

Workplaces of the Future Summit

International Healthy Buildings Conference HB2012 Overview

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The Agenda



- Background to Healthy Buildings 2012

- Key themes for Healthy Buildings

- Key trends for Healthy Buildings

- Key studies and cases presented

- Lessons for Australia

- Major Learnings and Conclusions

HB2012 – The Conference

International IEQ “Applied” Conference every 3 years,
Alternates with Indoor Air Quality “Research” Conference

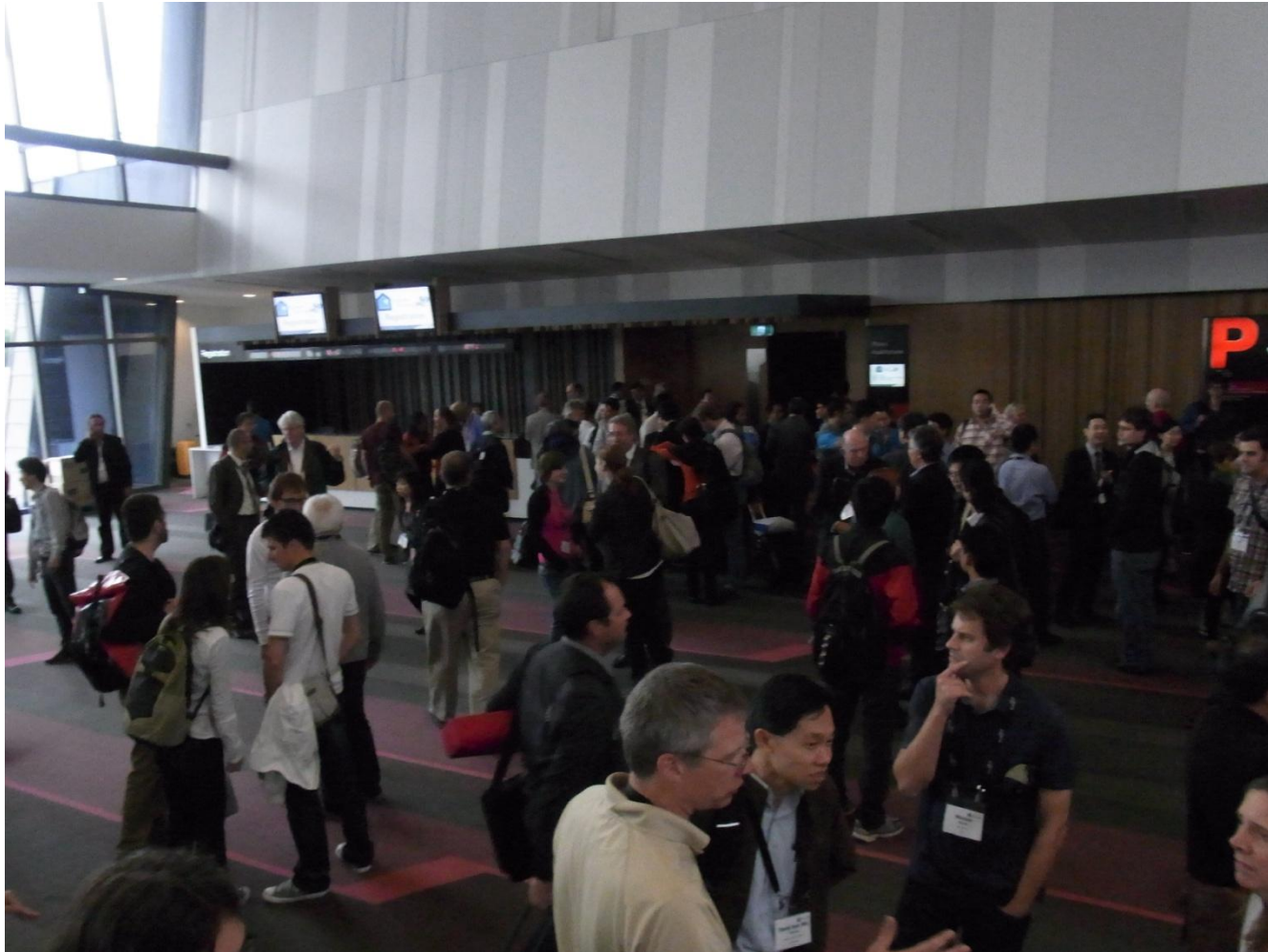
1st time in Australia (Brisbane Convention and Exhibition Centre)

- ~670 delegates
- ~50 Australians
- ~43 Countries
- ~600 Papers (approx 50 Australian)

Main International Meeting of Healthy Building Stakeholders

- Organizations
- Working Groups
- Networks
- Master classes
- New associates





HB2012 – The Conference



Wide diversity of :

- Topics
- Skills
- Applications
- Approaches



Key Themes



Balance of Power:
Energy
Conservation vs
Indoor
Environment
Quality



Race against time:
Population, Urban
Growth and
Miracles of
Innovation



Infection Spread:
Will breathing kill
you?



Key Themes	Sessions
Health	13
Energy vs Health	2
Contaminants	18
Comfort	11
Measurement	7
Design	10
Sustainability	6
Regulations and Ratings	7
Materials	3
Productivity – business, private and education	5
Urbanisation	6
Multi-disciplines needed	93
Internationalisation	1

Key Themes	Key Trends
Health	Confirmation that buildings can cause and transmit ill health
Energy vs Health	Health is more valuable than energy
Contaminants	Better detection shows stronger relationship to health
Measurement	Better measurement allows clearer relationships and better design
Regulations and Ratings	Increased national regulation of IEQ and ratings
Materials	More testing improves performance and health

Key Themes

Key Trends

**Productivity –
business, private and
education**

Research and case studies confirm significant role of IEQ, including roles in health and education facilities

Urbanisation

Precinct design and density affect health and wellbeing

**Multi-disciplines
needed**

Fusion of skills create bigger and better solutions from complexity

Internationalisation

World wide learnings and teams accelerate knowledge

Education

More training and education needed for property industry and HR

Key Themes

Healthy Buildings Research: New Developments, Future Directions and Potential Solutions



Professor Charlie Weschler

Professor, Environmental and
Occupational Health Sciences-
Rutgers University,
International Centre for Indoor
Environment and Energy,
Technical University of Denmark
Department of Building Science,
Tsinghua University, China

Key Studies

- **Better assays .. increased predictive power .. “in progress”.**
- **Studies ..of the toxicity of chemicals.. In commerce. ..Reduction of noxious chemical and particulate emissions from office equipment...**
- **Better sensors.. to harmful chemicals..**
- **More efficient filtration and catalytic degradation ..of pollutants.**
- **Progress towards the integrated triad of energy efficient,sustainable and healthy buildings.**

Key Themes

Pandemic control measures, future directions and conclusions.



**Session Chair:
Gerard
Fitzgerald, QUT**

Key Studies

- **Community outbreaks of infections have a significant impact on the economy, health and well-being.**
- **The design of buildings (for health care or otherwise) can contribute .. to how effective are measures necessary to control disease outbreaks.**
- **Building design can contribute to infectious disease.**
- **Modify building design to reduce infectious disease spread during major outbreaks.**
- **Identify future strategies including research that may improve the effectiveness of building design.**

Lessons for Australia



- Facility Ecology has a major effect on national wellbeing and productivity
- Recognise that the major trends and knowledge are overseas
- Become more aware of international knowledge and practise
- Attend and contribute to international meetings to maximise benefit



Key Themes	Key Learnings
Health	Confirm international studies with case studies vs building design and performance
Energy vs Health	Educate stakeholders that Health is more valuable than energy saving
Contaminants	Validate key contaminants in Australian buildings
Comfort	Confirm perception and satisfaction in climate zones
Measurement	Confirm key parameters and standardise methodologies and establish a national data base
Design	Develop designs to optimise health, productivity and sustainability based on international knowledge
Sustainability	Integrate sustainability with health and productivity outcomes

Key Themes	Key Learnings
Materials	Continue testing, develop national inventory and regulations for health and performance.
Productivity – business, private and education	More research and case studies needed with Facility Ecology approach.
Urbanisation	More research and case studies needed with Facility and Precinct Ecology approach
Multi-disciplines needed	Add scientific and health skills during design and construction stages even for residential buildings.
Internationalisation	Keep better awareness of overseas developments for HB
Education	More training and education needed for property industry and HR

For additional information please do not
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