Environment

environmental

The verified positive impacts of the development can be co-
language to the home buyer.



Costs

- ✓ Annual heating costs per year €250 - €400
- ✓ Can be easily extended if needed
- ✓ Smart metering of energy to allow easy control of costs
- ✓ Very low flood risk
- ✓ Low transport costs



Wellbeing

- ✓ Designed for enhanced daylight levels
- ✓ Better than standard sound proofing between dwellings
- ✓ Designed for excellent indoor air quality
- ✓ Uses healthy materials
- ✓ Location ensures walkable distance to amenities for



Our

- ✓ A2 BER carbon
- ✓ Red con
- ✓ D c







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How to use the Net Zero project to create opportunities for impact in your market

14:45 – 15:30

Agenda

- 1. Introduction to Project (5 minutes)**
- 2. Update from three GBCs on their Net Zero Plans (15 minutes)**
 - Sweden GBC
 - India GBC
 - Canada GBC
- 3. Panel Discussion & Audience Input (25 minutes)**

“Advancing Net Zero” Goal (to 2050)



All buildings are net zero by 2050
All new buildings are net zero by 2030

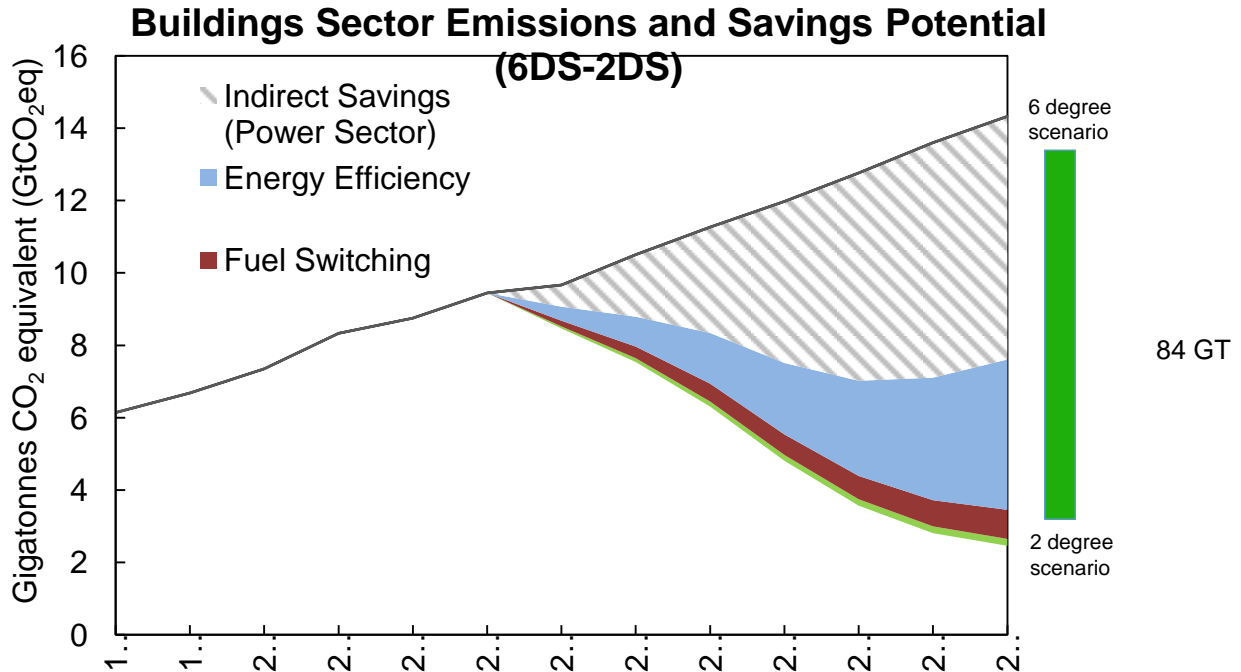


Why this goal?

- ✓ Science-based targets
- ✓ Alignment with WorldGBC Commitment at COP21



Building sector role to avoid 60 temperature rise



Source: International Energy Agency

Project Goals to 2020

Program creation	20 GBCs create or adopt a net zero/ carbon neutral program by 2020
Buildings certified	1,000 buildings certified by 10 GBCs by 2020
Training	10,000 professionals trained by 2020

Project Goals to end of 2017

Program creation	10 GBCs create or adopt net zero/carbon neutral certification program by 2018;
Project Value	Participating GBCs report that action on net zero buildings faster and more efficient by virtue of participation in project.
Training	1,000 professionals trained by end of 2017
Resource Development	Global communications campaign launched; Model net zero framework launched

What we have done so far in 2016?

JUNE

Launched project at Business & Climate Summit

- 18+ press mentions
- 1000+ Twitter impressions
- 50+ external tweets
- Lots of inquiries



SEPTEMBER

Workshop for initial group of GBCs

- 10 GBCs
- 3 days of meetings on program design
- Site visits
- Relationship building



What will we do in in the coming year?

November 2016	Deliver 'state of play' report at Buildings Day, COP22	In Progress
	Hire Project Manager	In Progress
April 2017	Launch global communications campaign	
October 2017	Publish WorldGBC model net zero framework	
November 2017	Deliver progress report at COP23	
December 2017	Conclude Phase 1	

Speakers



Sue Clark
LEED Manager



S Raghupathy
Deputy Director
General



Thomas Mueller
CEO

1. State of Market for net zero buildings in Sweden?



Villa Åkarp
2009

- single-family home
- plus-energy, on-site generation
- no certification



Väla Gård
2012

- office building
- plus-energy, on-site generation
- LEED certification



Vasakronan
2013

- property management firm
- climate-neutral
- certified ISO 14001

2. Why is Sweden GBC working on this topic?



Support member organizations with climate-neutral goals



Complement other certification systems

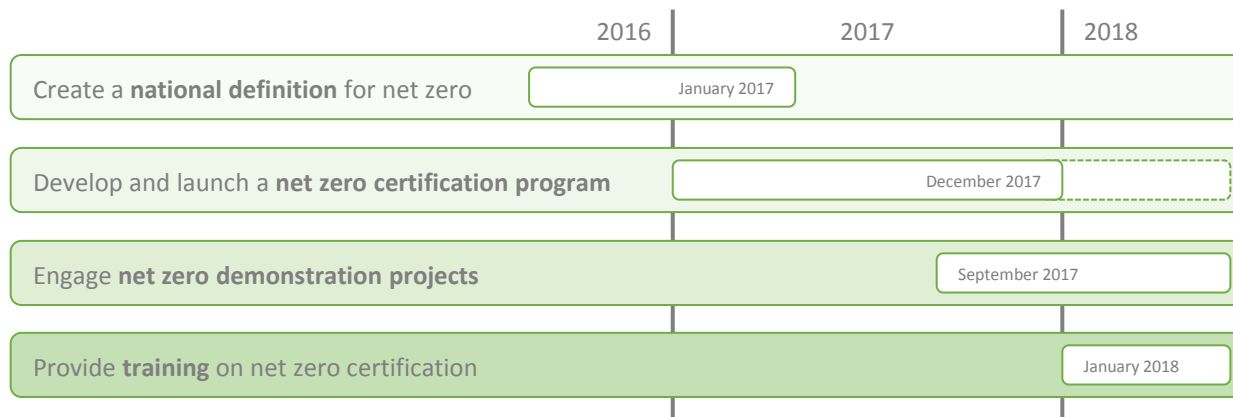


Be a driving force in growing net zero buildings

3. Sweden GBC's long-term objectives for net zero buildings are...



4. Sweden GBC's short-term objectives for net zero buildings (to 2020 or 2022) are...



1. How many net zero buildings in India?



Bayer's Eco Commercial Building, Noida



Sun Carrier Omega, Bhopal



Indira Paryavaran Bhavan,
(MoEFCC),



Gujarat Pollution Control Board (GPCB),
Gandhinagar



Naandi Rurban Commune, Hyderabad



QuikBuild Demo, Hyderabad



Net Zero Home, Bhubaneswar



Asadi Tensile Canopy Studio, Cochin

8* Certified Net Zero Projects; Typical size: 2,000 sq.ft – 300,000 sq.ft

Payback: 5 – 7 years ; 100 % in-situ RE power generation

Platinum = Net Zero by 2025

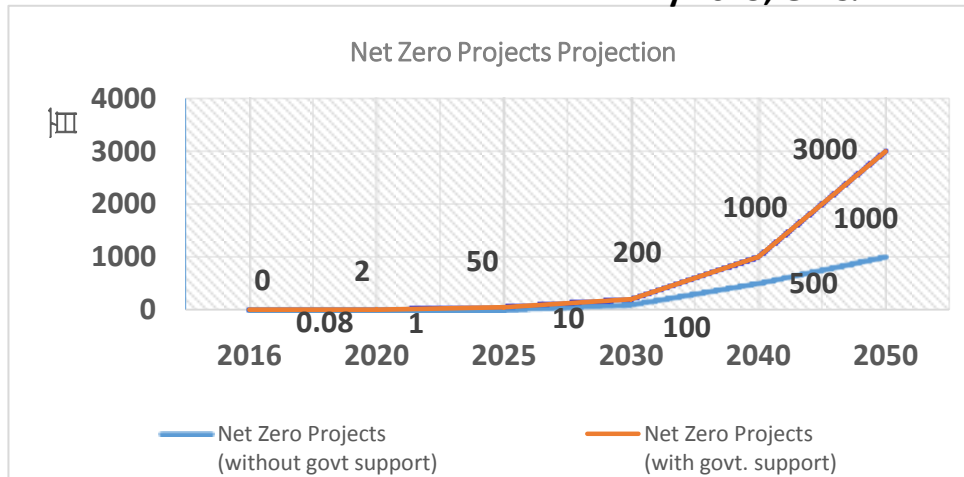
* Certified NZ projects

2. Why is India GBC working on this topic?

- ❖ **Develop a NZB Certification in collaboration with World GBC**
- ❖ **Share & learn global best practices**
- ❖ **Enhance energy security of the country**
- ❖ **Gave credibility & confidence;**
- ❖ **Net Zero initiative speeded up our process**

3. India GBC's long-term objectives for net zero buildings are...

By 2025, GB & NZB : Merge



Achieve India buildings Carbon Neutral by 2050

4. India GBC's short-term objectives for net zero buildings (to 2020 or 2022) are...

Strategy # 1 (1- 3 years)

Build our own core team in India

Learn from experience, develop standard, scale it up, work closely with
World GBC, BEE (nodal agency in India)

Strategy # 2 (3 -5 years)

Demonstrate NZB makes business case with live examples

Strategy # 3 (3 – 5 years)

Closely work with Government to encourage NZB

Develop package of incentives & policy measures (e.g., net metering)

Strategy # 4 (3 – 10 years)

Work towards reducing the incremental cost

CII & IGBC work closely with building community & Renewable energy community

Strategy # 5 (3- 10 years)

Position NZB as a movement in the country

Involve all stakeholders and Win-Win for All

1. How many net zero buildings in Canada?

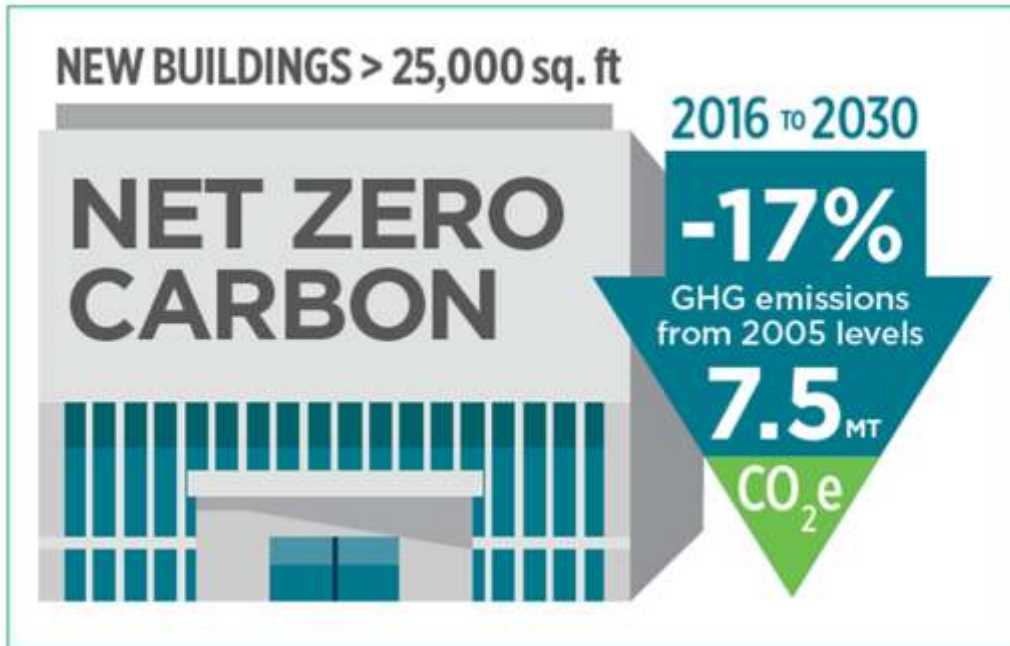


Centre for Interactive
Research on Sustainability
University of BC
LEED Platinum

2. Why is Canada GBC working on this topic?

- Catalyze action towards reducing GHG emissions from buildings
- Influence building design towards both low carbon intensity and high energy efficiency outcomes
- Allow broad market participation by setting a pathway for increasing targets over time
- Drive decisions on a range of different building types in different locations in Canada
- Provide a transparent, robust, and measurable metric that the industry can use

3. Canada GBC's long-term objectives for net zero buildings are...



4. Canada GBC's short-term objectives for net zero buildings (to 2020 or 2022) are...

- **Standard Development**
 - Phase I: **Definition**: work with industry stakeholders and experts to define Net Zero Carbon, buildings
 - Phase II: **Pathways**: identify key strategies and performance characteristics of Net Zero Carbon buildings.
 - Phase III: **Verification**: develop a framework to verify Net Zero Carbon buildings in a transparent process.
- **Pilot Projects**
 - Testing and refining the standard before full implementation
- **Government Advocacy**
 - Working with federal, provincial and municipal governments to adopt net zero policies & codes, provide incentives & apply net zero to their own buildings

Key issues for each GBC

Net zero carbon,
energy, both?

Zero or
nearly zero?

Renewable energy
requirements &
scope?

Asset rating,
operational rating,
both?

Building level,
precinct-scale,
both?

Discussion questions

1. Key issues facing your GBC in developing certification?
2. Who do you foresee as the early adopters?
3. What value have you received from global project to-date (if any)?
4. How does your GBC plan to work with government to ensure 100% net zero buildings by 2050?
5. WorldGBC is developing a global communications campaign in 2017 – what would you like to see in it?

Coffee Break

15:30 – 15:45



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How to work with cities and raise the profile and influence of your GBC

15:45 – 16:30

Agenda

1. Introduction to topic (5 minutes)
2. Speaker presentations (15 minutes)
 - Sweden GBC
 - Colombia GBC (CCCS)
 - USGBC
3. Panel discussion & audience Input (25 minutes)

2016 Main activities

1. **Buildings Efficiency Accelerator (“BEA”)**

- 4 GBCs are currently participating in this global programme operated by World Resources Institute;



**Building Efficiency
Accelerator**

2. **Established GBC Network** – Group of Established GBC CEOs sharing ideas on how to influence city approaches to green buildings and how to create impact



2017 activities being considered

1. Expanded participation in BEA

- Subject to available funding from WRI

2. “Sustainable Cities Playbook”

- Idea being developed by CEO Network for a guidance document to “provide a five-phase pathway to help GBC’s build a meaningful and tailored cities agenda”

3. Connect Advancing Net Zero Project with C40 Cities

- Declaration/Call to Action on net zero carbon buildings

4. Energy Efficiency Lab 2.0 (WBCSD)

Speakers

Ann-Kristin Belkert, Director Citylab, Sweden GBC

Cristina Gamboa, Executive Director, CCCS (Colombia GBC)

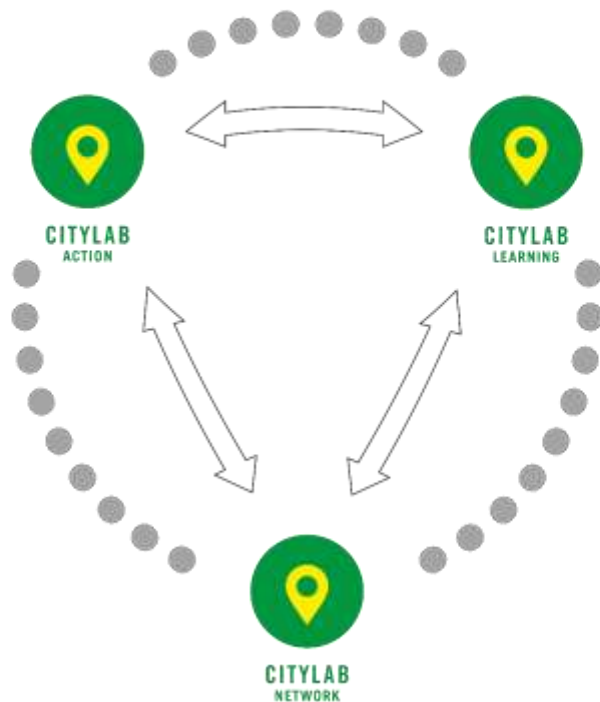
Peter Templeton, Senior Vice President, USGBC



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CITYLAB





CITYLAB
ACTION



Rosendal
Uppsala



Masthugskajen
Göteborg



**Stadsläkning
Lagersdal**, Eskilstuna



Norrtälje Hamn
Norrtälje



DrottningH
Helsingborg



Täby Park
Täby



Barkarbystaden TRE
Järfälla



Solna Business Park
Solna



Campus Albano,
Stockholm



Skeppsbron,
Jönköping



Falsterbokanalen
Vellinge



Lommarstranden
Norrtälje



CITYLAB
ACTION







CITYLAB
LEARNING



PUBLIC ENGAGEMENT



CITYLAB ACTION



CITYLAB
NETWORK



STUDY TOURS



NETWORK MEETINGS

Building Efficiency Accelerator (BEA) partnership

Coordinating partner:



WORLD
RESOURCES
INSTITUTE

WRI ROSS CENTER FOR
SUSTAINABLE
CITIES

NGOs/Associations/Multilaterals:



Service Providers/Companies:



WorldGBC has been very active in the BEA initiative



Building Efficiency
Accelerator



WORLD
RESOURCES
INSTITUTE



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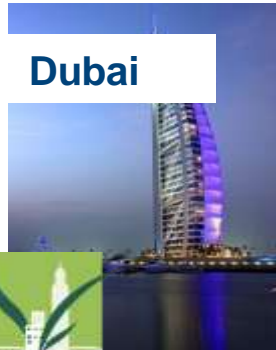
ALCALDÍA MAYOR
DE BOGOTÁ D.C.

BOGOTÁ
MEJOR
PARA TODOS

Bogotá



Dubai



Warsaw



Tshwane



Source: WorldGBC (2016).



Worldwide encouraging local governments to sign up for commitments under Building Efficiency Accelerator (BEA) partnership

BEA Partner Jurisdictions (23)



*City selected for "Deep Dive" engagement



**Building Efficiency
Accelerator**

In support of the United Nations
initiative SE4ALL



What are cities in the BEA Program signing up to do?

Over-reaching commitment:

double the rate of building energy efficiency by 2030 in targeted sector within the jurisdiction

Implement one
enabling **policy**

Policy

Implement one
demonstration **project**

Project

Create a baseline, **track**
and report annual
progress, and **share**
experiences with other
governments

**Tracking &
communication**

www.se4all.org/energyefficiencyplatform/building-efficiency/

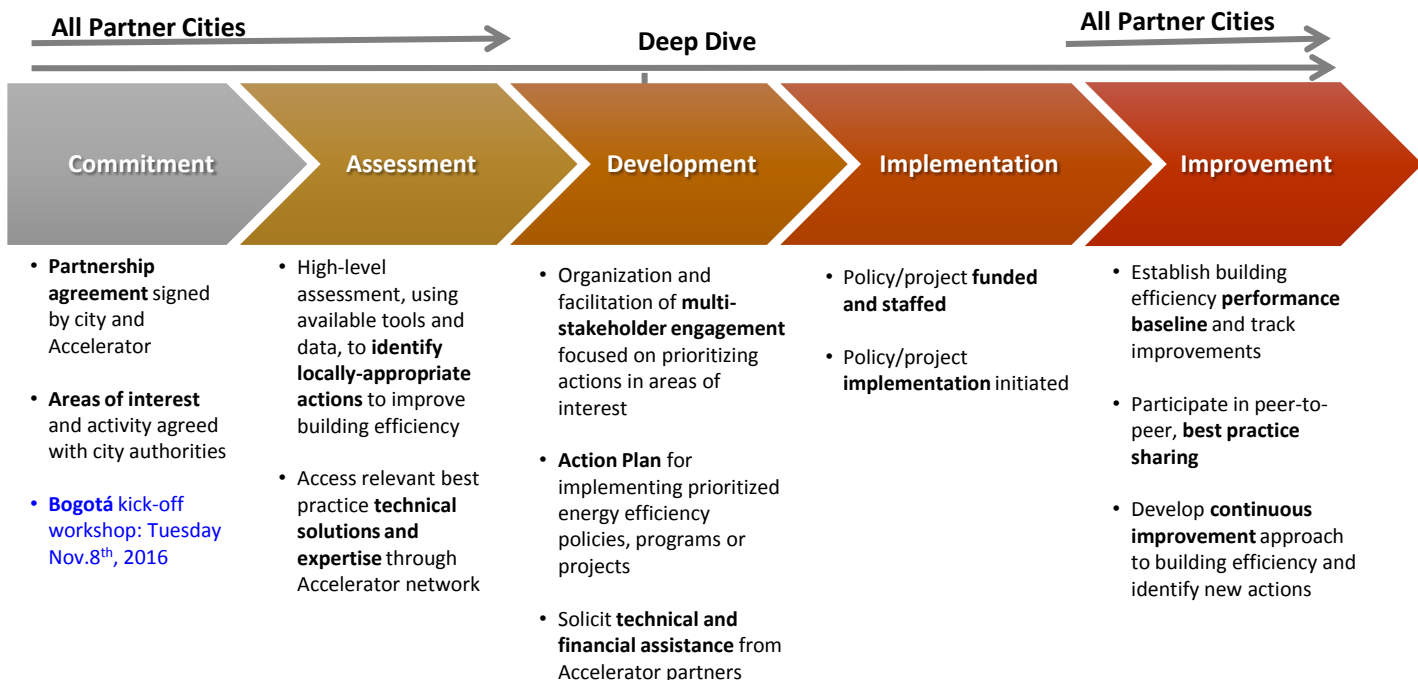
Acceleration of building efficiency policy efforts

New partnerships enable implementation of ambitious projects and policy packages to address barriers, bridge efficiency gap, and avoid lock-in of inefficient building stock.



Source: World Resources Institute (2016)

BEA city assistance process



Ambitious projects and policy packages to address barriers, bridge efficiency gap, and avoid lock-in of inefficient building stock

An aerial photograph of the New York City skyline at dusk. The sky is a mix of deep blue and orange from the setting sun. The city lights are beginning to glow, with the Empire State Building being a prominent landmark in the center. The title 'DRIVERS FOR ACTION' is written in large, white, sans-serif capital letters across the middle of the image.

DRIVERS FOR ACTION



ACTIVITIES
Green Events & Projects



BUILDINGS
Green Structures



PLACES
Cities, States & Counties



STRATEGIES
Processes & Practices



COLLECTIONS
Groups & Project Portfolios

[Home](#) » [Places](#) » [United States](#) » [District of Columbia](#)



Washington, District of Columbia

[Overview](#)

[Activities \(1,678\)](#)

[Table](#)

[Map](#)



About USGBC

The U.S. Green Building Council is a 501(c)(3) nonprofit community of members, chapters, advocates and practitioners that give voice to our commitment to improve human health, support economies and protect the environment through green buildings.

[About USGBC](#)

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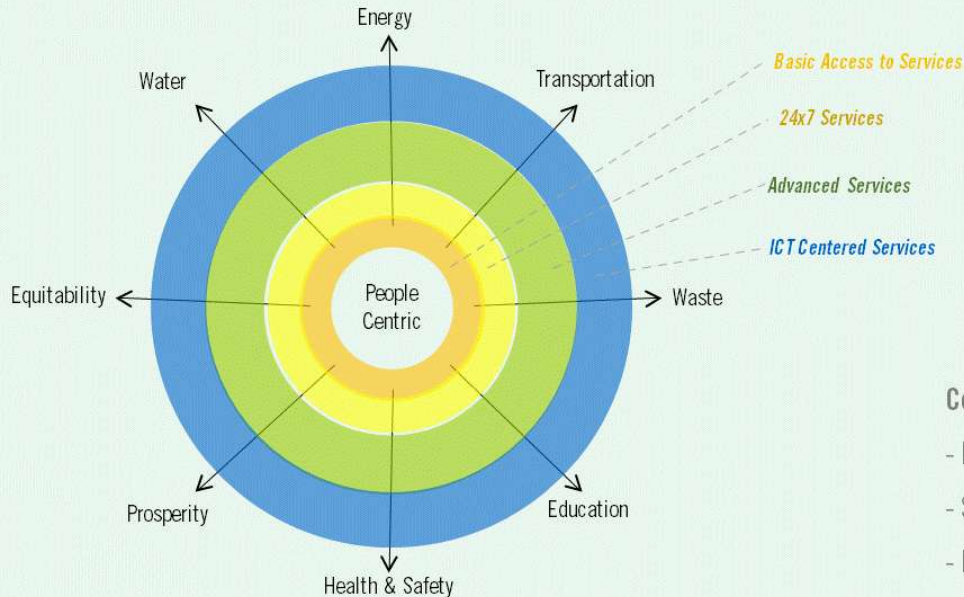


ACTION, INNOVATION AND LEADERSHIP

- Cities are at the **forefront** of implementing innovative and practically viable solutions.
- **Investments made today** in urban infrastructure and buildings will shape cities for generations.
- Urban progress is achievable with the **right tools, commitment and local leadership**.
- Cities must count on **effective planning, proven strategies and capable partners** to reach ambitious goals for greater sustainability and higher quality of life.
- A **performance driven focus** encourages locally appropriate solutions that yield the greatest benefit

ACTIONABLE APPROACH

People-centric • Performance-driven • Competitive • Livable • Sustainable • Resilient • Smart

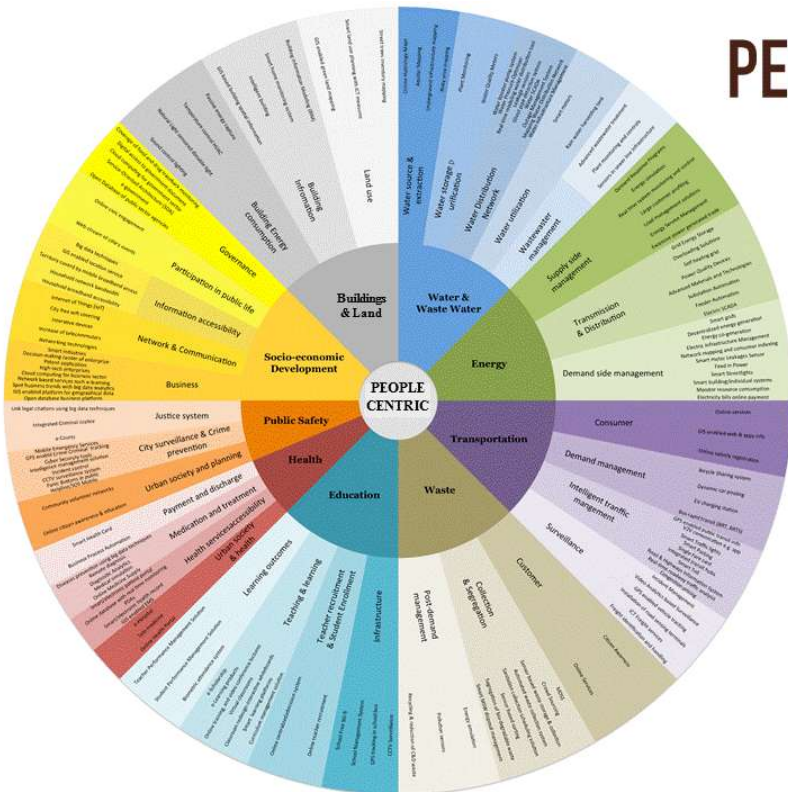


Core Elements for Improvements

- Better technology/innovation
- Superior management
- Efficient governance

PERFORMANCE INDICATORS

- Inclusive of diverse city priorities and impacts (dynamic in nature)
- @250 quantifiable and qualitative metrics
- Basis for performance score
- Adaptive and scalable
- Secondary data for 220 global cities

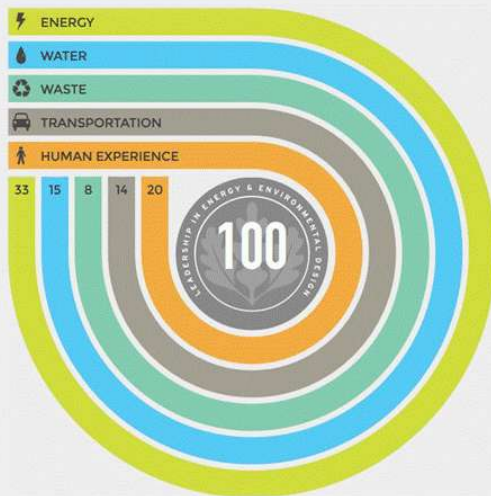


IMPROVE CITY PERFORMANCE

- Improve citizen prosperity, equity, education, health, safety and wellness
- Improve air and water quality



- Reduce pollution and CO2 emissions
- Reduce energy, water and waste consumption



Discussion Question #1

Why is working with cities important/valuable to your GBC?

Discussion Question #2

When you've worked with cities, what have they indicated is the 'value' add of a relationship to them?

Discussion Question #3

What do you believe should be WorldGBC's role in supporting GBCs engagement with cities?

Other Questions / Comments?



Regional Networks Update

16:30 – 17:20

AFRICA REGIONAL NETWORK

GBC PROFILE

ESTABLISHED	EMERGING	PROSPECTIVE	PROGRESSED THIS YEAR
1 South Africa	0	6 Ghana Kenya Mauritius Namibia Tanzania Zambia	1 TBC Kenya

AMERICAS REGIONAL NETWORK

GBC PROFILE

ESTABLISHED	EMERGING	PROSPECTIVE	PROGRESSED THIS YEAR
6 Argentina Brazil Canada Colombia Peru USA	4 Costa Rica Guatemala Mexico Panama	8 Bolivia Dominican Republic Ecuador El Salvador Nicaragua Paraguay Trinidad & Tobago Uruguay	4 TBC Venezuela, Panama, Guatemala, Chile

AMERICAS REGIONAL NETWORK

Current Chair: Felipe Faria, GBC Brasil + Incoming Chair Francesca Mayer, Peru GBC

- Group Commitment: support the progression of existing GBCs
- Definition of a common project

Regional Areas of Focus (projects under discussions):

- Energy efficiency in existing buildings (Building Efficiency Accelerator)
- Health and Wellbeing (Better Places for People)
- Activities Annual Report

Funding Progress:

- Interest from Dow, Sherwin Williams & Informa Group

ASIA PACIFIC REGIONAL NETWORK

GBC PROFILE

ESTABLISHED	EMERGING	PROSPECTIVE	PROGRESSED THIS YEAR
9 Australia Hong Kong India Japan Malaysia New Zealand Singapore Taiwan Philippines	3 Indonesia South Korea Kazakhstan	3 Pakistan Sri Lanka Vietnam	2 Philippines Vietnam + 1 TBC Pakistan

ASIA PACIFIC REGIONAL NETWORK

Current Chair: Lee Siang Tai, Singapore GBC (new chair being selected by the Board)

Regional Areas of Focus:

- Regional Awards
- Healthy Green Buildings
- Business Case for Investors

Funding Progress:

- Private Foundation (60K), AGC (30K), LG Electronics (30K) all confirmed, positive conversations with UTC and Lend Lease

EUROPE REGIONAL NETWORK

GBC PROFILE

ESTABLISHED	EMERGING	PROSPECTIVE	PROGRESSED THIS YEAR
12 Austria Croatia Netherlands Finland France Germany Ireland Poland Spain Sweden Turkey UK + Norway TBC	4 Bulgaria Hungary Italy Switzerland	5 Greece Latvia Macedonia Montenegro Slovenia	3 Finland Ukraine Ireland + 2 TBC Norway Luxembourg

EUROPE REGIONAL NETWORK

Current Chair: Christine Lemaitre

Regional Areas of Focus:

- Existing Building Renovations
- Green Building Financing

Funding:

- Skanska (30K), UTC, (30K), Knauf Insulation (30K), Saint Gobain (30K), E.ON (30K), BASF (30K) all Regional Partners

MENA REGIONAL NETWORK

GBC PROFILE

ESTABLISHED	EMERGING	PROSPECTIVE	PROGRESSED THIS YEAR
2 Emirates Jordan	2 Lebanon Qatar	5 Bahrain Egypt Kuwait Morocco Palestine	1 Morocco

MENA REGIONAL NETWORK

Current Chair: Abdullah Bdeir, Jordan GBC and Vice Chair, Meshal Al-Shamari, Qatar GBC

Regional Areas of Focus:

- Regional Awards
- Green Schools

Funding:

- Seed funding from Majid Alfutaim (12K)

Closing and next steps

17:20 – 17:30

WITH THANKS TO OUR CORPORATE ADVISORY BOARD



CITY DEVELOPMENTS LIMITED



JPMORGAN CHASE & CO.

