

International Energy Agency Energy in Buildings and Communities Research Programme

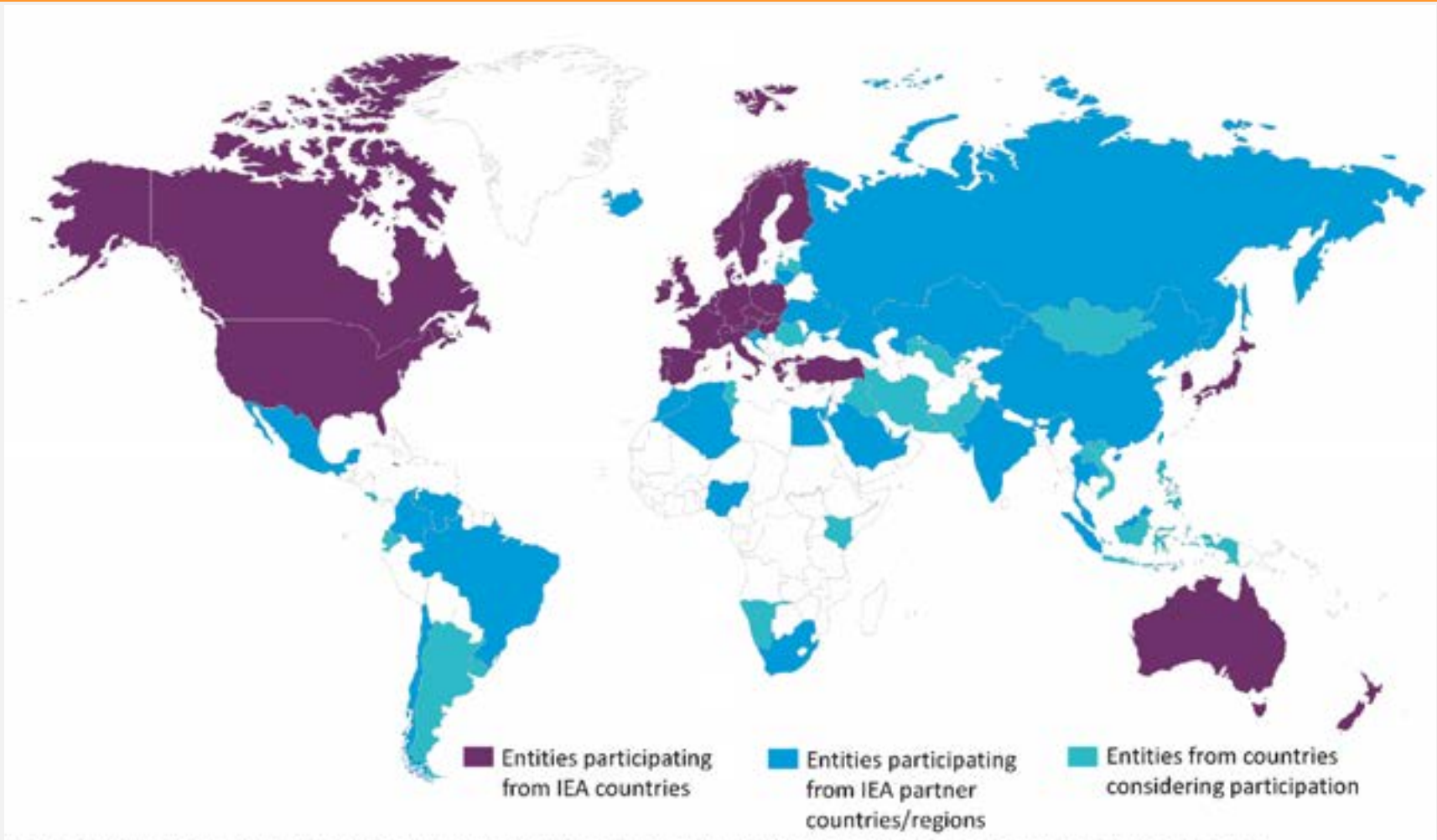
Based on a presentation by Andreas Eckmanns
EBC Executive Committee Chair, Switzerland
Michael Donn, NZ EBC ExCo rep.

AIVC Meeting
Wellington/New Zealand, 19 March 2018

The International Energy Agency (IEA)

- Founded in response to the 1973/74 oil crisis: secure oil supply / emergency oil stocks.
- Today: ensure reliable, affordable and clean energy for its 28 member countries and beyond.
- Main focus: energy security, economic development, environmental awareness, and engagement worldwide.

The International Energy Agency (IEA)



This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries, and to the name of any territory, city or area.

© OECD/IEA 2017 *International Energy Agency Technology Collaboration Programmes: Participation Map*. Licence: www.iea.org/t&c

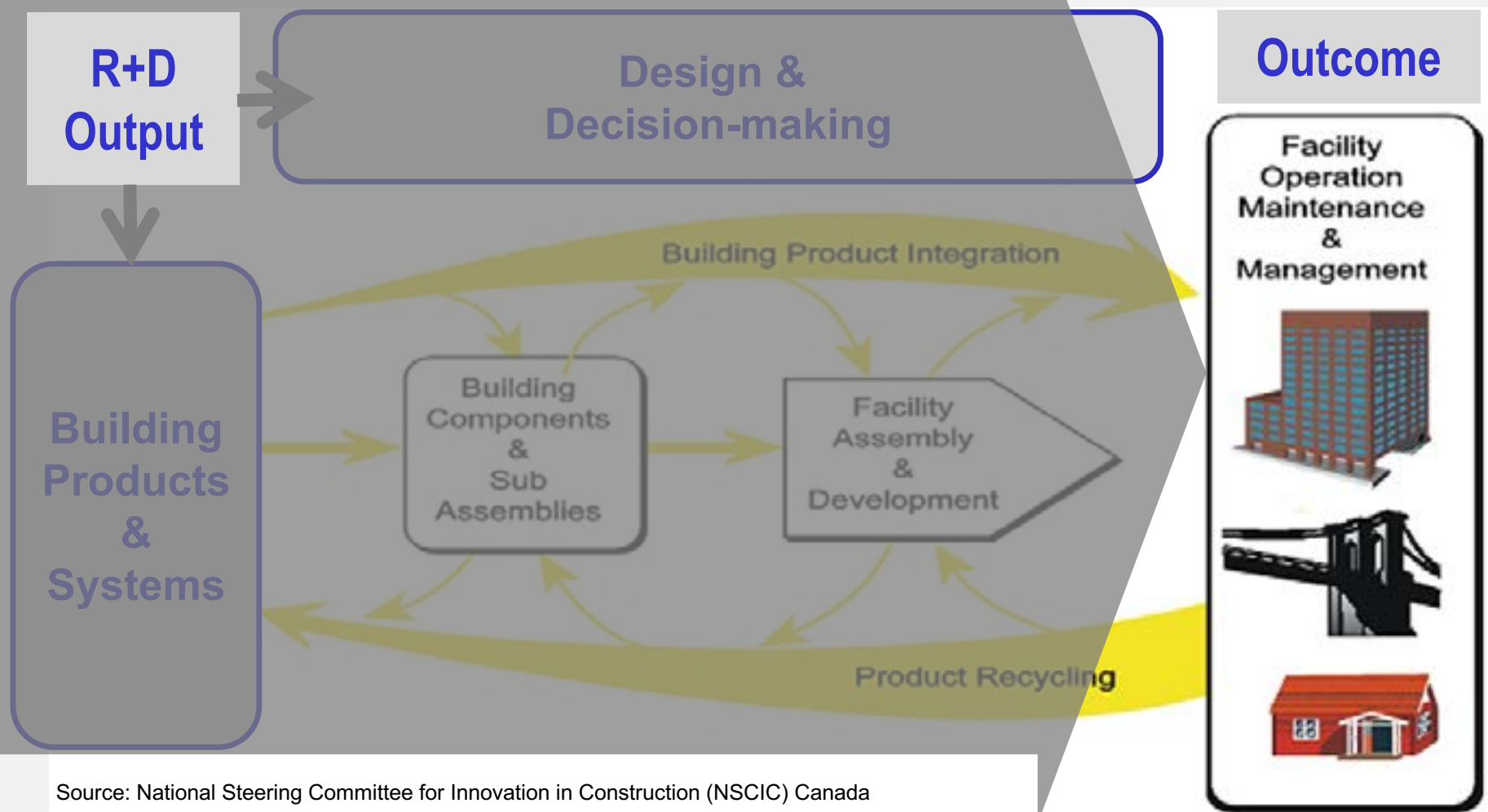
IEA-EBC Programme

- International Technology Collaboration Programme
- Energy RDD+D
- 71 Annexes projects
- 600 experts from 24 countries
- Official Annex reports freely available
- **International understanding**

24 Participating Countries

- Australia
- Austria
- Belgium
- Canada
- P.R. China
- Czech Republic
- Denmark
- France
- Finland
- Germany
- Ireland
- Italy
- Japan
- Republic of Korea
- Netherlands
- Norway
- Portugal
- Singapore
- Spain
- Sweden
- Switzerland
- UK
- USA

Value Chain in Construction Market

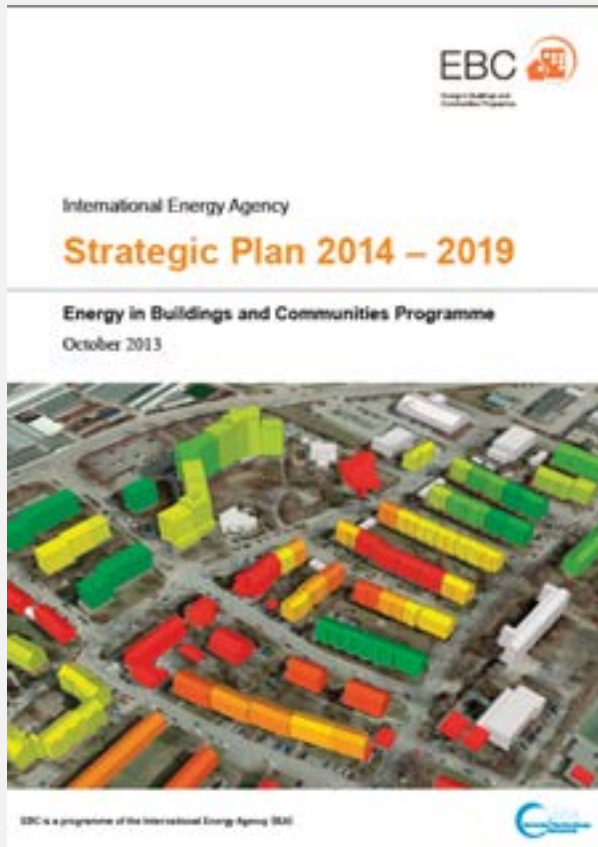


Source: National Steering Committee for Innovation in Construction (NSCIC) Canada

EBC Mission

→ Energy efficiency is key

To accelerate the transformation of the built environment towards more energy efficient and sustainable buildings and communities, by the development and dissemination of knowledge and technologies through international collaborative research and innovation.



High Priority Themes

- Theme #1: Integrated planning and building design
- Theme #2: Building energy systems
- Theme #3: Building envelope
- Theme #4: Community scale methods
- Theme #5: Real building energy use

Ongoing Projects

- N°77 Integrated Solutions for Daylight and Electric Lighting
- N°76 Deep Renovation of Historic Buildings Towards Lowest Possible Energy Demand and CO2 Emissions
- N°75 Cost-effective Building Renovation at District Level Combining Energy Efficiency & Renewables
- N°74 Competition and Living Lab Platform
- N°73 Towards Net Zero Energy Public Communities
- N°72 Assessing Life Cycle Related Environmental Impacts Caused by Buildings
- N°71 Building Energy Performance Assessment Based on In-situ Measurements
- N°70 Building Energy Epidemiology: Analysis of Real Building Energy Use at Scale

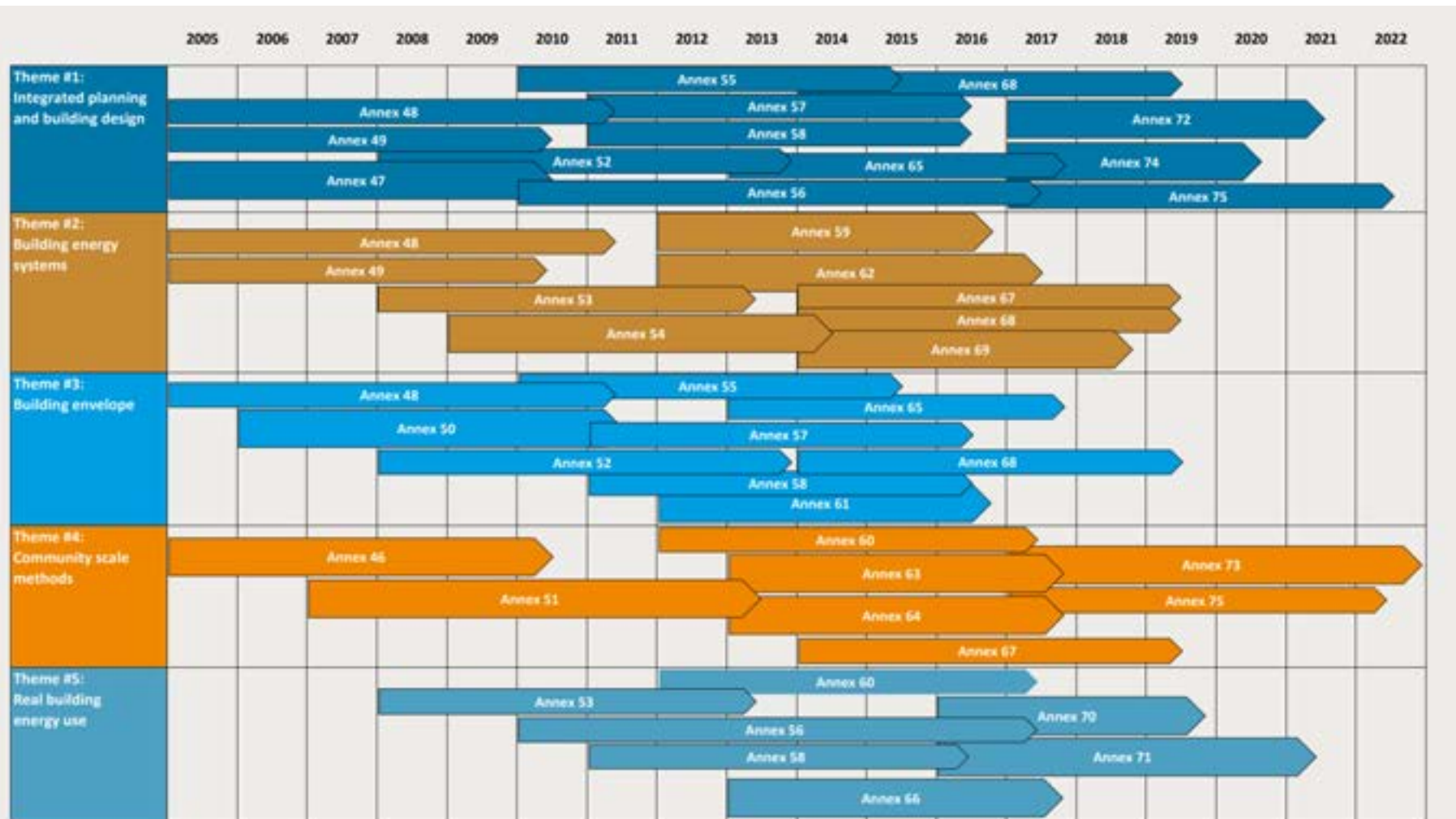
Participating / Doing related work, no funding

Ongoing Projects (2)

- **N°69** Strategy and Practice of Adaptive Thermal Comfort in Low Energy Buildings
- N°68 Design and Operational Strategies for High IAQ in Low Energy Buildings
- **N°67** Energy Flexible Buildings
- **N°66** Definition and Simulation of Occupant Behavior in Buildings
- N°65 Long Term Performance of Super-Insulating Materials in Building Components and Systems
- N°64 LowEx Communities - Optimised Performance of Energy Supply Systems with Exergy Principles
- N°63 Implementation of Energy Strategies in Communities
- N°62 Ventilative Cooling
- **N°05** Air Infiltration and Ventilation Centre

Participating / Doing related work, no funding

Mapping from Annexes to the Strategic Plan



Source: Rolf Moser

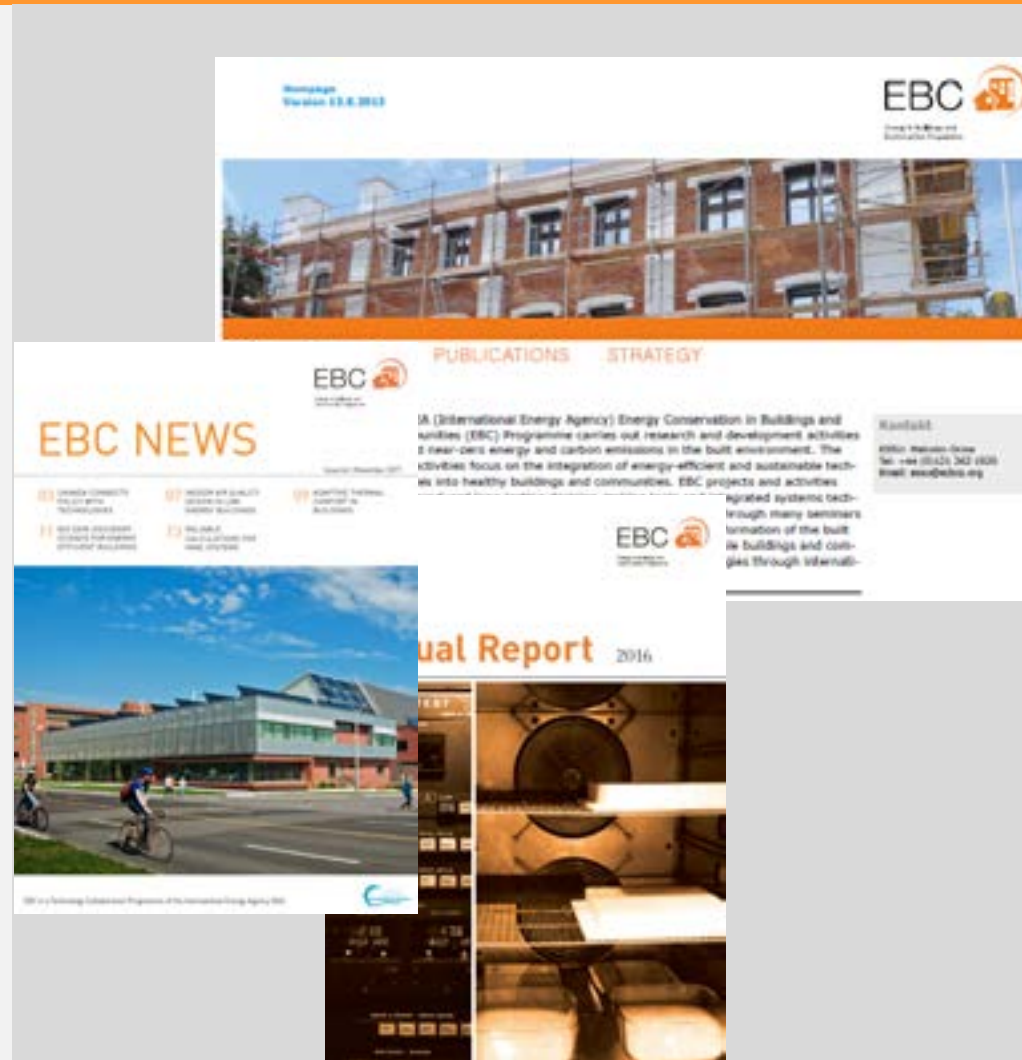
Mid-Term Analysis of Strategic Plan

- Strengthen ‘real building energy use studies’ (resulted in Annexes:
 - 70 Building Energy Epidemiology: Analysis of Real Building Energy Use at Scale
 - 71 Building Energy Performance Assessment Based on In-situ Measurements
- Strengthen non-technical aspects energy research
 - Socio-economic
 - Occupant behaviour
 - Owner motivations regarding renovation

Dissemination & Outreach

www.iea-ebc.org

- Scientific Reports
- e-Newsletter
- Annual Report
- Conferences / seminars
- Demonstration
- AIVC



What's in it for us?

Pros

- Not re-inventing the wheel
 - Small investment creates large team
- Network of trusted experts
- NZ has a voice in pre-standards research
- Focus can be on our issues
 - NZ relevant construction
 - Mild climates

Cons

- Travel is almost always 30 hrs x 2 twice a year
- Sun = South
 - Cold not warm climates
 - Not NZ construction
- No separate funding of participation
 - exploratory workshops *impossible* to attend

Further Information

www.iea-ebc.org

Thank you