



# WORLD

## SB14 BARCELONA

October 28<sup>th</sup>/30<sup>th</sup> 2014

**Sustainable Building: Results...**

**Are we moving as quickly as we should?**

**It's up to us!**

## Final Programme

[www.wsb14barcelona.org](http://www.wsb14barcelona.org)

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Dear World SB14 Barcelona attendee:

Welcome to World SB14 Barcelona!

For the first time, Spain hosts a **World SB Conference**, a global reference on sustainable building. Barcelona becomes an international meeting point, a centre for sustainability in building.

The main theme of this Conference is “Sustainable Building Results: Are we moving as quickly as we should? It’s up to us!”

We are setting the starting point for a new cycle within the building sector. We are setting the new principles for a renovated paradigm. We can, and we must, be part of the historical change that is happening around us. GBCe is committed with a new cycle and we are putting all our efforts into favouring and encouraging it. Therefore, we thank you for your cooperation, sharing this process with us and contributing to creating a new roadmap to direct our future as a sector.

Intense work is ahead of us, exchanging knowledge and experiences between different countries of the world. It is an honour to count on your participation, from the start of this fascinating project, and we take pride in all the attendees who are sharing this exciting event with us.

We hope you enjoy World SB14 Barcelona!

A handwritten signature in blue ink, appearing to read 'F. Pich-Aguilera'.

Felipe Pich-Aguilera  
*President of Green Building Council España (GBCe)*

The conference is structured around three thematic areas:

## GLOBAL VISION

The plenary session area of World SB14 Barcelona is in charge of gathering and presenting, in the most clear and structured way possible, the global challenges that the building sector faces, as well as the approaches we have to tackle them.

In addition, through the “A Global Vision” Report, a process is started to answer world needs.

This area aims to provide the Conference with a Roadmap that allows the building sector to meet the global challenges, considering its local or regional scope, but considering the limitations that these same challenges pose to their solution.

## CREATING NEW RESOURCES

This area follows the traditional scientific World Conference structure, as was done in previous WSB events.

Taking all the contributions received, the Scientific Committee has structured the Conference sessions with a novel approach: grouping peer reviewed papers under several title questions that are related to the Conference goals, born from the content of the papers themselves. Thus, each Conference session is guided by a question which speakers reply to, giving their views and experience through their papers and speeches. These answers will result in the conclusions of the Creating New Resources area.

## TRANSFORMING REALITY

In order to give an answer to the challenges that the sector faces we need more than scientific and technical instruments. Sector stakeholders, those who work on site every day, giving answers to the problems and challenges of today, can and must give answers to the challenges of the future. Furthermore, it is them who must put together available tools, building and developing action plans to face the future.

Therefore, World SB14 Barcelona opens a scientific conference to the world of industry, manufacturers, stakeholders at a whole.

In this regard, the scope covers stakeholders who build, use and transform the built environment, those who have the operational knowledge to do so: building materials and systems manufacturers, public administrations, developers, builders, technical professionals, managers, users, etc.







**Tuesday, 28th October**

Session: GB1

Room: Auditorium

Time: 12.15-13.3

Global Vision

## Building facing global environmental challenges



### Speakers:

**Cuchí, Albert.** *President of World SB14 Conference. Barcelona, Spain*

**Kohler, Stephan.** *General Director of Deutsche Energie-Agentur (DENA). German*

### Summary:

According to the conclusions reached by the WSB14 Global Vision Report (Building a Common Home):

The global environmental situation is critical in some aspects such as climate change, biodiversity loss and energy availability. There are also environmental aspects whose local expression is also very often critical: deterioration of water resources, soil destruction, excessive pressure on renewable resources, etc.

The growing population demands habitability. Following current tendencies, by 2050 the building sector alone will be responsible for all the global emissions that the 2°C increase scenario allows.

Aware of those crises and their environmental importance, the building sector has started putting in place several actions to face environmental exigencies. But they are actions born to improve current practices, without global goals references. The building sector, crucial in responding to the global challenges, has possibilities to do so, but these need to be incorporated into a global vision that allows designing adequate strategies to face them. Professor Albert Cuchí, President of WSB2014 Barcelona and Author of the Global Vision Report will analyse these kind of global challenges from the perspective of the question that inspires the Conference: are we moving as quickly as we should? It's up to us. Considering the foregoing situation, the building sector must become the heart of the discussions on energy transition. Perhaps the most inspiring example comes from Germany. The General Director of DENA, Stephen Kohler will address this issue.



Session: 1 Room: J Time: 15.00-16.30 Transforming Reality

**Labels:** Health and Indoor  
Quality  
Building Regulations and Standards

**ROCKWOOL**



## Are buildings that burn down sustainable?

### Chairman:

**Dunca, Bill.** *Partner, Advizors. EU*

### Speakers:

**Torero, José.** *Professor, Head of School, School of Civil Engineering, The University of Queensland. Queensland, Australia*

**Roisin, Jean Philippe.** *Business Development Manager EMEA FM Approvals*

**Sjöström, Johan.** *Researcher, SP Technical Research Institute of Sweden*

**Lange, David.** *Researcher, SP Technical Research Institute of Sweden*

Session: 2 Room: A Time: 15.00-16.30 Transforming Reality

**Labels:** Rating tools  
Financing and New Business Models  
Education and Knowledge Management



## Buildings: World's Closing Window of Opportunity; What could be the role of Rating Tools?

### Chairman:

**Sauer, Bruno.** *Technical Director, GBCe. Spain*

### Speakers:

**Kapoor, Prashant.** *Principal Industry Specialist-Green Buildings, International Finance Corporation (IFC). Washington, USA*

**Oussidhoum, Firdaous.** *Director of International and External Relations at Africa Union Of Architects. Morocco*

**Platt, Roger.** *President of US Green Building Council. USA*

**Kerswill, Bruce.** *Chair of WorldGBC and South Africa GBC. South Africa*

| Session: 3 | Room: F | Time: 15.00-16.30 | Transforming Reality |
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**Labels:** Politics and governance  
Renovation, retrofitting and regeneration



**Which are the strategies and actions of the Government of Spain to achieve energy efficient building renovation and fight climate change?**

**Chairman:**

**León, Isabel**, *Architect, Executive Committee of GBCe*

**Speakers**

**TBC** High representative of General Directorate of Architecture, Housing and Land.  
Ministry of Infrastructure

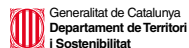
**TBC** High representative of Spanish Office for Climate Change (OECC). Ministry of  
Agriculture, Food Quality and the Environment

**TBC** High representative of General Directorate of Energy Policy and Mining, Ministry  
of Industry, Energy and Tourism

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| Session 4 | Room: H1 | Time: 15.00-16.30 | Transforming Reality |
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**Labels:** Nearly Zero Energy Building  
Operation and maintenance



**How to obtain zero-energy buildings: maintenance?**

**Chairman:**

**Vidal De Puig, Jordi**. *INCASÒL. Spain*

**Speakers:**

**Morer, Lluís**. *ICAEN. Catalonia, Spain*

**Reynolds, Fabian**. *PROMUSA. Spain*

**Valls, Gerard**. *Agència Catalana d'habitatge. Catalonia, Spain*

**Almécija, Joan Carles**. *ENERGEA S.L. Spain*

Session 5 Room: H2 Time: 15.00-16.30 Transforming Reality

**Labels:** Financing and New Business  
Models Renovation, retrofitting and regeneration



## Financial Structures and Incentives: How do we scale-up retrofit?

### Chairman:

**Sweatman, Peter.** *Chief Executive, Climate Strategy & Partners. Spain*

### Speakers:

On-going work in Europe led by the European Commission and its Energy Efficiency Institutional Finance Group to look at the barriers to attracting finance for energy efficient renovation

**Dorendorf, Bettina.** *DG Energy, European Commission. Brussels, Belgium*

Innovative financial instruments being developed for funding renovation and delivering deep renovation

**Bornholdt, Martin.** *CEO of DENEFF, the German Corporate Energy Efficiency Initiative. Germany*

The policy and regulatory framework being evolved in Europe to help scale-up national renovation programmes

**Lynham, Barry.** *Group Director of Strategy and Communication, Knauf Insulation. Belgium*

The potential suite of other innovative financial solutions that can be put in place alongside private finance to ensure businesses and individuals take up renovation packages.

**Lesay, Ivan.** *Advisor to the Vice-Chairman of Government and Minister of Finance. Czech Republic*

Session: 6 Room: H3 Time: 15.00-16.30 Transforming Reality

**Labels:** Life-Cycle assessment  
Construction Systems and materials



## Architecture based on circular economy, is this the right way?

### Chairman:

**Llebot, Josep Enric.** *Current Secretary of Environment and Sustainability of the Government of Catalunya. Spain*

### Speakers:

**Braungart, Michael.** *Founder of EPEA International Umweltforschung GmbH in Hamburg, Germany, and co-founder of MBDC McDonough Braungart Design Chemistry in Charlottesville, Virginia. Currently professor of Process Engineering at the University of Applied Sciences in Suderburg. Germany*

**Diaz Camacho, Miguel Angel.** *Architect, Ph.D. in Architectural Design, UPM ETSA Madrid. Madrid, Spain*

Session 7

Room: C1

Time: 15.00-16.30

Creating new resources

**Labels:** Stakeholders  
Operation and maintenance



## What role must the user play in sustainable building?

### Chairman:

**Colin, Brigitte.** *Consultant in Architecture, Cities and Urban Policies. UNESCO Natural Sciences Sector*

### Speakers:

Impact of occupant behavior on space heating demand in the retrofit of multi-family residential buildings

**Domingo-Irigoyen, Silvia.** *SAVIArquitectura Research Group. School Of Architecture. University Of Navarra. Pamplona, Spain*

Post-Occupancy Evaluation by the test families in five Model Home 2020 across Euro

**Christoffersen, Jens.** *VELUX A/S. Hoersholm, Denmark*

Assessment of Occupant Satisfaction in Building Performance Evaluation based on Systematic Surveys

**Wagner, Andreas.** *Karlsruhe Institute of Technology, Building Science Group. Karlsruhe, Germany*

Using the EduTool: IEQ to evaluate the IEQ performance inside classrooms

**Soccio, Philippa.** *The University Of Melbourne. Melbourne, Australia*

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Session: 8

Room: C3

Time: 15.00-16.30

Transforming Reality

**Labels:** Housing  
Renovation, retrofitting and regeneration  
Health and Indoor quality



## Do we really want to build in the most sustainable manner? How the use of concrete may help for make sustainable buildings?

### Chairman:

**Peñin Llobel, Alberto.** *Founder Peñin Arquitectos*

### Speakers:

**Ramos Abengózar, José Antonio.** *Partner of Vicent & Ramos Estudios de Arquitectura. Spain*

**López Antich, Marcos.** *Managing Director, Escofet 1886, S.A.*

**Arroyo Portero, Juan Carlos.** *Founder CALTER Ingeniería S.L.*

**Alonso Ollinger, Pedro.** *Housing Director, CEMEX*

Session 9 Room: C5 Time: 15.00-16.30 Transforming Reality

**Labels:** Construction Systems and materials  
Resources and waste



**How to incorporate sustainable tropical timber in construction?  
Advantages, challenges and opportunities**

**Chairman:**

**Fernández Candela, Javier**, *Fundación COPADE. Madrid, Spain*

**Speakers:**

**Nevado, Miguel**. *Enmadera. Madrid, Spain*

**Alfaya, Valentín**. *Ferrovial. Madrid, Spain*

**Anguita, Gonzalo**. *FSC Spain. Madrid, Spain*

**Noriega, Ana Belén**. *PEFC Spain. Madrid, Spain*

Session 10 Room: B1 Time: 15.00-16.30 Creating new resources

**Labels:** Renovation, retrofitting and regeneration



**Where should energy renovation reach up to? (I)**

**Chairman:**

**Lützkendorf, Thomas**, *Head of the Chair of Sustainable Management of Housing and Real Estate Department of Economic and Business Engineering at Karlsruhe Institute of Technology (KIT)*

**Speakers:**

Method to develop cost-effective studies of energy efficiency measures for Meditterraen residential existing buildings with multi-criteria optimization

**Salom, Jaume**. *Catalonia Institute For Energy Research (IREC). Sant Adrià del Besòs, Spain*

Urban energy interventions in Oostland (NL): bottom-up towards sustainability

**Broersma, Siebe**. *Technical University Delft, Fac. Of Architecture. Delft, The Netherlands*

Regionalization of buildings-stock description as basis for evaluating energy conservation measures - South East Norway and South West Sweden

**Mata, Erika**. *Chalmers University Of Technology. Gothenburg, Sweden*

Analysis of Indoor Environment Quality and Heating Energy Consumption by Building Retrotif for Energy Efficiency of the Public Building

**Jang, Min Seon**. *Korea Institute Of Construction Technology. Goyang-Si, Republic of Korea*

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|------------|----------|-------------------|----------------------|
| Session 11 | Room: B2 | Time: 15.00-16.30 | Transforming Reality |
|------------|----------|-------------------|----------------------|

**Labels:** Rating Tools Building  
Regulations and Standards



## How to harmonize building assessment at European level?

### Chairman:

**Berchtold-Domig, Markus.** *Network Enterprise Alps (NENA), Schwarzenberg, Austria*

### Speakers:

**Moro, Andrea.** *iiSBE Italia. Turin, Italy*

**Borak, Dalibor.** *Czech Chamber of Architects. Prague, Czech Republic*

**Viennot, Etienne.** *Rhône-Alpes Regional Energy and Environment Agency. Lyon, France*

**Moosbrugger, Robert.** *Regional Development Vorarlberg. Alberschwende, Austria*

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| Session 12 | Room: B3 | Time: 15.00-16.30 | Creating new resources |
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**Labels:** Construction Systems and materials  
Best Papers of SB13 Conference series



## Which is the best strategy for building envelopes: insulation or thermal inertia?

### Chairman:

**Kratz, Markus.** *Forschungszentrum Jülich. Germany*

### Speakers:

Improving the thermal performance of commercial buildings envelope

**Mendes Da Silva, J.A.R.** *University Of Coimbra. Coimbra, Portugal*

Thermal Performance Analysis of Un-insulated and Owner Insulated Masonry Residential Buildings in Northwestern Mexico using State-Space Simulation and Lumped Parameter Modeling

**Palomera-Arias, Rogelio.** *University Of Texas At San Antonio. San Antonio, USA*

Energy efficiency in Spanish social housing stock. Façade composition and energy demand review (*Best Papers SB13 California*)

**Alonso, Carmen.** *Eduardo Torroja Institute Of Construction Science IETCC, Spanish National Research. Madrid, Spain*

Double skin façade for naturally ventilated office buildings in Brazil

**Barbosa, Sabrina.** *University Of Brighton. Brighton, United Kingdom*

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Session 13 Room: E1 Time: 15.00-16.30 Creating new resources

**Labels:** Urban Scale  
Renovation, retrofitting and regeneration  
Politics and Governance



**What are the bottlenecks in the sustainable urban regeneration process?**

**Chairman:**

**de Santiago, Eduardo.** *Consejero Técnico. Subdirección General de Urbanismo. Subdirección General de Urbanismo. Ministerio de Fomento, Gobierno de España. Spain*

**Speakers:**

Rallying to Sustainability of Existing Public Housing Estates

**Chan, S.T.** *Hong Kong Housing Authority. Hong Kong, China*

A Strong Research Environment for Sustainable Renovation Established in Sweden

**Mjörnell, Kristina.** *SP Technical Research Institute Of Sweden. Gothenburg, Sweden*

Eurbanlab, the 5P approach to accelerate the transition to low-carbon resilient cities

**Mateo, Carolina.** *Instituto Valenciano Edificación, Universidad Europea Valencia. Valencia, Spain*

A scenario of long-term integrated spatial planning strategies for sustainable community

**Kamei, Miho,** *The University Of Tokyo. Tsukuba, Japan*

Session 14 Room: E2 Time: 15.00-16.30 Creating new resources

**Labels:** Urban Scale  
Renovation, retrofitting and regeneration  
Stakeholders



**Urban renewal, how is it managed?**

**Chairman:**

**Cárdenas, Luz.** *University Of Chile Faculty of Architecture & Urbanism. Santiago, Chile*

**Speakers:**

Unique heritage. Sustainable valorization in urban and environmental complex contexts

**Carrá, Natalina.** *Mediterranean University of Reggio Calabria, Department PAU. Reggio Calabria, Italy*

Think different – gain more, spend less A real life example from a passive house refit

**Martinsson, Linda.** *Skanska Sverige AB. Göteborg, Sweden. Gothenburg, Sweden*

Comparing socio-technical regimes and transition potential in Austrian and Swedish multi-residential housing

**Femenias, Paula.** *Chalmers University of Technology. Gothenburg, Sweden*

Managing sustainability aspects in renovation processes: Interview study and outline of a process model

**Olsson, Stefan.** *KTH Royal Institute Of Technology. Stockholm, Sweden*

| Session 15 | Room: E3 | Time: 15.00-16.30 | Creating new resources |
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**Labels:** Rating tools



## Which should the challenges of buildings rating tools be?

### Chairman:

**Larsson, Nils.** *Executive Director, iiSBE*

### Speakers:

Tools comparison: Ecometro vs Existing environmental buildings assessment systems

**Alonso, Iñaki.** *Asociación Ecómetro. Madrid, Spain*

Qualitative assessment for sustainable housing

**Lalande, Christophe.** *UN-Habitat. Nairobi, Kenya*

Social performance criteria for buildings according to the CEN TC 350: Case study of the assessment of the Velux Sunlight-House, Austria

**Tritthart, Wibke.** *Interuniversity Research Center (IFZ). Graz, Austria*

Tool for Evaluation of Thermal and Environmental Performance of Buildings

**Badurova, Silvia.** *Research Centre, University Of Zilina. Zilina, Slovakia*

DGNB Certification System

**Dax, Michael,** *German Sustainable Building Council. Germany*

| Session 16 | Room: E4 | Time: 15.00-16.30 | Creating new resources |
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**Labels:** Traditional Architecture  
Renovation, retrofitting and regeneration  
Best Papers of SB13 Conference series



## How can traditional architecture contribute to sustainability? (I)

### Chairman:

**Laureano, Pietro.** *President of International Traditional Knowledge Institute (ITKI), IPOGEA*

### Speakers:

Assessment of Existing and Historical Buildings in Terms of Sustainability – Case Studies in the Czech Conditions

**Mancik, Stepan.** *CTU In Prague, Faculty Of Civil Engineering. Praha, Czech Republic*

Energetic and comfort benefits of composite buildings. Learning from vernacular techniques

**Szkordilis, Flóra.** *Department Of Environmental Economics, BUTE. Budapest, Hungary*

Vernacular Architecture Approach to achieve sustainability In Informal Settlements

**Omar, Walid.** *Beirut Arab University. Beirut, Lebanon*

Using Historic Cases to Formulate Appropriate Sustainable Building Refurbishment Strategy

**Ng, S. Thomas.** *The University Of Hong Kong. Hong Kong, China*



Session 17 Room: E5 Time: 15.00-16.30 Creating new resources

**Labels:** Health and Indoor Quality



**What should the limits to comfort and how can we manage them?**

**Chairman:**

**Sánchez Ostiz, Ana.** *Dra. Arquitecta, Profesora Titular de Construcciones Arquitectónicas de la Universidad de Navarra, Directora del Master de Diseño y Gestión Ambiental de Edificios. EA UNAV. Pamplona, Spain*

**Speakers:**

The use of intelligent buildings to achieve sustainability through an architectural proposal for public buildings in Cairo

**Khashaba, Sherif.** *Zagazig University, Beirut Arab University. Cairo, Egypt*

Energy and environmental impacts of home automation components

**Longo, Sonia.** *Dipartimento Di Energia, Ingegneria Dell'Informazione E Modelli Matematici, Uni. Palermo. Italy*

The comfort range as a nonlinear function and its role on evaluating the design performance of low energy buildings

**Linhares De Siqueira, Gustavo.** *Hafencity Universität, Resource Efficiency In Architecture And Planning. Hamburg, Germany*

Automatic quantification for waste management with BIM Models

**Cózar, Elías.** *Escuela Técnica Superior de Ingeniería de Edificación. Departamento de construcción. Sevilla, Spain*

Session 18 Room: E6 Time: 15.00-16.30 Creating new resources

**Labels:** Education and Knowledge Management  
Politics and governance



**Is North-South technology transfer efficient?**

**Chairman:**

**Torres, Mario.** *Subdirector Instituto de la Vivienda. Facultad de Arquitectura y Urbanismo, Universidad Chile, INVI*

**Speakers:**

Technological implants for sustainable autonomous upgrading of informal settlements in Cairo-Egypt

**Nadim, Wafaa.** *Then German University In Cairo (GUC). Cairo, Egypt*

Sustainable community and neighbourhood regeneration and development. Experiences from the approach and implementation of VTT's EcoCity concept

**Huovila, Pekka.** *VTT Technical Research Centre Of Finland. Espoo, Finland*

The influence of the Mediterranean climate on vernacular architecture: a comparative analysis between the vernacular responsive architecture of southern Portugal and north of Egypt

**Fernandes, Jorge.** *C-TAC Research Unit, University of Minho. Guimaraes, Portugal*

IDES-EDU: Comprehensive multidisciplinary education programme to accelerate the implementation of EPBD in Europe

**Wyckmans, Annemie.** *NTNU Norwegian University Of Science And Technology. Trondheim, Norway*

Session 19

Room: J

Time: 17.00-18.30

Transforming Reality

**Labels:** Health and Indoor Quality  
Building Regulations and Standards



**ROCKWOOL**

**Is invisible architecture the secret to happy, productive and healthy buildings? Specifically - acoustic comfort a privilege or a must**

**Chairman:**

**Treasure, Julian.** *The Sound Agency. England*

**Speakers:**

**Daumal i Domènech, Francesc.** *Ph.D. in Architecture and Full Professor at ETS d'Arquitectura de Barcelona (UPC). Barcelona, Spain*

**Czerwinska, Dominika.** *Manager of Membership and Europe Network, World Green Building Council*

Session: 20

Room: A

Time: 17.00-18.30

Transforming Reality

**Labels:** Renovation, retrofitting and regeneration  
Politics and governance  
Stakeholders



**Which are the keys to define roadmaps to sustainable building?**

**Chairman:**

**Sweatman, Peter.** *CEO and Founder of Climate Strategy, Madrid, Spain*

**Speakers:**

**Joyce, Adrian,** *Secretary General EuroACE. Brussels, Belgium*

**Garcia, Pau.** *Project Officer, At European Commission. Brussels, Belgium*

**Hidalgo, Andoni.** *Manager Communications & Public Affairs at Eurima. Brussels, Belgium*

Session: 21

Room: F

Time: 17.00-18.30

Transforming Reality

**Labels:** Rating Tools  
Building Regulations and Standards  
Renovation, retrofitting and regeneration



**Which methodologies, tools and projects for Energy Renovation in Buildings within MED Regional Strategies should be used in the framework of EU Directives?**



**Chairman:**

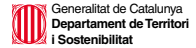
**Marti, Xavier.** *Coordinator Marie Project. DTS-Generalitat de Catalunya. Barcelona Spain*

### Speakers:

**Cervelli, Curzio.** *JTS MED. Marseille, France*  
**Peters, Christoph.** *LIMA secretary. Barcelona, Spain*  
**Herrenschmidt, Aniela.** *Chargée de projet. Région PACA, France*  
**Llisteri, Fabián.** *UMAR. Malta*  
**Abrego, Luisa.** *Regione Piemonte, Italy*  
**Navarro, Pere.** *CTFC Solsona. Spain*

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| Session 22 | Room: H1 | Time: 17.00-18.30 | Transforming Reality |
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**Labels:** Housing



### Housing demand in a post-crisis context configuration

### Chairman:

**Baulies, Xavier.** *Head of Research and Innovation of the Department of Territory and Sustainability*

### Speakers:

**Comerón, Lluís-Xavier.** *Dean of the Official College of Architects of Catalonia*  
**Bosch Meda, Jordi.** *Architect and political scientist. Responsible for Redevelopment of Neighborhoods in the General Direction of Housing of the Generalitat de Catalunya*

|            |          |                   |                      |
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| Session 23 | Room: H2 | Time: 17.00-18.30 | Transforming Reality |
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**Labels:** Renovation, retrofitting and regeneration  
Housing



### How can a demonstration project trigger the energy retrofitting of social and public housing in Europe?

### Chairman:

**De Las Cuevas Jiménez, Juan Ramón.** *ACCIONA Infraestructuras S.A. Madrid, Spain*

### Speakers:

**Alexandersson, Ulf.** *Alingsåshem AB. Alingsås, Sweden*  
**Jacobs, Anne.** *Luwoqe Consult GmbH. Ludwigshafen, Germany*  
**Martinsson, Linda.** *Skanska Sverige AB. Göteborg, Sweden*  
**Hiller, Carolina.** *SP Technical Research Institute of Sweden. Borås, Sweden*

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| Session 24 | Room: H3 | Time: 17.00-18.30 | Transforming Reality |
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**Labels:** Urban Scale  
Resources and waste



Ajuntament  
de Barcelona

**What is the right approach to energy and natural resources in the sustainable cities?**

**Chairman:**

**Manteca, Florencio.** *MSc Architect. Director of the Energy in Buildings Department at the National Renewable Energy Centre of Spain, CENER*

**Speakers:**

**Treberspurg, Martin.** *Univ. Prof. Arch. DI Dr, Head of Division of Sustainable Construction, University of Natural Resources and Life Sciences. Vienna, Austria*

**Astibia, Alejandro.** *Dipl. Ing. Manager at Energy Agency of Pamplona. Pamplona, Spain*  
**Roux, Saul.** *African Centre For Cities. Cape Town, South Africa*

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| Session 25 | Room: C1 | Time: 17.00-18.30 | Creating new resources |
|------------|----------|-------------------|------------------------|

**Labels:** Stakeholders  
Financing and New Business Models



**Which are the keys to interest owners in sustainable building?**

**Chairman:**

**Colin, Brigitte.** *Consultant in Architecture, Cities and Urban Policies. UNESCO Natural Sciences Sector*

**Speakers:**

Swedish property owners' experience of added value from environmentally certified non-residential buildings

**Brown, Nils.** *KTH, Royal Institute Of Technology. Stockholm, Sweden*

How to motivate homeowners to invest in sustainable renovation?

**Galiotto, Nicolas.** *Department Of Civil Engineering, Aalborg University. Copenhagen, Denmark*

Integration of sustainability aspects into property valuation practice

**Lorenz, David.** *Karlsruhe Institute Of Technology. Karlsruhe, Germany*

Shifting the ownership paradigm in the built environment

**F. Velasco-Fuentes, Carlos.** *University Of British Columbia. Vancouver, Canada*

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Session: 26

Room: C3

Time: 17.00-18.30

Transforming Reality

**Labels:** Construction Systems and materials  
Renovation, retrofitting and regeneration



**How can innovative technologies make a difference in building retrofitting? The RESSEEPE approach.**

**Chairman:**

**Certeno, Fernando.** *Head of research projects (Exergy)*

**Speakers:**

**Roman, Eduardo.** *Solar Photovoltaic Manager in the SOLAR Area of Energy and Environment Division (TECNALIA). New technologies for refurbishment in RESSEEPE*

**Sakas, Nikkos.** *Manager and in charge of the WIRELESS THINGS spin off activity under buildingwarden.com (Apintech Ltd). Innovative sensor development and monitoring in RESSEEPE*

**Pérez, Patricia.** *Architect in Technical Department of Building Projects (OHL). New technologies applied to building demosites in RESSEEPE*

**Ferrando, Valeria.** *EU Head of Research (IES). Numerical simulation of buildings in RESSEEPE*

Session 27

Room: C5

Time: 17.00-18.30

Creating new resources

**Labels:** Case Studies  
Education and Knowledge Management



**What does construction of schools teach us about sustainable building?**

**Chairman:**

**Zamora, Joan Lluís.** *Professor Universitat Politècnica de Catalunya. Barcelona, Spain*

**Speakers:**

**ECO - SCHOOL - MAX - Built with waste materials**

**Camacho Ballesteros, Jesús.** *Ecoart-Ddactic. Palafròls, Spain*

*Integrated value model for sustainable assessment of school centers construction*

**Pons Valladares, Oriol.** *UPC. Barcelona, Spain*

*Users impact on energy and water consumption in Portuguese school buildings. From assessment to strategy*

**Lourencio, Patricia.** *Técnico, Universidade De Lisboa. Lisbon, Portugal*

*From Single Building to Master Plan. Policies for Transformative Refurbishment of School Building Stocks*

**Lorbek, Maja.** *Vienna University Of Technology. Wien, Austria*

Session 28

Room: B1

Time: 17.00-18.30

Creating new resources

**Labels:** Renovation, retrofitting and regeneration



## Where should energy renovation reach up to? (II)

### Chairman:

**Lützkendorf, Thomas.** *Head of the Chair of Sustainable Management of Housing and Real Estate Department of Economic and Business Engineering at Karlsruhe Institute of Technology (KIT)*

### Speakers:

Renovation of non-profit social housing to CO2 neutral buildings on Active House level

**Eriksen, Kurt Emil.** *Active House Alliance. Bruxelles, Belgium*

Thermal Rehabilitation in old residential buildings

**Salehi, Atefeh.** *Department of Mechanical Engineering, Faculty of Sciences and Technology, Univer. Coimbra, Portugal*

Towards effective energy efficient rehabilitation of building envelopes

**Sánchez-Ostiz Gutiérrez, Ana.** *Universidad De Navarra. Pamplona, Spain*

Spatial Quality in Building Performance Assessments Tools. The case of in Dwelling Renovation for Energy Efficiency

**Acre, Fernanda.** *NTNU Norwegian University Of Science And Technology. Trondheim, Norway*

Regulatory review on the energy performance of buildings towards 2020 EU's targets. Portugal's Case Study

**Morais, Patricia.** *Instituto Superior Técnico, Universidade De Lisboa. Oeiras, Portugal*

Session 29

Room: B2

Time: 17.00-18.30

Transforming Reality

**Labels:** Rating Tools  
Case Studies



## How can ICT technologies be relevant enablers for Energy Efficient Buildings?

### Chairman:

**Griera-i-Fisa, Mercè.** *European Commission, Communications Networks, Content and Technology Directorate-General, Smart Cities & Sustainability. Brussels, Belgium*

### Speakers:

**Jiménez Redondo, N.** *CEMOSA. Málaga, Spain*

**Amorós, F.** *Universitat Politècnica de Catalunya, Department of Construction Engineering. Terrassa, Spain*

**Marquina, A.** *Solintel M&P. SL. Madrid, Spain*

**Costa, A.** *Informatics Research Unit for Sustainable Engineering, National University of Ireland. Galway, Ireland*

Session 30 Room: B3 Time: 17.00-18.30 Creating new resources

**Labels:** Construction Systems and materials  
Best Papers of SB13 Conference series



## Do sustainable buildings require complex technical innovations?

### Chairman:

**Meacham, Brian, J.** *Associate Professor. Worcester Polytechnic Institute. USA*

### Speakers:

Optimization of Energy Supply Systems for a Sustainable District in Stockholm Using Genetic Algorithms

**Magny, Alessandro Antoine Andrea.** *KTH, Royal Institute of Technology. Stockholm, Sweden*

Characteristics of design process in Life Cycle Carbon Minus House

**Toki, Kensuke.** *KOIZUMI Atelier. Yokohama, Kanagawa, Japan*

Energy-Saving Technologies Incorporated in a Low-Carbon Office Building Located in Tokyo. (*Best Papers SB13 Singapore*)

**Takemasa, Yuichi.** *Kajima Technical Research Institute Singapore. Singapore*

The impact of cool roof applications on energy performance: results from Australian subtropical and tropical field studies

**Miller, Wendy.** *Queensland University Of Technology*

Session 31 Room: E1 Time: 17.00-18.30 Creating new resources

**Labels:** Education and Knowledge Management  
Urban Scale



## Improvements by research and practice. Can the distance between theory and reality be reduced?

### Chairman:

**Wadel, Gerardo.** *Socio fundador. Societat Orgànica Consultora Ambiental SL*

### Speakers:

What does practice in the built environmental look like from the ecological worldview?

**Hes, Dominique.** *The University Of Melbourne. Melbourne, Australia*

Compact cities for a fast urbanizing world

**Labbe, Françoise.** *Urban Morphology and Complex Systems Institute. Paris, France*

Breaking symmetries and emerging urban structures

**Salat, Serge.** *Urban Morphology and Complex Systems Institute. Paris, France*

|            |          |                   |                        |
|------------|----------|-------------------|------------------------|
| Session 32 | Room: E2 | Time: 17.00-18.30 | Creating new resources |
|------------|----------|-------------------|------------------------|

**Labels:** Nearly Zero Energy  
Building Urban Scale



## Is zero carbon design an adequate solution for sustainable development?

### Chairman:

**Higuera, Esther.** *Profesor Titular UPM. Profesora de Postgrado UPM. Departamento de Urbanística y Ordenación del Territorio ETSAM UPM*

### Speakers:

Study on Residential Policy of ZEH for Local Action in Taiwan

**Tsay, Yaw-Shyan.** *National Cheng-Kung University. Tainan, Taiwan, Republic of China*

Paths towards zero carbon city using nanotechnology. Tripoli city case study

**Omar, Osama.** *Beirut Arab University. Beirut, Lebanon*

Planning outline and analysis of actual energy operational performance from completion to present in Japanese and foreign large domes and stadiums

**Takai, Hiroaki.** *Takenaka Corporation. Tokyo, Japan*

Post Occupant Evaluation of Green Mark-Rated Buildings in Singapore

**Kishnani, Nirmal.** *Department Of Architecture, School Of Design And Environment, National University. Singapore*

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|------------|----------|-------------------|------------------------|
| Session 33 | Room: E3 | Time: 17.00-18.30 | Creating new resources |
|------------|----------|-------------------|------------------------|

**Labels:** Rating Tools



## To obtain sustainable building, can the same tools be used everywhere?

### Chairman:

**Sauer, Bruno.** *Director Técnico GBCe, Socio Bipolaire Arquitectos. Profesor Universidad Europea de Valencia. Spain*

### Speakers:

Application of CASBEE-City to Various Types of Cities around the World

**Takigami, Masaki.** *Keio University. Yokohama, Japan*

A comparison of the life cycle energy profile of residential buildings in different countries

**Stephan, André.** *Université Libre de Bruxelles. Brussels, Belgium*

Tomorrows buildings today – results, conclusions and learnings from a cross-european demonstration programme

**Feifer, Lone.** *VELUX Group. Hoersholm, Denmark*

Do Imported Building Environmental Assessment Methods Accelerate Culturally Appropriate Green Building Practices?

**Cole, Raymond.** *University of British Columbia. Vancouver, Canada*



Session 34 Room: E4 Time: 17.00-18.30 Creating new resources

**Labels:** Traditional Architecture 

## How can traditional architecture contribute to sustainability? (II)

### Chairman:

**Laureano, Pietro.** *President of International Traditional Knowledge Institute (ITKI), IPOGEA*

### Speakers:

Earthen Architecture & Sustainable Building: Proposed Union between authenticity and technical renovation - Case of South Moroccan Villages

**El Rharbi, Siham.** *Ecole Nationale d'Architecture - Rabat. Casablanca, Morocco*


Development of a Self-Compacted Clay based Concrete: Rheological, mechanical and environmental investigations

**Landrou, Gnanli.** *ETH Zurich. Zurich, Switzerland*

Energy efficiency strategies and tools for the refurbishment of Mediterranean historical small town centres: a methodology

**Battisti, Alessandra.** *PDPTA Departement, Sapienza University of Rome. Rome, Italy*

Session 35 Room: E5 Time: 17.00-18.30 Creating new resources

**Labels:** Health and Indoor Quality 

## How do lighting and ventilation influence user comfort in buildings?

### Chairman:

**Gomes, Vanesa.** *Associate Professor. University of Campinas. Brazil*

### Speakers:

Post Occupancy Evaluation of Shading Device for Elementary School Classroom

**Hsieh, Hung-Ren.** *Graduate Institute Of Architecture And Sustainable Planning, National Ilan Unive. Yilan, Taiwan, Republic of China*

Control of indoor climate systems in Active Houses

**Holzer, Peter.** *Institute Of Building Research & Innovation. Vienna, Austria*

Passive Cooling by Ventilated Façades in Streets Canyons under Climatic Summer Conditions in Southern Europe

**Domínguez Delgado, Antonio.** *Escuela Técnica Superior De Arquitectura. Universidad De Sevilla. Sevilla, Spain*

Floor-integrated HVAC-systems for zonal supply of multifunctional buildings

**Wolisz, Henryk.** *RWTH Aachen University. Aachen, Germany*

Session: 36

Room: E6

Time: 17.00-18.30

Creating new resources

**Labels:** Education and Knowledge Management  
Stakeholders



## Do we know all the benefits of sustainable management?

### Chairman:

**Gálvez, Miguel Angel.** *Doctor Arquitecto. Profesor Titular Interino. Escuela Técnica Superior Arquitectura Madrid, UPM. Spain*

### Speakers:

Festivals as laboratories: Developing new temporary housing

**Haugbølle, Kim.** *Danish Building Research Institute/Aalborg University. Copenhagen, Denmark*

Avtice + Stadia: Guidelines and Indicators for Sustainability and Plus-Energy Mega-Event-Buildings

**Essig, Natalie.** *Munich University of Applied Science. Germany*

Learning from the past: Training for a sustainable future of the tourist sector in the Coastal Atacama Desert

**Whitman, Christopher J.** *Laboratorio De Bioclimática, FAUP, Universidad Central de Chile. Santiago de Chile, Chile*

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## Beyond the critic: the transitional perspective applied to the building sector

### Speakers:

**Kohler, Stephan.** *General Director of Deutsche Energie-Agentur (DENA). Germany*

**Yayo Herrero.** *Co-coordinadora estatal de Ecologistas en Acción. Spain*

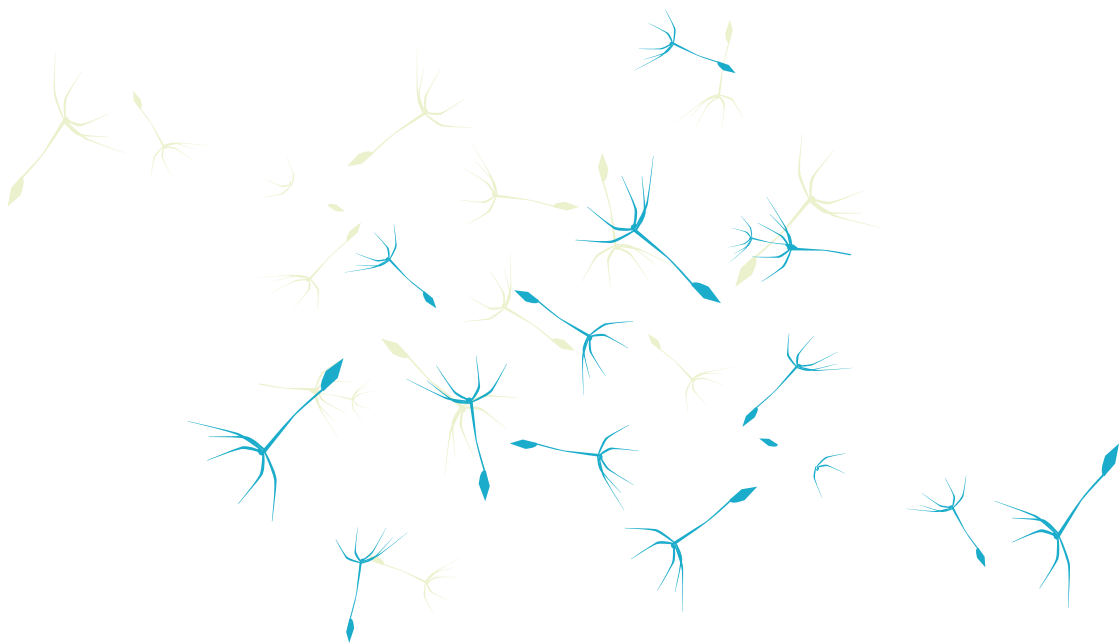
**Rudinger, Andreas.** *Research Fellow. Climate and Energy Policies. IDDRI (Institut du Développement Durable et Relations Internationales). France*

### Summary:

As will have been explained by the keynote speakers in the previous Global Vision session, in the morning of this first day of the WSB2014 conference, the global environmental situation is critical in some aspects such as climate change, biodiversity loss and energy availability. For example, following current tendencies, by 2050 the building sector alone will be responsible for all the global emissions that the 2°C increase scenario allows.

This roundtable will follow the analysis of these global challenges to what the building sector has to face. Participants in the discussion, as well as the German leader Stephen Kohler, will include a representative of the Institute for Sustainable Development and International Relations (IDDRI- Institut pour le développement durable et les relations internationales) offering experience related to French energy transition; and Yayo Herrero, a senior representative of the ecologist and social Spanish movement with a more alternative view.





**Wednesday, 29<sup>th</sup> October**

## Is sustainability still possible? the role of the building sector



### Speakers:

**Chan Mo-Po, Paul.** *Secretary for Development, the Government of the Hong Kong Special Administrative Region. Hong Kong*

**Engelman, Robert.** *Former President of World Watch Intitute. USA*

### Summary:

As will have been explained by the keynote speakers in the previous Global Vision session, in the morning of this first day of the WSB2014 conference, the global environmental situation is critical in some aspects such as climate change, biodiversity loss and energy availability. For example, following current tendencies, by 2050 the building sector alone will be responsible for all the global emissions that the 2°C increase scenario allows.

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**Session: 37      Room: J      Time: 10.00-11.30      Transforming Reality**

**Labels:** Stakeholders  
Financing and New Business Models



**Is it possible to achieve an alternative real-estate model where “nearly” everyone wins?**

**Chairman:**

**Bermejo Amarillo, Javier.** *Marketing and Kömmerling Prescription Manager*

**Speakers:**

**Mira Illana, Miguel Ángel.** *Arquitecto, Socio fundador y Presidente de la Asociación Jubilares. Socio Fundador de Milla Mira y Navarro Arquitectos S.L.*

**Style, Oliver.** *Cofundador de Progetic y Director del Área de Edificios de bajo consumo. Consultor energético, Proyectista Passivhaus Certificado*

**Robert, Raul.** *Industrial Engineer, Socio Fundador Sostre Civic*

**Ruiz, Rogelio.** *Arquitecto, eCOHOUSING Equipo Bloque Arquitectos*

**Session: 38      Room: A      Time: 10.00-11.30      Transforming Reality**

**Labels:** Financing and New Business Models  
Stakeholders



**Are sustainable buildings worth the effort? (The view from various sectors involved)**

**Chairman:**

**Lechien, Dominique.** *Partner, Chairman of Baker & McKenzie Global Real Estate Practice Group*

**Speakers:**

**Alfaya, Valentín.** *Quality & Environment Director Ferrovial*

**Reihlen, Albrecht.** *Managing Director - Deka Immobilien Investment GmbH*

**Amores, Miguel Ángel.** *Coordinator of the Environmental Department*

**Hirigoyen, Julie.** *UK Head of Sustainability Jones Lang Lasalle*

Session: 39

Room: F

Time: 10.00-11.30

Transforming Reality

**Labels:** Politics and governance  
Financing and New Business Models  
Renovation, retrofitting and regeneration



**How can we put in practice a multilevel Governance model integrating private sector for energy renovation in buildings in Mediterranean?**

**Chairman:**

**Strangis, Davide**, *Executive Secretary, CPMR Intermediterranean Commission*

**Speakers:**

**Maldonado, Eduardo**. *Coordinator of "European Concerted Building Action". University of Porto. Porto, Portugal*

**Repullo, Anna**. *Responsible MED Program. DG Regio-European Commission. Belgium*  
**Marti, Xavier**. *Coordinator MARIE project. DTS-Generalitat de Catalunya. Barcelona, Spain*

**Crotta, Stefania**. *Deputy Directorate Regionale 21. Regione Piemonte, Italy*

**Tourret, Jean Claude**. *Directeur. AVITEM, ELIH-Med partner. France*

**Amin, Naguib**. *CES MED Coordinator. Tunisia*

**Laverdière, Folco**. *Chef de service adjoint. Région PACA*

Session: 40

Room: H1

Time: 10.00-11.30

Transforming Reality

**Labels:** Construction Systems and materials  
Housing



**5th Active House Symposium, Session 1: How can sustainable buildings become standard solutions and affordable for people and society?**

**Chairman:**

**Eriksen, Kurt Emil**. *Secretary General, Active House*

**Speakers:**

The European Commission's view on sustainable buildings and future steps to strengthen the focus on sustainable buildings

**Garcia, Pau**. *EASME - DG Energy European Commission*

Can we use learnings from the past to develop standard solutions for sustainable buildings?

**Larsson, Nils**. *Executive Director. International Initiative for a Sustainable Built Environment (iiSBE)*

What are the value of sustainable buildings and how can we engage customers to invest in sustainable buildings?

**Haglund, Staffan**. *International Green Business Officer. Skanska*

How can the industry support a development towards sustainability and sustainable living?

**Rasmussen, Michael K**. *Chief Marketing Officer VELUX A/S and Chairman of Active House Advisory Board*



Session:41

Room: H2

Time:10.00-11.30

Transforming Reality

**Labels:** Education and Knowledge Management   
Case Studies  
Housing

## The future of Solar Decathlon Europe?

### Chairman:

**Rollet, Pascal.** *Competition Director of SDE 2014. Versailles*

### Speakers:

**Jacques Le Seigneur, Vincent.** *INES. France*

**Mesureur, Bruno.** *CSTB Solar. France*

**Rodríguez, Edwin.** *CSTB Solar and Universidad Politécnica de Madrid. Madrid, Spain*

**Veaga, Sergio.** *CSTB Solar and Universidad Politécnica de Madrid. Madrid, Spain*

Session: 42

Room:H3

Time:10.00-11.30

Transforming Reality

**Labels:** Construction Systems and materials  
Resources and waste



## Can Sustainable Resources Management Keep Up With Rapid Urbanisation / Building Construction?



### Chairman:

**Poon, C.S.** *Professor, Associate Head and Director of Research Centre for Environmental Technology and Management at the Civil and Environmental Engineering Department, The Hong Kong Polytechnic University, Hong Kong Special Administrative Region (HKSAR)*

### Speakers:

*Innovative Design Measures for Waste Minimisation in Public Housing Development*

**Fung, Ada Y.S.** *Deputy Director, Hong Kong Housing Authority, HKSAR*

*Moving Towards Low Carbon Building Design and Construction – From Rhetoric to Reality*

**Lee, Chun Fai.** *Manager - Research, Construction Industry Council, HKSAR*

*Case Studies of Development and Application of Green Concrete in Hong Kong*

**Zheng, W and So, K.L.** *Gammon Construction Ltd., HKSAR*

*Commercialisation and Applications of Recycled Construction Materials*

**Chan, Dixon.** *Tiostone Holdings Ltd. HKSAR*

Session: 43

Room: C1

Time: 10.00-11.30

Transforming Reality

**Labels:** Stakeholders  
Construction Systems and materials



**What is the role of construction materials suppliers to contribute to more sustainable buildings?**

**Chairman:**

**Hofmann, Dr. Matthias.** *Sika AG. Zurich, Switzerland*

**Speakers:**

**Alonso, Carmen.** *IETCC-CSIC. Madrid, Spain*

**Zambrana-Vasquez, David.** *CIRCE. Zaragoza, Spain*

**Carmona, Ana.** *Sika. S.A.U. Madrid, Spain*

**García de Oteiza, Rafael.** *Grupotec. Barcelona, Spain*

Session: 44

Room: C3

Time: 10.00-11.30

Transforming Reality

**Labels:** Education and knowledge management



**How to approach the project, with a common global commitment, from different environmental, social and economic al situations? The transformation in the architecture from the complicity between students and teachers**

**Chairman:**

**González, María Jesús.** *ASA President (Association of Sustainable Architecture) from 2010 to 2013. Member of the Scientific Committee of the contest POWERING TRANSFORMATION*

**Speakers:**

**CO3-Cooperativeness for Sustainable Regeneration**

**Moreno, Susana.** *European University of Madrid. Madrid, Spain*

**González, Francisco Javier.** *European University of Madrid. Madrid, Spain*

**WATERNET-La Yaguara resilience park**

**González, Yumisbet.** *Simon Bolivar University. Venezuela*

**Piscitelli, Isabel.** *Simon Bolivar University. Venezuela*

**PLUGGET MOBILITY-Co-working facilities in Barcelona**

**Izaga, Pablo.** *Sevilla University. Sevilla, Spain*

Session: 45 Room: C5 Time: 10.00-11.30 Transforming Reality

**Labels:** Politics and governance  
Operation and maintenance  
Case Studies



Federal Ministry for the  
Environment, Nature Conservation,  
Building and Nuclear Safety

**How does the Sustainable Use and Operation of Public Buildings in Germany works?**

**Chairman:**

**Lützkendorf, Thomas.** *Head of the Chair of Sustainable Management of Housing and Real Estate Department of Economic and business Engineering at Karlsruhe Institute of Technology (KIT)*

**Speakers:**

**Müller, Julia.** *Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR). Berlin, Germany*

**Leide, Lutz.** *Institute for Federal Real Estate (BlmA). Bonn, Germany*

**Schablitzki, Gerd.** *Federal Environment Agency (UBA), Dessau. Germany*

**Wagner, Andreas.** *Karlsruhe Institute of Technology (KIT). Karlsruhe, Germany*

Session: 46 Room: B1 Time: 10.00-11.30 Transforming Reality

**Labels:** Financing and New Business Models



**How can planners and investors benefit from best practice projects on sustainable buildings?**

**Chairman:**

**Vasallo, Ali.** *Fundación CARTIF, Boecillo. Valladolid, Spain*

**Speakers:**

**Zabalza, Ignacio.** *Fundación CIRCE. Zaragoza, Spain*

**Kaiser, Jan.** *Fraunhofer-Institut für Bauphysik IBP. Kassel, Germany*

**Lalaguna Alcaine, Iván.** *INGECON (Ingeniería y Control Electrónico). Zaragoza, Spain*

**Sanz, Sergio.** *Fundación CARTIF. Boecillo. Valladolid, Spain*

Session: 47

Room: B2

Time: 10.00-11.30

Creating new resources

**Labels:** Nearly Zero Energy Building  
Resources and waste



**Is embodied energy in materials the barrier to achieve ZEB? If so, how can we overcome it?**

**Chairman:**

**Tenorio, José Antonio.** *Responsable de la Unidad de Calidad en la Construcción. Instituto de Ciencias de la Construcción Eduardo Torroja. CSIC*

**Speakers:**

Sustainability and Building Materials within BNB – Evaluation, Tools and Database (BNB = German assessment system for sustainable construction for federal buildings)

**Brockmann, Tanja.** *Head of Division, Federal Institute for Research on Building, Urban Affairs and Spatial Development within Federal Office for Building Regional Planning. Berlin, Germany*

Design strategies for low embodied energy greenhouse gases in buildings: analyses of the IEA Annex 57 case studies

**Malmqvist, Tove.** *Royal Institute Of Technology (KTH). Stockholm, Sweden*

Assessment of embodied impacts – Incorporation of the approaches of IEA Annex 57 into the overall context of environmental performance assessment

**Balouktsi, Maria.** *Karlsruhe Institute Of Technology. Karlsruhe, Germany*

Introduction of Annex 57 -Evaluation of Embodied Energy and Carbon Dioxide Emissions for Construction in the Worldwide

**Okazaki, Tatsuo.** *Laboratory Of Environment Design. Tokyo, Japan*

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Session: 48

Room: B3

Time: 10.00-11.30

Creating new resources

**Labels:** Construction Systems and materials  
Resources and waste



**What role can renewable materials play in sustainable construction?**

**Chairman:**

**Laureano, Pietro.** *President of International Traditional Knowledge Institute (ITKI) IPOGEA*

**Speakers:**

Bamboo Reinforcement – A sustainable Alternative to Steel

**Heisel, Felix.** *ETH Zurich / Future Cities Laboratory Singapore. Singapore*

Lignin based Sandwich System for load bearing insulation

**Krombholz, Andreas.** *Fraunhofer Institute For Mechanics Of Materials IWM. Halle, Germany*

Applicability of a vapor-open wooden building envelope for subtropical regions in global context

**Goto, Yutaka.** *Chalmers University Of Technology. Gothenburg, Sweden*

Technological innovation within 'villas miserias' (SLUMS)

**Michelena Valcárcel, Emiliano Cruz.** *DIST - Politecnico Di Torino. Torino, Italy*

**Session: 49**

**Room: E1**

**Time: 10.00-11.30**

**Creating new resources**

**Labels:** Building Regulations and Standards  
Urban Scale



**Regulations, processes and systems to support Energy Efficiency in buildings: Are there contradictions between theory and practice?**

**Chairman:**

**de Santiago, Eduardo.** *Consejero Técnico. Subdirección General de Urbanismo. Subdirección General de Urbanismo. Ministerio de Fomento, Gobierno de España*

**Speakers:**

Traffic Problems in the Core Area of Historic City of Casbah, Algiers: from urban conservation to sustainable development

**Dilmi, Djamel.** *Gtu. M'Sila. Algeria.*

Australian residential energy efficiency regulations – success, shortcomings and learnings

**Ambrose, Michael.** *Commonwealth Scientific And Industrial Research Organisation. Highett, Australia*

Development of a decision-making framework for the analysis of incentive schemes within the context of sustainable building

**Hipwood, Tara.** *School of Planning and Geography, Cardiff University. Cardiff, United Kingdom*

Session: 50

Room: E2

Time: 10.00-11.30

Creating new resources

**Labels:** Urban Scale  
Construction Systems and materials



## What role must new technologies play in sustainable urban transformation strategies?

### Chairman:

**Todd, Joel Ann.** *Environmental Consultant*

### Speakers:

Photovoltaics in Italian historical city centers: PV products and building codes have a meeting point?

**Paparella, Rossana.** *Department Of Civil, Environmental And Architectural Engineering, University Of. Padova, Italy*

The Empowered Policy on Kaohsiung City's Green Building Self-Governance Regulation for Skyline Transformation by photovoltaic Roofs

**Li, Yen-Yi.** *ShuTe University / IISBE-Taiwan. Kaohsiung, Taiwan, Republic of China*

Barriers and drivers for energy efficient upgrade of single-family housing in Norway

**Hauge, Ashild L.** *SINTEF Building And Infrastructure. Oslo, Norway*

Retrofitting Russian cities; Addressing housing conditions in the regional masterplan for Berezniki, Solikamsk and Usolye

**King, Sara.** *KK Architects. Berlin, Germany*

Session: 51

Room: E3

Time: 10.00-11.30

Creating new resources

**Labels:** Rating Tools



## New tools, more information...what are the key needs for the future?

### Chairman:

**Cole, Ray.** *Professor, School of Architecture & Landscape Architecture, Director, Centre for Interactive Research on Sustainability. University of British Columbia*

### Speakers:

**Alfaro, Licio.** *Instituto De Tecnologia De La Construcción De Cataluña, Barcelona. Spain*

**Gazulla, Cristina.** *UNESCO Chair In Life Cycle And Climate Change (ESCI-UPF). Barcelona, Spain*

**Zabalza, Ignacio.** *CIRCE - Research Centre For Energy Resources And Consumption. Zaragoza, Spain*

**Berchtold-Domig, Markus.** *Network Enterprise Alps (NENA). Schwarzenberg, Austria.*

Session: 52 Room: E4 Time: 10.00-11.30 Creating new resources

**Labels:** Life-Cycle assessment  
Rating tools



**Which are the limits of life-cycle assessment as a rating tool to evaluate sustainability in building? (I)**

**Chairman:**

**Macías, Manuel.** *Profesor/Responsable del área de Investigación. Universidad Politécnica de Madrid/GBCe. Madrid, Spain*

**Speakers:**

Survey of Allocation Methods in Life Cycle Assessments of Wood Based Products  
**Dolezal, Franz.** *Holzforschung Austria. Vienna, Austria.*

Resource efficiency of buildings – a model for the assessment throughout the life cycle and implementation in a real case study

**Eberl, Sebastian.** *Fraunhofer IBP / Technische Universität München. Munich, Germany*

Climate renovation can pay off - A Life Cycle Cost analysis conducted as part of the LichtAktiv Haus experiment confirms the economic viability of modernising a 1950s settler house

**Trinius, Wolfram.** *Ingenieurbüro Trinius GmbH. Hamburg, Germany*

The Application of LCA calculation methods in building certification systems in Austria  
**Passer, Alexander.** *Graz University Of Technology. Graz, Austria*

Session: 53 Room: E5 Time: 10.00-11.30 Creating new resources

**Labels:** Health and Indoor Quality



**What impact does good ventilation have in energy efficiency?**

**Chairman:**

**Baillon, François.** *Commercial Director, International Federation of Consulting Engineer (FIDIC). Geneva, Switzerland*

**Speakers:**

Computerized Numerical Analysis on Stipulations of Taiwan's Localization Design Principles of a Sustainably Built Environment

**Chou, Po-Cheng.** *Dept. Of Interior Design, SHU-TE University. Kaohsiung. Taiwan*

Cross ventilation CFD Modeling: Characterization and study of different façade opening configurations at the refurbishment of a residential building in Málaga (Spain)

**Gallo,Izaskun.** *Grupo Sostenibilidad en la Construcción y en la Industria, Departamento de Construcción. Madrid, Spain*

Evaluation of ventilative cooling in a single family house - Characterization and modelling of natural ventilation

**Dupin, Nicolas.** *Velux. Morangis, France*

Conversion from CAV to DCV with reuse of existing ductwork

**Mysen, Mads.** *SINTEF Building & Infrastructure. Oslo, Norway*

Session: 55

Room: J

Time: 12.00-13.30

Transforming Reality

**Labels:** Politics and governance  
Renovation, retrofitting and regeneration



## National Renovation Strategies: How do we ensure we capture the full potential of deep renovation?

### Chairman:

**Carré, Celine.** *European Public Affairs Manager, Saint-Gobain Insulation A. Brussels, Belgium*

### Speakers:

**Garcia, Pau.** *Project Officer, EASME, European Commission. Belgium*

**Smyth, Fintan.** *Building Physics Manager, Gyproc & Isover. Ireland*

**Pierpoint, David.** *Chief Executive, Centre of Refurbishment Excellence (CORE). United Kingdom*

**Van Erck, Ron.** *Manager European Markets, Energiesprong. Amsterdam, Netherlands*

Session: 56

Room: A

Time: 12.00-13.30

Transforming Reality

**Labels:** Renovation, retrofitting and regeneration  
Politics and governance



## How can we power building renovation in Spain after recent national and European regulatory changes?

### Chairman:

**Paricio, Ignacio.** *ITEC (Instituto de Tecnología de la Construcción de Catalunya). Architect and professor in Universidad de Arquitectura de Barcelona. Barcelona, Spain*

### Speakers:

**Battle, Teresa.** *Architect, estudio Picharquitects and vicepresident of ASA. Barcelona, Spain*

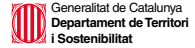
**de Diego, Maria Teresa.** *Manager of the Area Urban Renovation, Ferrovial Agromán. Madrid, Spain*

**Rubio de Val, Juan.** *Director of the Urban Rehabilitation and Innovation Residential Projects Area Zaragoza Municipal Housing Authority S.L.U. Member of the GTR group. Zaragoza, Spain*



Session: 57 Room: F Time: 12.00-13.30 Transforming Reality

**Labels:** Education and Knowledge Management  
Case Studies  
Renovation, retrofitting and regeneration



## Mediterranean region. What challenges will the methodology of Energetic Renovation of LogementS (RELS) have to tackle with ?

### Chairman:

**Claret, Coque.** *Architect and Technical coordinator of RELS project at University UPC. Barcelona, Spain*

### Opening and welcome:

**Fornt, Jaume.** *Director, Housing Agency of Catalonia. Spain*

**Puigdomenech, Joan.** *Vice-rector, Community, Social Action and Sustainability UPC. Spain*

### Speakers:

**El Ghosseini, Nouha.** *Mayor of Baakline. Baakline, Libano*

**Arafat, Yahya.** *Northern Electricity Distribution Company (NEDCO) Director. Palestine*

**El Hanchi, Fethi.** *Director, Rational use of energy division, National Agency for Energy Conservation (ANME). Tunisia*

**Watson, Ian.** *Expert, BRE Group, Liverpool Warm Zone*

Session: 58 Room:H1 Time: 12.00-13.30 Transforming Reality

**Labels:** Rating Tools Building Regulations and Standards  
Renovation, retrofitting and regeneration



## 5th Active House Symposium, Session 2: Lesson and experience with design and evaluation of Active House

### Chairman:

**Gunther, Zsolt.** *Architect, 3H Architect. Board of directors Active House Alliance*

### Speakers:

How do sustainable buildings affect the behavior and well-being of occupants?

**Wegener, Bernd.** *Humboldt University Berlin. Berlin, Germany*

Initiatives to move towards sustainable homes in UK

**Halsall, Peter.** *Sustainable Developer, CEO of Good Homes Alliance. London, United Kingdom*

Use of the Active House Vision in development of specification to Green Solution House, a renovation and extension of a conference center

**Richter, Trine.** *CEO Green Solution House. Ronne, Denmark*

Learnings from practical application of the Active House Specifications and Active House Radar: Suggestions for possible improvements

**Holzer, Peter.** *Institute of Building Research & Innovation. Vienna, Austria*

**Hammer, Renate.** *Arch. Dipl.-Ing.Dr; Institute of Building Research & Innovation. Austria*

Session: 59

Room: H2

Time: 12.00-13.30

Transforming Reality

**Labels:** Construction Systems and materials  
Housing



## Can low-cost financing achieve bankability of large-scale deep energy retrofit in public housing?

**Chairman:**

**Dijol, Julien.** CECODHAS – HOUSING EUROPE

**Speakers:**

**Bastiaanssen, Rolf.** Bax & Willems Consulting Venturing

**Winkels, Zeno.** Woonbron

**Koppelaar, Corne.** Savills

Session: 60

Room: H3

Time: 12.00-13.30

Transforming Reality

**Labels:** Urban Scale



## Is Urban Compaction our Sustainable Future? The Hong Kong's Experience



**Chairman:**

**Poon, C.F. Larry,** Architect planner in private practice with the Hong Kong-based consulting firm, Wong Tung and Partners Limited. He is currently a Committee Member of the Hong Kong Green Building Council and a Convener steering a consultancy study in developing a new rating tool for planning applications for the Council; Hong Kong Special Administrative Region (HKSAR)

**Speakers:**

Urban Regeneration Focusing on Community Cohesion

**Tam, S. Y. Iris.** Managing Director, Urban Renewal Authority, HKSAR

Culture & Place Making: West Kowloon Cultural District Development

**Chan, M. W.** Executive Director of Project Delivery, West Kowloon Cultural District Authority, HKSAR. Hong Kong, China

Accessibility & Connectivity: Mass Transit Development

**Cheng, K. W. Ronald.** GM - Technical & Engineering Services, MTR Corporation Limited, HKSAR

China's New Urbanisation Plan 2014-2020: Containing Urban Sprawl and Mitigating Carbon Emissions

**Yip, Stanley.** Director of Planning and Development, Arup China, Shanghai, China. School of Urban Planning and Design, Peking University. Beijing, China

Session: 61 Room: C1 Time: 12.00-13.30 Transforming Reality

Label: Urban Scale



## Can the building sector contribute to mitigate climate change?

### Chairman:

**Pedraza, Nuria.** *President of AUS*

### Speakers:

**Samitier, Salvador.** *Climate Change Office Head. Spain*

**Caltayud, Dani.** *ETSAV professor. Barcelona, Spain*

**López, Fabián.** *Architect PhD, Societat Orgànica. Barcelona, Spain*

Session: 62 Room: C3 Time: 12.00-13.30 Transforming Reality

Labels: Education and Knowledge Management



## Powering transformation. Which is the value of the intangible in the architecture and the sustainability?

### Chairman:

**Díaz Camacho, Miguel Ángel.** *ASA President (Association of Sustainable Architecture)*

### Speakers:

**Pich-Aguilera, Felipe.** *Architect. President of GBC Spanish. Spain*

**Rich, Peter.** *Architect, founding partner of Light Earth Designs LLP, Honorary Fellow of the American Institute of Architects*

**Lau, Stephen.** *Architect, professor of the projects architecture school of the University of Hong Kong. Chair of the China-Hong Kong Green Building Council Hong Kong Chapter. Hong Kong, China*

**Elizalde, Antonio.** *Sociologist, member of Sustainable Programme of Chile. Chile*

Session: 63

Room: C5

Time: 12.00-13.30

Creating new resources

Labels: Case Studies



## Which are the keys to have energy efficient office buildings?

### Chairman:

**Sauer, Bruno.** *Director Técnico GBCe, socio Bipolaire Arquitectos. Profesor Universidad Europea de Valencia. Spain*

### Speakers:

Carbon Reduction of Office Building Retrofit Packages

**Seo, Seongwon.** *Csiro. Highett, Australia*

Sustainability paradigm of high-rise office buildings in Barcelona: Auditori Tower of Iberdrola

**Moreno, Víctor.** *Isolana Ahorro Energético. L'Hospitalet de Llobregat, Spain*

Life cycle analysis as tool for environmental assessment of office and administration buildings – a critical review and evaluation of the LCAs practical feasibility for a future roadmap

**Neururer, Christoph.** *University Of Natural Resources And Life Sciences, Vienna - IKI. Vienna, Austria*

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Session: 64

Room: B1

Time: 12.00-13.30

Creating new resources

Labels: Renovation, retrofitting and regeneration



## Which should the main goals in building renovation be?

### Chairman:

**Miguel Mitre, Emilio.** *GBCe. Madrid, Spain*

### Speakers:

Solutions for energy efficiency and renewable energy use in buildings: Basics and results of a stakeholder-oriented economic assessment

**Stengel, Julian.** *French-German Institute For Environmental Research, Karlsruhe Institute of Techn. Karlsruhe, Germany*

Interventions in old city centres: assessing the sustainability of rehabilitation actions

**Ramos, Ana.** *Polytechnic Institute Of Castelo Branco. Castelo Branco, Portugal*

Is building renovation truly sustainable? The need for applying a multi-criteria assessment through life cycle approach

**Pombo, Olatz.** *Universidad Politécnica de Madrid. Madrid, Spain*

Sustainable Renovation of Buildings

**Staniaszek, Dan.** *Buildings Performance Institute Europe. Brussels, Belgium*

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**Session: 65**      **Room: B2**      **Time: 12.00-13.30**      **Creating new resources**

**Labels:** Nearly Zero Energy Building  
Construction Systems and materials



**What should new structures for ZEB be like?**

**Chairman:**

**Bragança, Luis.** *Director. Energiehaus scp*

**Speakers:**

Comparative life cycle and carbon footprint analyses of wood building systems designed as conventional or passive house standard

**Dodoo, Ambrose.** *Linnaeus University. Växjö, Sweden*

Environmental product declaration of ready-mix concrete products. A practical application  
**Alarcon Barrio, Arturo.** *Instituto Español Del Cemento Y Sus Aplicaciones. Madrid, Spain*

Comparison of GHG emissions from Concrete Alternatives for a Zero Emission Office Concept

**Kristjansdottir, Torhildur.** *SINTEF Building And Infrastructure. Trondheim, Norway*

Multi-performance indicators for sustainability evaluation of concrete structural systems

**Gomes, Vanessa.** *University Of Campinas. Campinas, Brasil*

**Session: 66**      **Room: B3**      **Time: 12.00-13.30**      **Creating new resources**

**Labels:** Construction Systems and materials



**Does innovation really exist in the Spanish construction sector?**

**Chairman:**

**Oteiza, Ignacio.** *Instituto de Ciencias de la Construcción Eduardo Torroja-CSIC*

**Speakers:**

Sustainable low energy buildings using innovate heat storage solutions

**Salmeron Lissen, Rafael.** *Grupo de Termotecnia, Escuela de Ingenieros de Sevilla. Sevilla, Spain*

Housing prototypes: Industrialized and efficient with renewable energy

**García Marín, Alberto.** *Escuela Técnica Superior De Arquitectura Universidad De Málaga. Málaga, Spain*

Thermal energy storage in sustainable buildings: passive and active systems

**Castell, Albert.** *University Of Lleida. Lleida, Spain*

Success factors for the multi-comfort house standard in warm climates: Last generation products and solutions to achieve a better energy performance, economical and management tools on job-side

**Pallarés Pallarés, Ana Isabel.** *Saint-Gobain Isover. Azuqueca de Henares, Spain*

**Session: 67      Room: E1      Time: 12.00-13.30      Creating new resources**

**Labels:** Urban Scale



**Improvements on an urban scale. How can buildings and public spaces help each other?**

**Chairman:**

**Wadel, Gerardo.** *Socio fundador. Societat Orgànica Consultora Ambiental S.L.*

**Speakers:**

On the improvement of urban regeneration processes from more than thirty years of rehabilitation experiences

**Matesanz Parellada, Àngela.** *Departamento De Urbanística Y Ordenación Del Territorio (ETSAM/UPM). Madrid, Spain*

Reconquest of public space through a managerial approach, case of Constantine and its new town Ali Mendjeli

**Bouhadjar, Khalil.** *Constantine University 3. Constantine, Argelia*

Seeking systems for sustainable higher-density housing in Australian cities

**Palmer, Jasmine.** *University Of Adelaide. Adelaide, Australia*

Market drivers on the transformation of green buildings in Hong Kong - The green building roadmap

**Yau, Man Hung Raymond.** *Arup. Hong Kong, China*

**Session: 68      Room: E2      Time: 12.00-13.30      Creating new resources**

**Labels:** Nearly Zero Energy Building  
Health and Indoor Quality



**Energy efficiency and life quality: on what scale?**

**Chairman:**

**Cárdenas, Luz.** *University Of Chile Faculty of Architecture & Urbanism. Santiago, Chile*

**Speakers:**

Evaluation of reduced energy use resulting from a DHC network in the Shinjuku DHC area

**Hashidate, Daisuke.** *Kogakuin University. Tokyo, Japan*

Green design strategies for urban heat island mitigation in a solar optimized access Eixample via IMM® methodology

**Lobaccaro, Gabriele.** *NTNU - Norwegian University Of Science And Technology - Department of Architectural Design, History and Technology Faculty of Architecture and Fine Art. Trondheim, Norway*

Towards near zero energy buildings: Energy storage, demand side regulation and renewable energy integration. "The Autonomus Office" case study

**San Juan, Cristina.** *Ove Arup & Partners, Madrid (Spain). Madrid, Spain*

Study on the Establishment of Indoor Environmental Health Housekeeper System-- Using Environmental Sensing and Consultation as an Example

**Chen, Nientsu.** *Tungfang Design Institute. Kaohsiung City, Taiwan, Republic of China*

Session: 69 Room: E3 Time: 12.00-13.30 Creating new resources

**Labels:** Rating Tools  
Operation and maintenance



### What criteria should be considered to define benchmarks?

#### Chairman:

**Larsson, Nils.** *Executive Director, iisBE*

#### Speakers:

Building sustainability assessment and rating system in Italy: The definition of Benchmark Values

**Moschetti, Roberta.** *Politecnico Di Milano. Milano, Italy*

Guidance value of the total environmental impact for buildings

**Wyss, Franziska.** *Treeze Ltd. Uster, Switzerland*

Evaluation of sustainability aspects and the use of local materials in the housing construction in Colombia

**Morales-Pinzón, Tito.** *Universidad Tecnológica De Pereira. Pereira, Colombia.*

Monitoring dwelling stock efficiency through energy performance register: Trends Dutch social housing

**Majcen, Daša.** *OTB Research Institute, Delft University Of Technology. Delft, The Netherlands*

Session: 70 Room: E4 Time: 12.00-13.30 Creating new resources

**Labels:** Life-Cycle assessment  
Construction Systems and materials  
Best Papers of SB13 Conference series



### Which are the limits of life-cycle assessment as a rating tool to evaluate sustainability in building? (II)

#### Chairman:

**Macías, Manuel.** *Profesor/Responsable del área de Investigación. Universidad Politécnica de Madrid/GBCe. Spain*

#### Speakers:

Building Life Cycle Assessment (LCA): results sensitivity to the choice of LCA data and reference service lives of construction products

**Hallouin, Thibault.** *Bouygues Construction. Saint-Quentin-En-Yvelines Cede, France*

Study on Life Cycle Carbon Minus House Part 1: Summary of project (*Best Papers SB13 Oulu*)

**Seike, Tsuyoshi.** *The University Of Tokyo. China, Japan*

Study on Life Cycle Carbon Minus House Part 2: Design concept of the LCCM demonstration house (*Best Papers SB13 Oulu*)

**Murata, Ryo.** *Tokyo Institute Of Technology. Tokyo, Japan*

Survey on LCA results analysis, interpretation and reporting in the construction sector

**Sibiude, Galdric.** *Cstb. Saint Martin d'Hères. France*

Session: 71

Room: E5

Time: 12.00-13.30

Transforming Reality

**Labels:** Urban Scale



**Designing for hope: What does contributive practice for a thriving city look like?**

**Chairman:**

**Hes, Dominique.** *The University of Melbourne*

**Speakers:**

**Du Plessis, Chrisna.** *The University of Pretoria*

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Session: 72

Room: E6

Time: 12.00-13.30

Transforming Reality

**Labels:** Urban Scale



**What are the main barriers and opportunities for EcoCities in Egypt and similar countries?**

**Chairman:**

**Hedman, Åsa.** *Senior Scientist, MSc (Tech). Project Manager of "EcoCity Capacity Building in NBC". VTT Technical Research Centre of Finland*

**Speakers:**

Industry sectors' role in the EcoCity approach in Egypt. Impacts, barriers and opportunities  
**EIShazly, Ahmed.** *Chairman, Chemical and Petrochemical Engineering Department Egypt-Japan University of Science and Technology*

**Adel-Rahman, Ali K.** *Chairman, Energy Resources Engineering Department Egypt-Japan University of Science and Technology*

The view of city authorities and investors on the challenges and opportunities of EcoCities in Egypt

**EI Menshawy, Hany.** *Chairman of Institute of Industry Committee (IIC)*

The view of national authorities on the challenges and opportunities of EcoCities in Egypt  
**Moustafa, Eng Hoda.** *Representative of EEAA, Egypt Environment Affairs Agency, Ministry of the State of Environment*

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Session: 73

Room: J

Time: 15.00-16.30

Transforming Reality

**Labels:** Education and Knowledge Management  



## Sustainable architecture or common sense?

### Chairman:

**Mangado, Francisco.** *Architect. Teacher at the University of Navarra. Pamplona, Spain*

### Speakers:

**Carrilho da Graça, João Luís.** *Architect. Lecturer at the University of Lisbon. Lisbon, Portugal*

**Vazquez Consuegra, Guillermo.** *Architect. Honorary teacher at the University of Sevilla. Sevilla, Spain*



**Herzog, Thomas.** *Architect Professor of Energy Efficient and Sustainable Planning and Design at the Technische Universität. Munich, Germany*

Session: 74

Room: A

Time: 15.00-16.30

Transforming Reality

**Labels:** Nearly Zero Energy Building  

## How to promote Nearly Zero Energy Buildings for new and retrofitting buildings in the municipal context

### Chairman:

**Cipriano, Jordi.** *Director of CIMNE-BEEGROUP, partner of the AIDA project, Barcelona, Spain*

### Speakers:

Powerhouse Kjørbo: The experience of a Plus-Energy office building in refurbishment

**Sartori, Igor.** *Senior research of NTNU - Norwegian University of Science and Technology. Trondheim, Norway*

Zero-Energy Urban Buildings and Zero-Energy Communities

**Santamouris, Mat.** *Professor of NKUA - National and Kapodistrian University of Athens. Athens, Greece*

Simulating intervention scenarios for carbon reduction in urban planning (SEMANCO Project)

**Cipriano, Xavi.** *Researcher of CIMNE- BEEGROUP, Partner of the SEMANCO project. Barcelona, Spain*

The nZEB promotion within SEAP (AIDA Project)

**Santos Lopez Lorenzo, José.** *Researcher of CIMNE- BEEGROUP, partner of the AIDA project. Barcelona, Spain*

Session: 75

Room: F

Time: 15.00-16.30

Transforming Reality

**Labels:** Building Regulations and Standards



**ferrovial**

**Are current building regulations adequately advancing sustainable buildings? If not, what is missing, and how should they be changed? (I)**

**Chairman:**

**Serra, Javier.** *Ministry of Infrastructure. Spain*

**Speakers:**

Resilience of Australian Buildings to Extreme Weather Events

**McDonald, Mathew.** *Australian Building Codes Board. Australia*

Life-time Environmental Sustainability of Buildings under the Singapore Building Control Act

**Neng Kwei Sung, Jeffery.** *Centre for Sustainable Building and Construction. Singapore*

Sustainability Labeling for Building Standards

**Dodds, Bill.** *Scottish Government. Scotland*

Building Regulatory Control in Facing the Challenge of Climate Change: A Case of Hong Kong

**Chan, Edwin HW.** *Hong Kong Polytechnic University. Hong Kong, China*

Sustainability, resilience and risk in earthquake-prone areas: Lessons for building regulators from the Canterbury earthquakes

**Stannard, Mike.** *Chief engineer, Ministry of business, Innovation & Employment (MBIE). New Zealand*

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Session: 76

Room: H1

Time: 15.00-16.30

Transforming Reality

**Labels:** Rating Tools

Construction Systems and materials



  
**SAINT-GOBAIN**

**What are the best “sustainable” construction materials?**

**Chairman:**

**Eveillard, Pascal.** *Sustainable habitat and public affairs director, Saint-Gobain*

**Speakers:**

**Mesureur, Bruno.** *Board Member SB Alliance & director marketing and international development CSTB*

**Lindblom, Josefin.** *DG Environment, European Commission*

**Domínguez Martínez, Alejandro.** *R&D Manager, Saint-Gobain Placo. Spain*

**Antink, Roy.** *Director Green Support, Skanska AB*

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**Session: 77      Room: H2      Time: 15.00-16.30      Transforming Reality**

**Labels:** Construction Systems and materials  
Renovation, retrofitting and regeneration



**Which breakthrough innovations will contribute most to acceleration of the sustainability transition in buildings?**

**Chairman:**

**Carioso, Stefano.** *D'Appolonia (Italy), E2BA (Europe)*

**Speakers:**

**Van Heiningen, Rinske.** *Akzonobel. The Netherlands*

**McLean, Don.** *IES. United Kingdom*

**Marti, Alain.** *EDF, France*

**Bastiaanssen, Rolf.** *Bax & Willems Consulting. The Netherlands*

**Session: 78      Room: H3      Time: 15.00-16.30      Transforming Reality**

**Labels:** Nearly Zero Energy Building



**Zero Carbon Buildings and Beyond! What is the future for Sustainable Built Environment?**



**Chairman:**

**Yau, M.H. Raymond.** *Arup Fellow and Director of Arup Hong Kong. He is Arup's director responsible for the total engineering design of Hong Kong first Zero Carbon Building of Construction Industry Council. He is Director of the Hong Kong Green Building Council and 1st Vice Chairperson of BEAM Society Limited*

**Speakers:**

*Towards Next-Positive Energy Buildings*

**J. Raymond.** *Centre for Interactive Research on Sustainability, UBC. Canada.*

*Implementation of Zero Carbon Buildings in Asia*

**Cheng, Vincent.** *Director of Building Sustainability, Arup Hong Kong. HKSAR. China.*

*Towards Zero Carbon Building-Bridging the performance Gap*

**Chan, Cary W.H.** *General Manager, Sustainability and Technical Services, Swire Properties. HKSAR*

*Smart Energy Systems for Smart Towns*

**Wang, Shengwei.** *Chair Professor of Building Services Engineering, The Hong Kong Polytechnic University. HKSAR*

Session: 79

Room: C1

Time: 15.00-16.30

Creating new resources

**Labels:** Stakeholders  
Urban Scale



## How can we empower citizens to create an urban identity?

### Chairman:

**Torres, Mario.** *Subdirector Instituto de la Vivienda. Facultad de Arquitectura y Urbanismo, Universidad Chile, INVI*

### Speakers:

Social sustainability between idealism and realism

**Zalloom, Bushra.** *Birmingham City University. Birmingham, United Kingdom*

Local GREEN PARTNERSHIPS for greener Cities and Regions

**Domingo Reig, Virginia.** *Granollers City Council. Granollers, Spain*

Understanding residents' attitudes towards infill development at Finnish urban suburbs

**Arvola, Anne.** *VTT Technical Research Centre Of Finland. Espoo, Finland.*

Tactical Urbanism: a Method of Community Empowerment in Cairo Neighborhoods  
(*Best Papers SB13 Cairo*)

**Elshater, Abeer.** *Ain Shams University. Cairo, Egypt*

Social impacts of citizen participation in service development. A case study from a Finnish urban neighbourhood.

**Ahvenniemi, Hannele.** *VTT Technical Research Centre Of Finland. Finland*

Session: 80

Room: C3

Time: 15.00-16.30

Creating new resources

**Labels:** Education and Knowledge Management  
Best Papers of SB13 Conference series



## Educating for a new paradigm. Are there barriers for the inclusion of this approach in formal education?

### Chairman:

**Verdaguer, Carlos.** *Profesor Asociado. Escuela Técnica Superior Arquitectura Madrid, UPM. Spain*

### Speakers:

Living Labs in Architecture: Open innovation and co-creation towards a more sustainable architecture and lifestyle

**Masseck, Torsten.** *Universitat Politècnica De Catalunya (UPC). Sant Cugat del Vallés, Spain*

Real Life Learning Lab Approach in Sustainable Building Education – EURL3A Pilot Project

**Ruzicka, Jan.** *CTU In Prague, Faculty Of Civil Engineering, Dept. Of Building Structures. Prague, Czech Republic*

MSc(Built environment) curriculum for sustainable development education - a post graduate student's perception. (*Best Papers SB13 Southern Africa*)

**Mahlangabeza, Luyolo.** *Nelson Mandela Metropolitan University. Port Elizabeth, South Africa*

Environmental design process at facility planning and management offices in the national universities in Japan  
**Yokoo, Noriyoshi.** *Utsunomiya University. Utsunomiya, Japan*

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|--------------------|-----------------|--------------------------|-------------------------------|
| <b>Session: 81</b> | <b>Room: C5</b> | <b>Time: 15.00-16.30</b> | <b>Creating new resources</b> |
|--------------------|-----------------|--------------------------|-------------------------------|

**Labels:** Case Studies  
 Rating tools



## What should the keys to obtain efficient commercial buildings be?

### Chairman:

**Bragança, Luis.** *iiSBE President / Professor at the Civil Engineering Department of University of Minho*

### Speakers:

An approach to the assessment of environmental impact in retail architecture

**Olaya Cotrino, Adriana Marcela.** *Grupo De Investigación Arquitectura, Energía Y Medio Ambiente Universidad Politécnica. Bogotá, Colombia*

Implementation of daylight as part of the integrated design of commercial buildings

**Karlsen, Line.** *Oslo and Akershus University College Of Applied Science. Oslo, Norway*

Sustainability assessment of shopping centres

**Haase, Matthias.** *Sintef Building And Infrastructure. Trondheim, Norway*

Environmental renovation methodology in commercial buildings: the case of the Europa Palace in Vitoria-Gasteiz (Spain)

**Wadel, Gerardo.** *Green Building Council España. Madrid, Spain*

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|--------------------|-----------------|-------------------------|-----------------------------|
| <b>Session: 82</b> | <b>Room: B1</b> | <b>Time:15.00-16.30</b> | <b>Transforming Reality</b> |
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**Labels:** Financing and New Business Models



## Eco-Innovations in Value Driven Sustainable Building Processes Need for New business Models, Opportunities for SMEs

### Chairman:

**Huovila, Pekka.** *VTT Technical Research Centre of Finland*

### Speakers:

**Antuñia Rozado, Carmen.** *VTT Technical Research Centre of Finland. Finland*

**Lommi, Jukka.** *Tiuri & Lommi. Finland*

**Trinius, Wolfram.** *Trinius GmbH. Germany*

**Pinon, Ludovic.** *Lascom. France*

**Session: 83**

**Room: B2**

**Time: 15.00-16.30**

**Creating new resources**

**Labels:** Nearly Zero Energy Building  
Construction Systems and materials



## What should new envelopes for ZEB be like?

### Chairman:

**Wassouf, Micheel.** *Director. Energiehaus scp*

### Speakers:

Primary energy implications of different external wall configurations for residential buildings

**Tetty, Uniben Y.A.** *Linnaeus University. Växjö, Sweden*

Carbon and Energy in Efficient Building Envelopes: A Comparative Case Study in Life Cycle Phases

**Moore, Erin.** *University Of Oregon Dept Of Architecture. Eugene, OR, USA*

Assessment and selection of external walls of buildings based on their environmental, performance "from cradle-to-cradle"

**Dinis Silvestre, José.** *Instituto Superior Técnico, Universidade De Lisboa. Lisbon, Portugal*

**Session: 84**

**Room: B3**

**Time: 15.00-16.30**

**Creating new resources**

**Labels:** Construction Systems and materials



## How can we know which the best constructive solution is?

### Chairman:

**Kratz, Markus.** *Forschungszentrum Jülich. Germany*

### Speakers:

Green infrastructure improvements for a more sustainable building sector

**Pérez, Gabriel.** *University Of Lleida. Lleida, Spain*

Implementation of GIS methodology and passive strategies to improve the quality of social housing in the Andean region of Ecuador

**Miño Rodríguez, Isabel.** *National Institute of Energy Efficiency and Renewable Energy (INER). Quito, Ecuador*

Retrofitting with prefabricated modules. Stakeholders views and needs.

**Kleiven, Tommy.** *Sintef. Trondheim, Norway*

Reshaping Housing Using Prefabricated Systems

**Steinhardt, Dale.** *Queensland University Of Technology. Brisbane, Australia*

Session: 85

Room: E1

Time: 15.00-16.30

Creating new resources

**Labels:** Urban Scale  
Rating tools  
Best Papers of SB13 Conference series



## Which are the key elements to follow-up environmental targets at an urban scale?

### Chairman:

**Velázquez, Isabela.** *Directora de proyectos de Gea21*

### Speakers:

Impact Assessment and Life Cycle improving energy efficiency in urban areas

**Zambrana Vasquez, David.** *CIRCE - Centro De Investigación De Recursos Y Consumos Energéticos. Zaragoza, Spain*

Design and operation of a test bench for agent based control systems of building supply systems

**Huber, Max.** *RWTH Aachen, Institute For Energy Efficient Buildings And Indoor Climate. Aachen, Germany*

Energy and architectural retrofitting in the urban context of Athens

**Fotopoulou, Anastasia.** *DA -Department Of Architecture- School Of Architecture And Engineer ALMA M. Bologna, Italy*

Economic Assessment of Refurbishment of Federal Public Housing in the UAE (*Best Paper SB13 Dubai*)

**Manneh, Abeer.** *The British University in Dubai. Dubai. United Arab Emirates.*

*CIRCE - Centro De Investigación De Recursos Y Consumos Energéticos. Zaragoza, Spain*

Session: 86

Room: E2

Time: 15.00-16.30

Creating new resources

**Labels:** Politics and governance  
Housing



## What role should public housing play in sustainable building?

### Chairman

**Cornelius Laudy, Sander.** *Architect, B01 Arquitectes*

### Speakers:

Sustainability Metrics - A Public Housing Empirical Experience

**Lo, Winnie W.Y.** *Hong Kong Housing Authority. Hong Kong, China*

"L'HDC" the CO2 indicator of L'Hospitalet in a P2P environmental governance towards NZEmissions Cities. A benchmark for S.E.A.P of signatories Covenant of Mayors

**López Grado, Sergi.** *Ayuntamiento de L'Hospitalet. Spain*

Renovation of non-profit social housing to CO2 neutral buildings on Active House level

**Eriksen, Kurt Emil.** *Active House Alliance. Brussels, Belgium*

The pace of energy improvement in the Dutch non-profit housing sector

**Filippidou, Faidra.** *Delft University Of Technology, Faculty Of Architecture And The Built Environmen. Delft, The Netherlands*

Session: 87

Room: E3

Time: 15.00-16.30

Creating new resources

**Labels:** Rating Tools  
Urban Scale



## How reliable are previous level rating tools on an urban scale?

### Chairman:

**González, María Jesús.** *ASA President (Association of Sustainable Architecture) from 2010 to 2013. Member of the Scientific Committee of the contest POWERING TRANSFORMATION*

### Speakers:

A hybrid methodology for the environmental assessment of the anthropic systems in urban area

**Schiopu, Nicoleta.** *Cstb. Saint Martin d'Heres. France*

A contextual and spatial approach towards resource cycles

**Geldermans, Bob.** *Delft University Of Technology. Delft, The Netherlands*

INDI: Neighbourhood a rating tool with a whole life value analysis for buildings

**Outrequin, Philippe.** *Suden. Valbonne, France*

Integrated decision support tool in energy retrofitting projects for sustainable urban districts

**Romero Amorrortu, Ander.** *Fundación TECNALIA Research & Innovation. Derio, Spain*

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Session: 88

Room: E4

Time: 15.00-16.30

Creating new resources

**Labels:** Life-Cycle assessment



## Which are the limits of life-cycle assessment as a rating tool to evaluate sustainability in building? (III)

### Chairman:

**Macías, Manuel.** *Profesor/Responsable del área de Investigación. Universidad Politécnica de Madrid/GBCe. Spain*

### Speakers:

Simplified and reproducible building Life Cycle Assessment: Validation tests on a case study compared to a detailed LCA with different user's profiles

**Bonnet, Romain.** *Bouygues Construction. Guyancourt, France*

Results of DGNB certified sustainable buildings. Austrian case study focussing on economic and environmental life cycle performance. (LCA)

**Smutny, Roman.** *BOKU Vienna, University Of Natural Resources And Life Sciences, H875. Vienna, Austria*



Life Cycle Based Optimization of Building Design

**Szalay, Zsuzsa.** *Budapest University Of Technology And Economics. Budapest, Hungary*

Identification of building materials influence on robustness and uncertainty of multi-residential buildings LCA

**Hoxha, Endrit.** *Cstb. Saint Martin d'Hères, France*

**Session: 89      Room: E5      Time: 15.00-16.30      Creating new resources**

**Labels:** Urban Scale



**Neighborhoods with roots. Which are the keys to manage high-complexity and low-resource frameworks?**

**Chairman:**

**Gomes, Vanesa.** *Associate Professor. University of Campinas, Brazil*

**Speakers:**

Cohousing and The Development of Rating Tools for Sustainable Living in Thailand

**Takkanon, Pattaranan.** *Faculty Of Architecture, Kasetsart University. Bangkok, Thailand*

Fatimid Cairo a Sustainable Neighborhood from Medieval

**Salama, Ali.** *Alazhar University. Cairo, Egypt*

Preserving the Old "Ksar" of Bou Saada - Algeria

**Diafat, Abderrahmane.** *Labo. PUViT. Sétif, Argelia*

Regeneration for Urban and Economic Sustainability: Assessment of the U.S. Neighborhood Stabilization Program (NSP - 2)

**Kamal, Azza,** *University Of Texas At San Antonio. San Antonio, Texas, USA*

**Session: 90      Room: E6      Time: 15.00-16.30      Creating new resources**

**Labels:** Construction Systems and materials



**What capacity does the construction sector have to absorb its own waste and by-products?**

**Chairman:**

**Díaz Camacho, Miguel Ángel.** *President of ASA (Association of Sustainable Architecture). Spain*

**Speakers:**

Waste – a Resource for Sustainable and Resilient Future Cities

**Wisniewska, Marta H.** *ETH Zurich / Future Cities Laboratory Singapore. Singapore*

Earthships: The building of the future

**Soriano Vivas, Marta.** *Ecoart-Didactic. Palafolls, Spain*

Recycling Construction Waste as Action to Minimize the Environmental Impact

**Rangel Martinez, Yamile.** *Universidad Autonoma Del Estado De Hidalgo. Mineral de la Reforma. Hidalgo, Mexico*

A model combining three methods lean, green, and six-sigma (LG6) to identify waste in construction processes prior to construction phase

**Banawi, Abdulaziz.** *United Arab Emirates University. Al Ain, United Arab Emirates*

Session: 91

Room: J

Time: 17.00-18.30

Transforming Reality

Labels: Housing



**COSENTINO**  
imagine & anticipate

**What's the potential of building well-designed, high-performance sustainable homes at a price low-income families can afford? By Make It Right non-profit organization.**

### Chairman:

**Tijeras, Valentín.** *Product and innovation Manager at Consentino Group. Cantoria, Almeria, Spain*

### Speakers:

**Darden, Tom.** *Make it Right Foundation. New Orleans, USA*

**Turner, Craig.** *Make it Right Foundation. New Orleans*

**Putz, Wolfram.** *GRAFT Architects. Berlin, Germany*

Session: 93

Room: F

Time: 17.00-18.30

Transforming Reality

Labels: Building Regulations and Standards



**ferrovial**

**Are current building regulations adequately advancing sustainable buildings? If not, what is missing, and how should they be changed? (II)**

### Chairman:

**Dodds, Bill.** *Scottish Government. Scotland*

### Speakers:

Impact of energy efficiency goals on systems of building regulations and control

**Visscher, Henk.** *Delft University of Technology. Delft, Netherlands*

Perspective of the Building Sustainability Regulatory Evolution in Spain: From Prescription to Performance

**Serra, Javier.** *Ministry of Infrastructure. Navarra, Spain*

Reviewing challenges between the need for government-subsidised housing in South Africa and the sustainability requirements of the National Building Regulations

**Laubscher, Jacques.** *Tshwane University of Technology. South Africa*

Adapting Building Regulatory Systems to Better Address Climate Change Impacts

**Meacham, Brian J.** *Worcester Polytechnic Institute. Worcester, MA, USA*

Session: 94 Room: H1 Time: 17.00-18.30 Transforming Reality

**Labels:** Health and Indoor Quality  
Financing and new business models



**Shall comfort and well-being be actually the top arguments to develop and sell sustainable buildings?**

**Chairman:**

**Szpunar, Slawomir.** *International Marketing Director, Saint-Gobain*

**Speakers:**

**Folch, Marc.** *Architect, Calderon-Folch-Sarsanedas Arquitectes*

**Sanders, Helen.** *VP Technical business development, Sage Glass*

**Rosso, Sophie.** *Green Office Director, Bouygues Immobilier*

**Blyth, Alastair.** *Design Strategist: Learning Environments*

Session: 95 Room: H2 Time: 17.00-18.30 Transforming Reality

**Labels:** Case Studies



**SB Challenge. Do our buildings perform as intended?(I)**

**Chairman:**

**Gorgolewski, Mark.** *University of British Columbia*

**Speakers:**

**Mallory-Hill, Shauna.** *Ryerson University, Toronto, Canada*

**Brown, Craig.** *Ryerson University, Toronto, Canada*

**Chu, Anne-Mareike.** *Further assistance was provided by University of British Columbia researchers Sylvia Coleman, Juliette Rauscher, Paul Save and Jinying Sun, and Ryerson university researcher Moe Otsubo. Toronto, Canada*

**Turcato, Adrian.** *University of British Columbia*

**Barlett, Karen.** *University of British Columbia*

**Hodgson, Murray.** *Further assistance was provided by University of British Columbia researchers Sylvia Coleman, Juliette Rauscher, Paul Save and Jinying Sun, and Ryerson university researcher Moe Otsubo*

Session: 96

Room: H3

Time: 17.00-18.30

Transforming Reality

Labels: Urban Scale



Ajuntament  
de Barcelona

**How can urban planning, infrastructure and mobility management improve sustainable development in our cities?**

### Chairman:

**Villalante, Manel.** *Industrial Engineer Associate Director Mobility International Projects BARCELONA REGIONAL Urban Development Agency*

### Speakers:

**Hussein, Ibrahim Mustafa.** *Civil Engineer, Deputy Mayor City of Bagdad. Bagdad, Irak*

**Shetty, Prassad.** *Chief Planning Division City of Mumbai. Mumbai, India*

**Guellart, Vicente.** *Chief Architect City of Barcelona. Barcelona, Spain*

Session: 97

Room: C1

Time: 17.00-18.30

Creating new resources

Labels: Stakeholders  
Education and Knowledge Management  
Best Papers of SB13 Conference series



**The role of the 'other' stakeholders. How to improve the position of the weakest members of society in empowerment processes?**

### Chairman:

**Torres, Mario.** *Subdirector Instituto de la Vivienda. Facultad de Arquitectura y Urbanismo, Universidad Chile, INVI*

### Speakers:

Ecómetro, collaborative work project to develop a desing and measure tool of ecology an architecture.

**González Pérez, Ana.** *Ecometro. Asociación Para La Medición Y Difusión De La Ecología En La Arquitectu. Madrid, Spain*

Good Urban Governance of Informal Settlements in Metropolitan Areas: Case Study of Informal Settlement of Ezzbet Al-Haggana, Cairo

**Azouz, Nouran.** *Ain Shams University. Cairo, Egypt*

Exploring ways to successful resident-driven infill development: Lessons learned from two cases in Helsinki area (*Best Papers SB13 Oulu*)

**Pennanen, Kyösti.** *VTT Technical Research Centre Of Finland. Espoo, Finland*

Mc Kinley Workshops: Sustainability Seen Through The Eyes of Children (*Best Papers SB13 California*)

**Battiwale, Eera.** *Cal Poly Pomona College Of Environmental Design. Ontario, USA*

Session: 98

Room: C3

Time: 17.00-18.30

Transforming Reality

**Labels:** Education and Knowledge Management



## Knowledge transfer between the business and universities worlds?

### Chairman:

**Casaldàliga Albisu, Pau.** *Cátedra de Edificación Industrializada y Medio Ambiente. Barcelona, Spain*

### Speakers:

**Sin Yu Lau, Stephen.** *Universidad de Hong Kong. Hong Kong, China*

**Guivernau, Jordi.** *Rockwool. Barcelona, Spain*

**Treviño, César Ulises.** *Tecnológico de Monterrey. Monterrey, México*

**Terrado, Enrique.** *CEMEX. Switzerland*

Session: 99

Room: C5

Time: 17.00-18.30

Creating new resources

**Labels:** Case Studies



## Do particular examples allow generic results to be extrapolated?

### Chairman:

**Gomes, Vanesa.** *Associate Professor. University of Campinas. Brazil*

### Speakers:

Energy Conservation in Existing Office Building: Case study Petrojet Company Head Office Buildings in Cairo, Egypt

**Refaat Abd-Allah, Nayera.** *Energy Resources Engineering Department, Egypt- Japan University Of Science And. Alexandria. Egypt*

Subjective and Objective Measurements of Thermal Comfort in An Austrian Active House: Occupant-reported Thermal Sensation and Measured Temperatures during a one-year period

**Foldbjerg, Peter.** *Velux A/s. Horsholm, Denmark*

Architectural integration of solar collectors on Dwellings' roofs

**Zalamea León, Esteban.** *Universidad Del Bío-Bío. Concepción, Chile*

An Intelligent Energy Management System For Sustainable Public Underground Spaces

**Simon, Jonathan.** *Fraunhofer Institute For Applied Information Technology FIT. Sankt Augustin, Germany*

**Session: 100**

**Room: B1**

**Time: 17.00-18.30**

**Creating new resources**

**Labels:** Renovation, retrofitting and regeneration



## Where should energy renovation reach up to? (III)

### Chairman:

**Donath, Cristian.** *Eco Platform. Germany*

### Speakers:

Energy upgrading of residential buildings and eighties with improved architectural quality

**Gunnarshaug Lien, Anne.** *SINTEF Building And Infrastructure. Trondheim, Norway*

Towards a resource and waste efficient built environment: Opportunities for renovation of transformable buildings in Brussels

**Paduart, Anne.** *Vrije Universiteit Brussel - ARCH. Brussels, Belgium*

Energy Efficient Refurbishment analysis for an Apartment Building in Portugal

**Demir, Ece.** *University Of Applied Sciences Stuttgart. Stuttgart, Germany*

Tackling climate change at community level: the example of Geothermal Community project in Montieri (Italy)

**Marino, Valentina.** *Politecnico Di Torino Dipartimento di Architettura e Design. Turin, Italy*

**Session: 101**

**Room: B2**

**Time: 17.00-18.30**

**Creating new resources**

**Labels:** Nearly Zero Energy Building

Best Papers of SB13 Conference series



## Towards a shared definition of nZEB? (I)

### Chairman:

**López, Fabían.** *Societat Orgànica*

### Speakers:

Sustainable Master Planning for the 21st Century: Metrics, Tools and Processes for Achieving Net-Zero College Campus Design and Operation

**Vujovic, Vuk.** *Legat Architects. Chicago, USA*

Evaluation of the energy performance strategies in competition tenders to achieve nearly zero energy buildings: Two case studies in Barcelona and Merano

**González Matterson, Maria Leandra.** *IREC- Institut de Reserca en Energia de Catalunya. Sant Adrià del Besòs, Spain*

Measuring the sustainability through a life cycle perspective: the case of Sunslace, a NZEB for high density urban environment

**Sirombo, Elisa.** *Department of Energy, Politecnico Di Torino. Torino, Italy*

Cost optimality and zero energy levels in the renovation of residential building - Rainha Dona Leonor case study (Best Papers SB13 Portugal)

**Almeida, Manuela.** *University Of Minho. Guimaraes, Portugal*

Session: 102 Room: B3 Time: 17.00-18.30 Creating new resources

**Labels:** Construction Systems and materials  
Best Papers of SB13 Conference series



## What key elements will determine construction materials' future?

### Chairman:

**Miguel Mitre, Emilio.** *GBCe. Madrid, Spain*

### Speakers:

**Havlik, Filip.** *CTU in Prague, Faculty of Civil Engineering, Department of Building Structures. Prague, Czech Republic*

Assessment of carbon footprint of laminated veneer lumber elements in a six story housing – comparison to a steel and concrete solution

**Tellnes, Lars G.F.** *Norwegian Institute Of Wood Technology. Oslo, Norway*

Environmental Active Materials based on Natural Clays toward Quality of Internal Microclimate

**Stanek, Kamil.** *CTU In Prague, Faculty Of Civil Engineering. Prague, Czech Republic*

Where is the embodied CO2 of buildings mainly located? Analysis of different types of constructions and various views of the results (*Best Papers SB13 Graz*)

**Viola, John.** *ETH Zürich. Zurich. Switzerland*

Session: 103 Room: E1 Time: 17.00-18.30 Creating new resources

**Labels:** Urban Scale



## How can we transform specific goals into urban scale strategies?

### Chairman:

**Velázquez, Isabela.** *Directora de proyectos de Gea21*

### Speakers:

An exploration of Law instruments in Kaohsiung sustainable actions: Taking Kaohsiung City Green Building Self-Governance Act for example

**Huang, Chin-Ming.** *Public Works Bureau Of Kaohsiung City Government. Kaohsiung, Taiwan, Republic of China*

Embedding sustainability considerations within the strategic and operative management of real estate organisations

**Lützkendorf, Thomas.** *Karlsruhe Institute Of Technology. Karlsruhe, Germany*

A Framework for People Capability Enhancement to Support Sustainable Facility Management Practices

**Yang, Jay.** *Queensland University Of Technology. Brisbane, Australia*

A sustainable? urban planing for the poorest

**Gesto Barroso, Belen.** *ICHaB, ETSAM – Universidad Politécnica De Madrid. Madrid, Spain*

Session: 104

Room: E2

Time: 17.00-18.30

Creating new resources

**Labels:** Education and Knowledge Management



## Which are the keys to integrate sustainability in architecture projects?

### Chairman:

**Colin, Brigitte.** *Consultant in Architecture, Cities and Urban Policies. UNESCO Natural Sciences Sector*

### Speakers:

The discussion on the Localization Architecture Design Principles of the Project Kaohsiung Houses with Sustainable Perspectives

**Chang, Kuei-Feng.** *National Pingtung Institute Of Commerce. Pingtung. Taiwan, Republic of China*

Architectural Approaches to Sustainable Design: Towards an Expanded Definition of Sustainability in the Context of Building Transformation

**Peters, Terri.** *Arkitektskolen Aarhus. Aarhus, Denmark*

Assessing sustainability of building materials in developing countries: The sustainable building materials index (SBMI) (*Best Papers SB13 Southern Africa*)

**Gibberd, Jeremy.** *University of Pretoria, Gauge/CSIR. Pretoria, South Africa*

Eco-responsible plan and design. Processes, strategies and tools towards environmental assessment in Architecture

**Meloni, Alessia.** *University Of Engineering And Architecture Of Cagliari. Assemini, Italy*

Session: 105

Room: E3

Time: 17.00-18.30

Creating new resources

**Labels:** Rating Tools  
Urban Scale



## Up to what degree are eco-efficiency management tools developed?

### Chairman:

**Sauer, Bruno.** *Director Técnico GBCe, socio Bipolaire Arquitectos. Profesor Universidad Europea de Valencia. Spain*

### Speakers:

Development of the rating system for environmental performance of city block (CASBEE-UD) and Case study

**Hayashi, Tatsuya.** *Chiba University. Chiba City, Japan*

EcoBalance model for assessing eco-efficiency of urban development

**Wahlgren, Irmeli.** *VTT Technical Research Centre Of Finland. Espoo, Finland*

Estimation of load and generation peaks in residential neighbourhoods with BIPV: bottom-up simulations vs. Velander method

**Sartori, Igor.** *Sintef. Oslo, Norway*

Sustainability indicators for building modernization and urban regeneration

**Cronhjort, Yrsa.** *Aalto University School Of Arts, Design And Architecture. Espoo, Finland*



**Session: 106    Room: E4    Time: 17.00-18.30    Creating new resources**

**Labels:** Life-Cycle assessment  
Renovation, retrofitting and regeneration  
Best Papers of SB13 Conference series



## Which are the most notable contributions to applying LCA in building renovation?

### Chairman:

**Charlotte Valdieu, Catherine.** *Sustainable Urban Development European Network (SUDEN). France*

### Speakers:

Methodology proposal for the socioeconomic life cycle assessment applied to retrofitting in a local context

**Touceda, M<sup>a</sup> Isabel.** *Ulb. Brussels, Belgium*

Life cycle optimized application of renewable raw materials for retrofitting measures

**Clueber, Norman.** *Fraunhofer Institute For Mechanics Of Material. Halle, Germany*

Environmental Impact of housing retrofit activities: Case study

**Russell, Mark.** *University Of New Mexico. Albuquerque, New Mexico, USA*

Relevance of the recycling potential (module D) in building LCA: A case study on the retrofitting of a house in Seraing (*Best Papers SB13 Graz*)

**Wastiels, Lisa.** *Belgian Building Research Institute. Brussels, Belgium*

**Session: 107    Room: E5    Time: 17.00-18.30    Creating new resources**

**Labels:** Urban Scale



## Are we advancing towards a truly complete urban regeneration?

### Chairman:

### Speakers:

The role of rehabilitation of buildings in the urban integration, social cohesion and environmental responsibility

**Gonzalez Garcia, Isabel.** *Departamento De Urbanística Y Ordenación Del Territorio. GIAU+S. ETSAM. UPM. Madrid, Spain*

New concept for user-orientated suburb renovation

**Soikkeli, Anu.** *University Of Oulu / Faculty Of Architecture. Oulu, Finland*

Evaluation and Development of Indicators for Sustainability Assessment of Urban Neighbourhood Renovation Projects

**Mittermeier, Paul.** *Munich University Of Applied Sciences. Kirchheim, Germany*

How do we understand net positive neighbourhoods? Three perspectives

**Oliver, Amy.** *Université De Montréal. Montreal, Canada.*

Session: 108

Room: E6

Time: 17.00-18.30

Creating new resources

**Labels:** Health and Indoor Quality



**Is it possible to define habitability conditions that insure healthy buildings without excessive spending?**

**Chairman:**

**Zamora, Joan Lluís.** *Professor Universitat Politècnica de Catalunya. Spain*

**Speakers:**

The Psychophysics of Well-being - Methodological approach of the||socio-psychological monitoring of the VELUX LichtAktiv Haus

**Wegener, Bernd.** *Humboldt University Berlin. Berlin, Germany*

Towards a fuel poverty definition for Spain

**Sánchez-Guevara, Carmen.** *Universidad Politécnica De Madrid. Madrid, Spain*

PM2.5 emissions of urban dwellings in China: Case study from Fuzhou

**Huang, Lizhen.** *School Of Management, Fuzhou University. Fuzhou, China*

Psychotherapeutic and Team Building Initiative of Greening Construction Sites - The Case Study of an 'Oasis in the Desert'

**Smallwood, John.** *Department Of Construction Management. Port Elizabeth, South Africa*

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## Sustainable building and communities



### Speakers:

**Oussidhoum, Firdaous.** *Director of International and External Relations at Africa Union Of Architects. Morocco*

**Kapoor, Prashant.** *Principal Industry Specialist-Green Buildings. International Finance Corporation (IFC), member of World Bank Group*

**Salas, Julián.** *ICCET (Institute of Building Sciences Eduardo Torroja) - CSIC (Superior Council for Scientific*

### Summary:

As highlighted and explained by the WSB14's Global Vision Report (Building a Common Home): The building sector has different tasks in different regions: Population growth is going to happen in developing countries, while hardly growing at all in most of the wealthiest countries. It is meaningful that 50% of population increment will happen in barely 8 countries (6 of them in Africa) Nigeria, Tanzania, Congo, Niger, Uganda, Ethiopia, India and... USA. Furthermore, the largest growth, proportionally, of GDP will happen in BRIC countries: This leads to different requirements in different areas of the world. In many nations, building renovation is an unavoidable strategy to reduce high energy consumption and associated emissions.

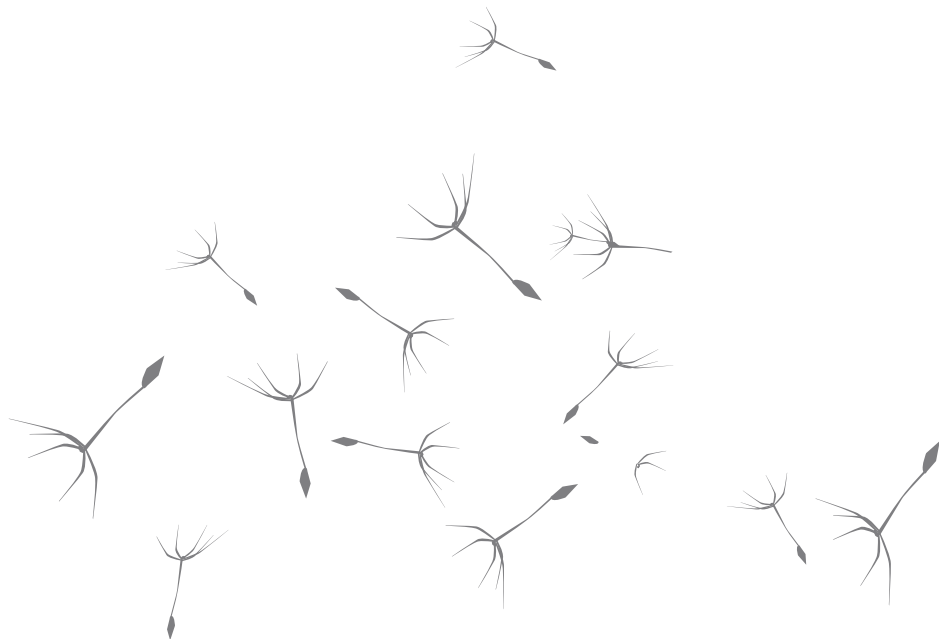
In other areas, slums are a reality that must be overcome. In 2010, more than 10% of world population lived in insalubrious neighbourhoods. And, if poverty is not surmounted, in 2030 it could affect 2,000 million people.

Likewise the building sector has different means to answer habitability demands: Providing socially demanded habitability with local and global environmental constraints in mind implies a decisive transformation of the ways and techniques to construct buildings and cities, which, owing to globalisation, are currently expanding homogeneously all over the world.

Adapting to varied climatic and social exigencies, as well as to the availability of local resources, will bring not only an important adaptive innovation of these techniques, but also a novel interpretation of the essential lessons that traditional systems and popular architecture have lent us.

The building sector must respond to social evolution: In seven of the eight countries where 50% of the world population increase until 2050 is going to happen – this is, in all of them except USA – more than 70% of the nations' agricultural land is managed by peasants, with very different social, territorial distribution and resource management models compared to the social and productive models of the OECD or of most of the BRIC countries.

Resilience as a way to answer to the challenges of sustainability in emerging countries: Flexibility and adaptability will be essential in the way in which emerging countries will meet habitability needs; with a prominent role of the community –as a scale in which to act and as a player-, of the human factor, and of informal frameworks.





Thursday, 30 October

## Global sustainable economy and sustainable building



### Speakers:

**Platt, Roger.** *President of US Green Building Council*

**Hoballah, Arab.** *Chief Sustainable Consumption and Production of UNEP/DTIE (Division of Technology, Industry and Economics)*

### Summary:

As highlighted and explained by the WSB14's Global Vision Report ('Building a Common Home'):

The business model of the building sector is to provide, at a price, a shelter for our social activities, doing so in very different economic, social and environmental frameworks and, very often, extraordinarily changeable, including the building sector as a relevant driver of change itself. The building sector has organised itself to resolve different situations and, therefore, has adapted to local conditions brilliantly. This adaptation to local conditions appears as something natural, even when confronting global environmental topics.

The building sector is an impressive recipient of investment and generator of jobs: Covering the environmental demands of the building sector between 2010 and 2050 to reach the 2°C increase scenario would require investing 31 trillion USD which would be recovered with energy and emission savings.

This investment would have important repercussions on jobs - different in each country or region: in developed economies, an average of 13 jobs/year per 1 million USD invested in implementing mitigation measures in building – which must be strategically considered so as to generate the highest social benefits, seeing to socioeconomic conditions in each particular region.

In conclusion, the building sector can and must be a relevant driver of change itself. This will be the perspective of the two keynote speakers, representatives of two key global players in the sector, World Green Building Council and United Nations Environment Programme. So, we will have the interventions of Roger Platt, Senior Vice President of Global Policy and Law of US Green Building Council, and Arab Hoballah, Chief Sustainable Consumption and Production of UNEP/DTIE (Division of Technology, Industry and Economics)

Session: 109 Room: J Time: 10.00-11.30 Transforming Reality

**Labels:** Case Studies  
Financing and new business models



**How does building design influence in the implementation of sustainable processes within retail and hotel franchises? Sustainable processes and design in large-scale buildings.**

**Chairman:**

**Salinas, Adelina.** *ZOI Arquitectura e Ingeniería. Almería, Spain*

**Speakers:**

**Iglesias, David.** *Arquitecto colaborador en Alonso Balaguer y Arquitectos Asociados. Barcelona, Spain*

**Valiño, María Teresa.** *Valora Consultores. La Coruña, Spain*

**Ortega, Luis.** *International Hospitality Projects. Madrid, Spain*

**Alfonso, Santiago.** *Grupo Cosentino. Cantoria. Almería, Spain*

Session: 110 Room: A Time: 10.00-11.30 Transforming Reality

**Labels:** Renovation, retrofitting and regeneration  
Construction Systems and materials



**Which are the keys to dealing with the technological changes that the building renovation sector requires?**

**Chairman:**

**Paricio, Ignacio.** *ITEC (Instituto de Tecnología de la Construcción de Catalunya). Architect and professor in Universidad de Arquitectura de Barcelona. Barcelona, Spain*

**Speakers:**

**Solé, Josep.** *European Sustainability and Technical Manager at URSA Insulation. Barcelona, Spain*

**Ripoll, Angel.** *Marketing at Technal. Barcelona, Spain*

**Saiz Sánchez, Pablo.** *Architect, founding partner at Modulab architecture and housing. Madrid, Spain*

**Saiz Sanchez, Pablo.** *Arquitecto, socio director en Modulab arquitectura y vivienda. Madrid, Spain*

**Saurina, Danielo.** *Ingeniero. Director comercial de Disset. Barcelona, Spain*

Session: 111

Room: F

Time: 10.00-11.30

Transforming Reality

**Labels:** Building Regulations and Standards  
Rating tools



**We are moving. But are EU-Member States moving in the same direction?**

**Chairman:**

**Hamans, Chris.** *European Sustainability Consulting. Heel, The Netherlands*

**Speakers:**

**Asensão, G.** *CEN-CENELEC - European Standardisation Organisation. Brussels, Belgium*

**Trudsø, E.R.** *Nordic Innovation. Oslo, Norway*

**Brockmann, T.** *Head of Division - Federal Institute for Research on Building, Urban Affairs and Spatial Development. Berlin, Germany*

**De Lathauwer, D.** *Federal Public Service Health; DG5; Environment and Product Policy. Brussels, Belgium*

Session 112

Room: H1

Time: 10.00-11.30

Transforming Reality

**Labels:** Nearly Zero Energy Building



**Which are the limits and how can we achieve nearly zero emission office buildings today?**

**Chairman:**

**Expósito Mora, Carlos.** *Tecnopen*

**Speakers:**

**Irastorza Ruigomez, Luis.** *Tecnopen*

**Álvarez Domínguez, Servando.** *Universidad de Sevilla. Sevilla, Spain*

**Pascual Pellicer, Jordi.** *AIGUASOL . Sistemes Avançats d'Energia Solar Tèrmica SQL. Spain*

**Expósito Mora, Carlos.** *ALIA, Arquitectura, Energía y Medio Ambiente, S.L.*

**Ingelmo Torres, Alfredo.** *Empresa Gas Natural Distribución, SDG, S.A. Spain*

Session 113

Room: H2

Time: 10.00-11.30

Transforming Reality

**Labels:** Financing and New Business Models



**Responsible business practice in land, construction and real estate**

**Chairman:**

**Hartenberger, Ursula.** *RICS*



### Speakers:

Promoting responsible business practice in land, construction and real estate

**Pes Guixa, Angel.** *Brand and Corporate Responsibility Director, Caixa Bank, President, Global Compact Network. Spain*

Human Rights, Labour, Environment and Anti-Corruption: Mapping sectoral engagement with the Ten Principles of the UN Global Compact

**Cosgrove, Alexander.** *Associate, Latham & Watkins*

Best practice example II: Embedding environmental best practice in construction

**Antink, Roy.** *Director Green Support, Skanska*

Best practice example III: Building capacity for corporate sustainability

**El Burai, Mahmoud Hesham.** *Director, Dubai Real Estate Institute*

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|-------------|----------|-------------------|----------------------|
| Session 114 | Room: H3 | Time: 10.00-11.30 | Transforming Reality |
|-------------|----------|-------------------|----------------------|

Labels: Urban Scale



Ajuntament  
de Barcelona

### What are the current health & social inclusive drivers for the sustainable development of Cities?

#### Chairman:

**Wassouf, Micheel.** *Director, Energiehaus scp*

### Speakers:

**Hellweg, Uli.** *IBA-Hamburg. Germany. Hamburg, Germany*

**Ng, John.** *Director Hong Kong Green Building Council, Hong Kong Special Administrative Region. Hong Kong, China*

**Orsini, Francesco.** *Urban Eafit. Medellín, Colombia*

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|-------------|----------|-------------------|----------------------|
| Session 115 | Room: B1 | Time: 10.00-11.30 | Transforming Reality |
|-------------|----------|-------------------|----------------------|

Labels: Renovation, retrofitting and regeneration

Building Regulations and Standards



### Is the Energy Performance Certificate (EPC) of the Energy Performance of Buildings Directive (EPBD) promoting building renovation?

#### Chairman:

**Morer Forns, Lluís.** *Head of Energy Efficiency. Catalan institute of Energy (ICAEN)*

### Speakers:

**Domínguez Martín, Aitor.** *Head of Domestic & Buildings / Technical Project. Ministry of Industry, Energy and Tourism Spain. Spain*

**Thers Egesberg, Leise.** *Legal advisor Danish Energy Agency*

**Garcia Audí, Pau.** *Project Officer Executive Agency for Small and Medium Enterprises (EASME). Unit B1 – Energy Efficiency*

**López, Fabián.** *Societat Orgànica, Consultora ambiental S.L.*

Session 116

Room: C3

Time: 10.00-11.30

Transforming Reality

**Labels:** Management



## Do the SB Conferences really serve their purpose?

### Chairman:

**Miguel Mitre, Emilio.** *GBCe and WSB14 Barcelona, SB13 Coordinator and WSB14 Barcelona International Representative. Spain*

### Speakers:

What have we talked about at the SB Conferences? A thematic structure as an analytical, adaptive a tool to know the contents of the SB Conference Series as a whole, and to be able to plan its future evolution. Methodology.

**Miguel Mitre, Emilio.** *GBCe and WSB14 Barcelona, SB13 Coordinator and WSB14 Barcelona International Representative.*

What's the History and planned Evolution of the SB Conference Series?

**Larsson, Nils.** *Representative of the four co-promoting organizations, and Overall Series Coordinator, iiSBE (international initiative for a Sustainable Built Environment).*

Is the SB Conference Series a good way for the research world to actively contribute to Sustainable Building?

**Bakens, Wim.** *CIB (International Council for Research and Innovation in Building and Construction).*

What is the relevance of the work done by iiSBE at the SB Conference Series?

**Bragança, Luis.** *iiSBE (international initiative for a Sustainable Built Environment).*

How can UNEP-SBCI approach be more present at the SB Conferences?

**Garrigan, Curt.** *UNEP-SBCI (Sustainable Building and Climate Initiative of the United Nations' Environmental Programme).*

Are the SB Conferences an adequate field for the pragmatic, technical approach of the world's largest engineers federation?

**Baillon, François.** *FIDIC (International Federation of Consulting Engineers).*

Session 117

Room: C5

Time: 10.00-11.30

Creating new resources

**Labels:** Case Studies

Operation and maintenance



## What are the keys to produce and maintain housing with less impact?

### Chairman:

**Gomes, Vanesa.** *Associate Professor. University of Campinas. Brazil*

### Speakers:

An ongoing evaluation of single-family passive housing in Norway

**Svensson, Anna.** *SINTEF Building And Infrastructure. Oslo, Norway*

Evaluation of the ecological footprint of residential buildings in terms of its construction typology

**González Vallejo, Patricia.** *Universidad de Sevilla. Sevilla, Spain*

5x4: a case study in low energy infill housing

**Crawford, Robert.** *The University Of Melbourne. Parkville, Australia*

Driving forces of energy-related behaviour in residential buildings

**Op 't Veld, Peter.** *Huygen Engineers & Consultants. Maastricht, The Netherlands*

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|--------------------|-----------------|--------------------------|-------------------------------|
| <b>Session 118</b> | <b>Room: B2</b> | <b>Time: 10.00-11.30</b> | <b>Creating new resources</b> |
|--------------------|-----------------|--------------------------|-------------------------------|

**Labels:** Nearly Zero Energy Building 

## **Towards a shared definition of nZEB? (II)**

### **Chairman:**

**Donath, Cristian.** *Eco Platform. Germany*

### **Speakers:**

Evaluating the Viability of Net Positive Carbon Sequestration in Buildings based on a Case Study in Brisbane, Australia

**Renger, Birte Christina.** *ThomsonAdsett Architects. Brisbane, Queensland, Australia*

Strategies to achieve the deeper carbon reduction targets

**Skopek, Jiri.** *Jll. Toronto, Canada*

Zero energy equipment building Lucia: A case study according to European Directive

**González Díaz, María Jesús.** *Universidad De Valladolid. Valladolid, Spain*

The path to zero carbon - Lets have all the options

**Woolcock, Jim.** *Sustainability House. Adelaide, Australia*

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Session 119

Room: B3

Time: 10.00-11.30

Creating new resources

**Labels:** Construction Systems and materials  
Best Papers of SB13 Conference series



## What issues are going to define the Windows of tomorrow?

### Chairman:

**Zamora, Joan Lluís.** *Professor Universitat Politècnica de Catalunya. Spain*

### Speakers:

Energy rating of windows for the cooling season: a proposal for Europe (*Best Papers SB13 Portugal*)

**Bikas, Dimitrios.** *Aristotle University Of Thessaloniki. Thessaloniki, Greece*

Timber framed windows in a historical perspective: Energy and cost assessment over the life cycle

**Sørnes, Kari.** *Sintef. Oslo, Norway*

A scheme for the energy performance and rating of windows in Europe

**Tsikaloudaki, Katerina.** *Aristotle University Of Thessaloniki. Thessaloniki, Greece*

The Effects of Light Shelf on Climate-based Daylight Performance in Tropics- A Case Study  
**Chien, Szu-Cheng.** *Berkeley Education Alliance For Research In Singapore (BEARS) Center. Singapore*

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Session 120

Room: C1

Time: 10.00-11.30

Creating new resources

**Labels:** Stakeholders



## The “other” actors role. Why aren’t all actors visible?

### Chairman:

**Gálvez, Miguel Ángel.** *Doctor Arquitecto. Profesor Titular Interino. Escuela Técnica Superior Arquitectura Madrid, UPM. Spain*

### Speakers:

The Only Way Out: Introducing a Gender Perspective for Sustainability

**Ciravoglu, Aysen.** *Yildiz Technical University. Istanbul, Turkey*

Technological design of urban creativity spaces: a functional classification of eco-friendly materials

**Violano, Antonella.** *Second University Of Naples. Aversa, Italy*

Better Water Governance for sustainable development: A Case Study of the Chi River Basin, North East Thailand.

**Pechpakdee, Pechladda.** *Faculty Of Architecture, Urban Design, And Creative Arts. Mahasarakham, Thailand*

Urban Planning in the Non-City. New tools for han active participation in a process to plan the growth or irregular settlements in Andalusia.

**Piñero Valverde, Antonio.** *Depto. Urbanística Y O.T. ETS Arquitectura. Univ. Sevilla. Sevilla, Spain*

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| <b>Session 121</b> | <b>Room: E1</b> | <b>Time: 10.00-11.30</b> | <b>Creating new resources</b> |
|--------------------|-----------------|--------------------------|-------------------------------|

**Labels:** Urban Scale  
Rating tools



**What conditions must models and methods fulfill on an urban scale to promote sustainability in buildings?**

**Chairman:**

**de Santiago, Eduardo.** *Consejero Técnico. Subdirección General de Urbanismo. Subdirección General de Urbanismo. Ministerio de Fomento, Gobierno de España. Spain*

**Speakers:**

Mitigation of the energy-water collision through integrated rooftop solar and water harvesting and use for cooling: A critical review

**Peterson, Eric.** *University Of Queensland. St. Lucia, Australia*

A design methodology for collective-self-organized housing projects to build sustainable districts

**Bektas, Esra.** *TNO, Organisatie Voor Toegepast Natuurwetenschappelijk Onderzoek. Delft The Netherlands*

Study on proper allocation of non-energy benefits supporting stakeholders' consensus building to promote community-wide sustainable energy systems

**Kuzuki, Ryota.** *Tokyo Gas Co., Ltd. Tokyo, Japan*

Baseline Analysis for Deployment of a Scalable and Modular Dedicated BMS in Sport and Recreation Buildings

**Maseda, José M.** *Tecnalia R & I. Derio. Spain*

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|-------------|----------|-------------------|------------------------|
| Session 122 | Room: E2 | Time: 10.00-11.30 | Creating new resources |
|-------------|----------|-------------------|------------------------|

**Labels:** Urban Scale



**Soft mobility and walkable neighbourhoods. Are there any specific proposals for the dense city centers?**

**Chairman:**

**Higuera, Esther.** *Profesor Titular UPM. Profesora de Postgrado UPM. Departamento de Urbanística y Ordenación del Territorio ETSAM UPM. Spain*

**Speakers:**

New urban landscapes of the mobility for the sustainable city

**Fallanca, Concetta.** *Mediterranean University Of Reggio Calabria. Reggio Calabria, Italy*

Soft mobility in the urban areas. The case study of reggio calabria

**Taccone, Antonio.** *Mediterranean University Of Reggio Calabria. Reggio Calabria, Italy*

Construction Risks of the Green Building Projects in Indonesia

**Abduh, Muhamad.** *Institut Teknologi Bandung. Bandung, Indonesia*

Reconversion in the medina of Tunis: a sensitive approach for sustainability in historic environments

**Mahroug, Eya.** *ERA, Ed.Sia, École Nationale D'Architecture Et D'Urbanisme De Tunis. Tunis, Tunisia*

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|-------------|----------|-------------------|------------------------|
| Session 123 | Room: E3 | Time: 10.00-11.30 | Creating new resources |
|-------------|----------|-------------------|------------------------|

**Labels:** Rating Tools



**Are energy simulations really reliable?**

**Chairman:**

**Sánchez-Guevara, Carmen.** *Universidad Politécnica de Madrid. Spain*

**Speakers:**

The missing energy. Improving the study of heat fluxes in buildings

**Llorens Viader, Roger.** *Laboratori D'innovació I Tecnologia A L'Arquitectura. LiTA. Barcelona, Spain*

Improving office building energy by smart engineering and computer simulation: an Australian case study

**Burroughs, Steve.** *University Of Canberra. Macquarie, Australia*

Deep renovation of single family houses in Norway. Mapping of the most ambitious projects and lessons learned in them

**Strøm Solberg, Silje.** *Sintef. Trondheim, Norway*

Lessons from reality: examples of near zero energy dwellings in practice

**Verbeeck, Griet.** *Hasselt University, Faculty Of Architecture And Art. Diepenbeek, Belgium*

Session 124 Room: E4 Time: 10.00-11.30 Creating new resources

**Labels:** Life-Cycle Assessment  
Nearly Zero Energy Building



## Which should be the contribution of life-cycle assessment in NZEB?

### Chairman:

**Tenorio, José Antonio.** *Responsable de la Unidad de Calidad en la Construcción. Instituto de Ciencias de la Construcción Eduardo Torroja. CSIC. Spain*

### Speakers:

EnerBuiLCA tool: Life Cycle Assessment for Energy Efficiency in Buildings

**Isasa, Marina.** *Escola Superior De Comerç Internacional (Cátedra UNESCO de Ciclo de Vida y Cambi. Barcelona, Spain*

Energy Rating Software with a Life Cycle approach

**Oregi, Xabat,** *Tecnalia Research & Innovation, Energy And Environment Division. Azpeitia, Spain*

An early-stage life cycle model for low-energy buildings

**Czerniakowski, Isabella.** *The University Of Melbourne. Parkville, Australia*

Added value of the European Core EPD

**Piasecki, Michal.** *Building Research Institute (ITB). Poland*

Session 125 Room: E5 Time: 10.00-11.30 Creating new resources

**Labels:** Urban Scale



## Are empty spaces the best opportunity within cities?

### Speakers:

Stop, Reassess and Redesign: Resilience Assessment within contexts of Urban Regeneration Strategies

**Marques Nunes, Duarte.** *Instituto Superior Técnico. Lisbon, Portugal*

Integration of Sustainability Issues into the Regeneration of Urban Wasteland: From Theoretical Framework to Operational Monitoring Tool

**Laprise, Martine.** *Laboratory Of Architecture And Sustainable Technologies (LAST), Lausanne, Suisse. Lausanne, Switzerland*

Impact of social sustainability assessment tools in the early planning phase of refurbishment and infill development

**Le Roux, Simon.** *Aalto University School Of Arts, Design And Architecture. Aalto, Finland*

Urban agricultural typologies and the need to quantify their potential to reduce a city's environmental 'foodprint'



**Goldstein, Benjamin,** *Danish Technical University. Kogens Lyngby, Denmark*

Session 127

Room: J

Time: 12.00-13.30

Transforming Reality

**Labels:** Education and Knowledge Management    
Construction Systems and materials



## How can BIM help designing sustainable buildings?

### Chairman:

**Jallon, Paul.** *Director of Development at Knauf. France*

### Speakers:

**Häkkinen, Tarja.** *Doctor Sc Tech. Senior principal research scientist at VTT. Technical Research Centre of Finland. Finland*

**Coloma, Eloi.** *BIM Innovation Specialist. PhD Lecturer at University UPC. Barcelona, Spain*



**Mills, Fred.** *Procurement Manager at Osborne and Founding Director of The B1M (BIM one million). United Kingdom*

Session 128

Room: A

Time: 12.00-13.30

Transforming Reality

**Labels:** Renovation, retrofitting and regeneration  



## Which are the real barriers to renovation?

### Chairman:

**Martínez, Juan Carlos.** *Journalist specialised in real state sector, cooperates with El País, Inmodiario, Economía Digital*

### Speakers:

**Mateo, Luis.** *Andimat. Madrid, Spain*

**Gómez, Carlos.** *NVR. Madrid, Spain*

Session 129

Room: F

Time: 12.00-13.30

Transforming Reality

**Labels:** Politics and governance



## Which kind of policy commitments has been achieved in MARIE (MED Programme) Strategic Project framework?



### Chairman:

**Chaparro, Carme.** *Journalist. Tele 5. Madrid, Spain*



## Speakers:

Introductory parliaments and institutional speeches

**Tarradellas, Ferran.** *Head of Representation in Catalonia. European Commission. Barcelona, Spain*

**Sala, Carles.** *Housing and Urban Improvement Secretary. DTS-Generalitat de Catalunya. Barcelona, Spain*

Regions of MARIE Project

**De L'Haye, Annick.** *Vicepresident. Région PACA, France*

**Vito, Sara.** *Assessore Ambiente ed Energia. Regione Friuli-Venezia-Giulia, Italy*

**Radaeli, Gaia.** *Directora General de Rehabilitación. Junta de Andalucía, Spain*

**Ranieri, Ernesta Maria,** *Environment Director. Regione Umbria, Italy.*

International Organisations

**Ribeiro, Teresa.** *Deputy Secretary General. Union for the Mediterranean.*

**Tejero, Isabel.** *President. Cluster of Energy Efficiency of Catalonia*

**Albinyana, Roger.** *Secretari d'Afers Exteriors Departament Presidència. Generalitat de Catalunya. CPMR-IMC*

**Fabianelli, Maria.** *Vice-president for Energy Efficiency. IRE LIGURIA. FEDARENE.*

**Llisterri, Fabian.** *Tresorery. UIA-UMAR*

**el Hanchi, Fathi.** *Directour de utilization rationnelle de l'Energie. National Agency of Energy Conservation. MEDENER*

**Joffre, André.** *Président Directour Général. IMEDER*

Pan-European Projects

**Moreno, Ana.** *Project coordinator of Elih-med. ELIMED Project*

**Palazón, Roque.** *Proforbiomed coordinator. PROFORBIOMED*

**Bardaji, Cristian.** *Coordinator of the SHAAMS Project. Barcelona Chamber of Commerce*

**Vergés, Joaquim.** *Coordinator of the ENPI-CBCMED EU. UAB-DIDSOLIT*

**Amin, Nagib.** *Team Leader. CES-MED Project*

| Session 130 | Room: H1 | Time: 12.00-13.30 | Transforming Reality |
|-------------|----------|-------------------|----------------------|
|-------------|----------|-------------------|----------------------|

**Labels:** Life-Cycle Assessment  
Rating tools



## Building Sustainability Assessment: How do we make lifecycle assessment mainstream?

### Chairman:

**Drinkwater, James.** *Senior Policy Advisor, WorldGBC. London, United Kingdom*

### Speakers:

**Lindblom, Josefina.** *DG Environment, European Commission. Brussels, Belgium*

**Mesureur, Bruno.** *Director of Marketing & European and International Affairs, CSTB (Centre Scientifique et Technique du Bâtiment). France*

**Wittstock, Bastian.** *Team Lead Building & Construction, PE International. Germany*

**Kotilainen, Heli.** *CEO, Finland Green Building Council. Finland*

Session 131

Room: H2

Time: 12.00-13.30

Transforming Reality

**Labels:** Financing and New Business Models



## Putting sustainability in real estate into practice

### Chairman:

**Bosteels, Tatiana.** *Head of Responsible Property Investment, Hermes Real Estate, UNEP FI Property Working Group Co-Chair*

### Speakers:

Strengthening the business case for energy efficiency in buildings in Europe: The role of the European Commission

**Garcia, Pau.** *Executive Agency for Small and Medium-sized Enterprises, European Commission*

Sustainability metrics in real estate investment and management

**Hovorka, Frank.** *MRICS, Head of Sustainable Development, Caisse des Dépôts, UNEP FI Property Working Group Co-Chair*

Greening the building supply chain

**Garriga, Curt.** *Coordinator UNEP SBCI*

RenoValue: State of play regarding the integration of sustainability in valuation practice in Europe

**Hartenberger, Ursula.** *Global Head of Sustainability, RICS*

Sustainability from a valuation practitioner's perspective

**Creamer, Mark.** *MRICS, Head of EMEA Valuation & Advisory Services CBRE*

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Session 132

Room: H3

Time: 12.00-13.30

Transforming Reality

**Labels:** Renovation, retrofitting and regeneration  
Urban Scale



## Is it possible to achieve a friendly and affordable urban district retrofitting?

### Chairman:

**Moro, Andrea.** *iiSBE Italia R&D*

### Speakers:

**Essig, Natalie.** *MUAS (Munich University of Applied Sciences). Germany*

**Ferrando, Valeria.** *IES (Integrated Environmental Solutions Limited). United Kingdom*

**Kiss, Ida.** *ABUD. Hungary*

**Camiruaga, Idoia.** *Santiago, Spain*

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Session 133

Room: C1

Time: 12.00-13.30

Creating new resources

**Labels:** Stakeholders



## Active citizens. How can we empower citizens for sustainable rehabilitation?

### Chairman:

**Verdaguer, Carlos.** *Profesor Asociado. Escuela Técnica Superior Arquitectura Madrid, UPM. Spain*

### Speakers:

Tenant involvement in renovation for low energy performance

**Hiller, Carolina.** *SP Technical Research Institute Of Sweden. Boras, Sweden*

From the 'project' to the 'process' for the building rehabilitation. Intervention strategies on existing buildings at the times of crisis

**Fianchini, Maria.** *Politecnico di Milano. Milan, Italy*

Innovation on actions of citizen awareness in terms of energy saving in households

**Soto Francés, Laura.** *Instituto Valenciano De La Edificación. Valencia, Spain*

Does the design of the built environment have a role in motivating and increasing participation in creating sustainable communities and living sustainable lifestyles?

**Sassi, Paola.** *Oxford Brookes University. Oxford, United Kingdom*

Session 134

Room: C3

Time: 12.00-13.30

Creating new resources

**Labels:** Construction Systems and materials

Best Papers of SB13 Conference series



## What saving potential do passive measures have?

### Chairman:

**Solé, Josep.** *European Sustainability and Technical Manager at URSA Insulation. Barcelona, Spain*

### Speakers:

Importance of orientation in building energy-savings

**Ramos, Germán.** *University of Navarra, Department of Building Construction, Services and Structures, School of Architecture. Pamplona, Spain*

Re-considering thermal insulation under Mediterranean

**Anastaselos, Dimitros.** *Laboratory Of Process Equipment Design, Aristotle University Thessaloniki. Thessaloniki, Greece*


Net Zero Energy Through Passive Downdraft Ventilation: The Design & Operation of the Conrad N. Hilton Foundation

**Mead, David.** *WSP Built Ecology. Seattle, USA*

The Impact of External Shading, Windows Glazing and Frame on Thermal Performance of Residential House in Abu-Dhabi (Best papers SB13 Dubai)

**Awadh, Omair.** *British University. Dubai, United Arab Emirates.*

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| Session 135 | Room: C5 | Time: 12.00-13.30 | Creating new resources |
|-------------|----------|-------------------|------------------------|

**Labels:** Case Studies  
Best Papers of SB13 Conference series 

## Local Answers: a resource to face up to global challenges?

### Chairman:

**López, M<sup>a</sup> Isabel.** *Investigadora Depto Planificación y Diseño Urbano. Universidad del Bio Bio. Chile*

### Speakers:

Affordable Sustainable Design: Three Case Studies in California and Mexico

**La Roche, Pablo.** *California State Polytechnic University Pomona. Santa Monica, CA, USA*

Environmental assessment of a constructive system for living spaces made in Mauritania

**Martín-Consuegra, Fernando.** *Instituto Eduardo Torroja De Ciencias De La Construcción. Madrid, Spain*

Applications of Sustainable Factors in Floating Architecture

**Moon, Ghangho.** *Kunsan National University. Kunsan, Korea*

Influence of affluence on sustainable housing: a contextual study of Mysore, India

**Basavapatna Kumaraswamy, Satish.** *School of Architecture, Design and Environment Plymouth University. Plymouth, United Kingdom*

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| Session 136 | Room: B1 | Time: 12.00-13.30 | Creating new resources |
|-------------|----------|-------------------|------------------------|

**Labels:** Renovation, retrofitting and regeneration 

## Where should energy renovation reach up to? (IV)

### Chairman:

**Charlotte Valdieu, Catherine.** *Sustainable Urban Development European Network (SUDEN). France*

### Speakers:

Towards determining daylighting design parameters in student dorm rooms - the South Eastern Europe case study

**Jovanovic, Aleksandar.** *Faculty Of Civil Engineering And Architecture Nis Serbia. Nis, Serbia*

Innovative technology versus tradition in energy efficient renovation

**Hasselaar, Everts.** *Delft University of Technology, OTB Research For The Built Environment. Delft, The Netherlands*

Sustainable retrofitting guidelines through an energy simulation-based method. Feasibly study on the social housing buildings in Aghia Varvara, Athens

**Cattani, Elena.** *University Of Bologna. Bologna, Italy*

Conditions and Methods Needed to Reliably Achieve Climate-Neutral Building Outcomes

**Edminster, Ann.** *Design AVenues LLC / Commission For Environmental Cooperation. Pacifica, USA*

**Session 137      Room: B2      Time: 12.00-13.30      Transforming Reality**

**Labels:** Building Regulations and Standards  
Housing



**Can Active House be the tool that drive sustainable buildings to become standard solutions for buildings?**

**Chairman:**

**Eriksen, Kurt Emil.** *Active House Alliance. Bruxelles, Belgium*

**Speakers:**

**Zsolt Gunther, Zsolt.** *3h architecture. Budapest, Hungary*

**Valentin, Emmanuel.** *Saint Gobain. Paris, France*

**Schjodt Worm, Amdi.** *Danish Technological Institute. Aarhus, Denmark*

**Christiansen, Niels B.** *Danish Technical University. Copenhagen, Denmark*

**Session 138      Room: B3      Time: 12.00-13.30      Transforming Reality**

**Labels:** Construction Systems and materials



**Institutionalizing Sustainability: Transforming Professional Practices to Achieve Portfolio-wide improvements / consistently Higher Performance on Projects**

**Chairman:**

**Batshalom, Barbra.** *Executive Director, Sustainable Performance Institute*

**Speakers:**

**Ekman, Rand.** *Director of Sustainability. Cannon Design*

**McEvoy, Paula.** *Co-director Sustainable Design, Associate Principal, Perkins+Will.*

**Hubbard, Gunnar.** *Principal and Building Sustainability Practice Leader, Thornton Tomasetti*

**Session 139      Room: E1      Time: 12.00-13.30      Creating new resources**

**Labels:** Rating Tools

Education and Knowledge Management



**Measuring sustainability in buildings. How can data help us to act more efficiently?**

**Chairman:**

**Wadel, Gerardo.** *Socio fundador. Societat Orgànica Consultora Ambiental SL*

**Speakers:**

Lack of Sustainability Assessment as a rating tool in the Building Industry - KSA

**Shaawat, Essam.** *University Of Dammam. Dammam, Saudi Arabia*

Net Zero Energy Schools: The Cutting Edge of US Net Zero Strategy

**Kibert, Charles.** *University Of Florida. Gainesville, USA*

Characterizing building renovation in the residential sector in Victoria, Australia

**Iyer-Raniga, Usha.** *RMIT University. Melbourne, Australia*

Sustainable construction: Singapore's journey towards zero landfill

**Low, Giau Leong.** *Building And Construction Authority Of Singapore. Singapore*

Session 140

Room: E2

Time: 12.00-13.30

Creating new resources

**Labels:** Nearly Zero Energy Building  
Housing



## How does energy efficiency affect different residential models?

### Chairman:

**Todd, Joel Ann.** *Environmental Consultant*

### Speakers:

Estimation of city-scale impact of new Japanese energy saving standard for residential building by energy end-use simulation

**Taniguchi, Ayako.** *Osaka University. Suita, Japan*

Value propositions for business models for nZEB renovation of single-family homes

**Straub, Ad.** *Delft University Of Technology. Delft, The Netherlands*

Contractor perceptions of very energy efficient new multi-storey residential buildings

**Hemström, Kerstin.** *Linnaeus University. Växjö, Sweden*

Thermal stress and comfort in elderly people's housing in tropical climates: the need for policy

**Chindapol, Sumavalee.** *Faculty Of Built Environment, University Of New South Wales. Sydney, Australia*

Session 141

Room: E3

Time: 12.00-13.30

Creating new resources

**Labels:** Renovation, retrofitting and regeneration



## Where should energy renovation reach up to? (V)

### Chairman:

**Sánchez Ostiz, Ana.** *Dra. Arquitecta, Profesora Titular de Construcciones Arquitectónicas de la Universidad de Navarra, Directora del Master de Diseño y Gestión Ambiental de Edificios. EA UNAV. Pamplona, Spain*

### Speakers:

EPBD (Energy Performance of Buildings Directive). Evolution o Revolution?

**Alomar, Inés.** *Deerns S.L. Barcelona, Spain*

Illustration of methodological challenges in energy and environmental assessment of buildings

**Fouquet, Marine.** *Cstb.Saint-Martin D'Hères, France*

How could Common Carbon Metric be practically usable for international collaboration to reduce greenhouse gas emission from buildings?

**Yashiro, Tomonari.** *Inst. Of Industrial Science, The University Of Tokyo. Tokyo, Japan*

Dynamic material flow analysis of the building stock in Spain

**Rincón, Lúdia.** *Universitat De Lleida. Lleida, Spain*

Session 142 Room: E4 Time: 12.00-13.30 Creating new resources

**Labels:** Life-Cycle Assessment  
Rating tools



**Which are the limits of life-cycle assessment as a rating tool to evaluate sustainability in building? (III)**

**Chairman:**

**Macías, Manuel.** *Profesor/Responsable del área de Investigación. Universidad Politécnica de Madrid/GBCe. Spain*

**Speakers:**

Contribution of timber buildings on sustainability issues

**Hafner, Annette.** *Ruhruniversität Bochum. Bochum, Germany*

Influence of construction material choice and design parameters on greenhouse gas emissions of buildings

**Heeren, Niko.** *ETH Zurich. Zurich, Switzerland*

Light Concrete Frame for Sustainable Buildings

**Fiala, Ctislav.** *CTU In Prague, Faculty Of Civil Engineering. Prague, Czech Republic*

Basic physical properties of lime from the shells of Japanese scallop and its environmental performance as an interior finishing material

**Yajima, Kazushi.** *Kogakuin University. Tokyo, Japan*

Session 143 Room: E5 Time: 12.00-13.30 Creating new resources

**Labels:** Urban Scale  
Best Papers of SB13 Conference series



**Why isn't efficient urban design made general?**

**Chairman:**

**González, María Jesús.** *ASA President (Association of Sustainable Architecture) from 2010 to 2013. Member of the Scientific Committee of the contest POWERING TRANSFORMATION*

**Speakers:**

Assessment of human intervention on social housing design considering impacts on thermal performance at residential neighborhood

**Cardenas, Luz.** *University Of Chile. Santiago, Chile*

A Novel Real-Time Traffic Surveillance System for Intermodal Travel Based on Cellular Networks-A Case Study from Greater Cairo Metropolitan Area (GCMA)

**Basyoni, Yarah.** *German University In Cairo (GUC). Cairo, Egypt*

The Norwegian zero emission neighbourhood Aadland

**Risholt, Birgit.** *SINTEF Building And Infrastructure. Trondheim, Norway*

Criteria for energy efficient urban planning

**Eicker, Ursula.** *University Of Applied Sciences. Stuttgart, Germany*

Session 144

Room: E6

Time: 12.00-13.30

Transforming Reality

**Labels:** Case Studies



## SB Challenge. Do our buildings perform as intended?(II)

**Chairman:**

Rietz, Andreas.

**Speakers:**

Müller, Julia. *Germany*

Loehnert, Günter. *Germany*

Possemiers, Toon. *Bruxelles, Belgium*

Atkins, Richard. *United Kingdom*

Larsson, Nils. *iiSBE. Canada*

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Session:GB6 Room: Auditorium Time: 15.00-16.30 Area: GlobalVision

## Economy, innovation and sustainable building

### Speakers:

**Rogalska, Marzena.** *Head of Unit, Sustainable Industrial Policy and Construction; DG Enterprise and Industry; European Commission*

**Garrigan, Curt.** *Coordinator of Sustainable Buildings and Climate Initiative at United Nations Environment Programme (UNEP SBCI)*

**Mueller, Thomas.** *President and CEO of Canada Green Building Council (Canada GBC). Canada*

**Hampson, Keith.** *CEO of Sustainable Built Environment Research Center. Australia*

### Summary:

As highlighted and explained by the WSB14's Global Vision Report ('Building a Common Home'):

The building sector is an impressive recipient of investment and generator of jobs: Covering the environmental demands of the building sector between 2010 and 2050 to reach the 2°C increase scenario would require investing 31 trillion USD – 19 for the residential sector, 12 for services – which would be recovered with energy and emission savings.

This investment would have important repercussions on jobs - different in each country or region: in developed economies, an average of 13 jobs/year per 1 million USD invested in implementing mitigation measures in building – which must be strategically considered so as to generate the highest social benefits, seeing to socioeconomic conditions in each particular region.

This roundtable, following the ideas posed in the morning global vision session, will address the issue from the relevant perspectives of: European Commission, the United Nations Environment Programme (UNEP), the Conseil International de Bâtiment (CIB) and World Green Building Council (WGBC). ). The audience will have the opportunity to get to know their strategies and documents related to the issue: the European Action Plan on Sustainable Competitiveness of the Construction Sector (Construction 2020 Action Plan), 10YFP Programme on Sustainable Buildings and Construction of UNEP, and R&D Investment and Impact in the Global Construction Industry of CIB.

We will have the interventions of: Ms. Marzena Rogalska, Head of Unit, Sustainable Industrial Policy and Construction), Curt Garrigan (Coordinator of UNEP-SBCI, Keith Hampson (CIB, CEO of SBEnrc-Australia) and Thomas Mueller (CEO of Canada-GBC)





## **Tuesday, 28th October**

# **POSTER SESSIONS**

## Poster Session 1 - Time: 11:30- 12:00 - Screen: 1

**Labels:** Building Regulations and Standards

P001 Comparison between the Provisions of the Egyptian Code of Practice and the Eurocodes for Reinforced Concrete Structures Design

**Ahmed El-Shennawy**

P002 Renovation and improvement of energy efficiency in buildings. Policies and techniques in the European environment

**Carles Ibáñez**

P003 The Actions of Sustainable Building and Environment Forming in Kaohsiung

**Yenyi Li**

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**Labels:** Case Studies

P004 Energy & Indoor Environmental evaluation of a student residence in Ireland - Results and lessons learnt after two years monitoring

**Patxi Hernandez**

P005 Sustainable building of a holiday care residence: a pilot project combining the comfort of a hotel with the facilities of a care residence

**Luc Boehme**

P006 Energy and Lighting Performance of Buildings in the Neighbourhood Ciudad de los Angeles, Before and After Refurbishing

**Marlix Perez Gonzalez**

## Poster Session 1 - Time: 11:30- 12:00 - Screen: 2

**Labels:** Construction Systems and materials

P029 Energy as indicator of environmental impact on building systems, formed from materials Uruguayan domestic production

**Virginia Casañas Muniz**

P030 Greening buildings by improving database

**Guillaume Habert**

P032 POTENTIALITY OF THE INDUSTRIALIZATION OF THE BALCONY SERVING TO ENVIRONMENTAL STRATEGIES

**Lara Sierra Trilla**

P033 Development for Sustainable Construction System (Rapid Walls) in Egypt Using Nanotechnology

**Mohamed Meselhy**

## Poster Session 1 - Time: 11:30- 12:00 - Screen: 3

**Labels:** Education and Knowledge Management

P045 Comparison of life cycle assessment databases for building assessment

**Atsushi Takano**

P046 Life Cycle Assessment on the installation of BIPV on Green Energy Housing Building in Taiwan by Life Cycle Carbon Minus method

**Bin Feng Liu**

P047 The Future Of Sustainable Architecture And Its Relationship With Currents Of Globalization

**Haitham Selim**

P049 Good built examples: Implementation of sustainable building in a ten years||perspective in the city of Gothenburg

**Liane Thuvander**

## Poster Session 1 - Time: 11:30- 12:00 - Screen: 4

**Labels:** Health and Indoor Quality

P070 Numerical simulations and experimental measurements of aerosol particle dispersion and removal depending on air distribution method in rooms with mechanical ventilation

**Laura Gagyte**

P071 Assessment protocol development: impacts of energy efficiency on indoor environmental quality in multi-family buildings

**Virpi Leivo**

P073 Draught risk index tool for building energy simulations

**Mette Havgaard Vorre**

P074 Acoustic comfort understood as basic for social sustainability. Towards sustainable building: The experience of the Institut Català del Sòl, the Urban Planning organization of the Government of Catalonia

**Jordi Vidal De Puig**

P075 Ergonomic Benefits of the Biophilic Construction Site Model and the Rock Garden Design

**Rita Obiozo**

## Poster Session 1 - Time: 11:30- 12:00 - Screen: 5

**Labels:** Life-Cycle Assessment

P095 The Impact of LCCM on Developing Taiwan's Urban & Rural Sustainable Environments  
**Kuei-Feng Daphne Chang**

P097 Life Cycle Assessment of zero- emission façade construction  
**Magda Helena Barecka**

P098 Comparative LCA of Air Duct systems ISO 14040 and 14044  
**Maria Luisa Perez Martin**

P099 Environmental Impact Classification Utilizing Activity-based LCA Model of XPS Insulation System Manufacturing Phase  
**Ji Youn Lim**

## Poster Session 1 - Time: 11:30- 12:00 - Screen: 6

**Labels:** Operation and maintenance

P120 HIGH RISE BUILDINGS: IS IT WISE TO CONTINUE TO EXPLORE SUCH BUILDING TYPOLOGY?  
**Miguel Sattler**

P121 Post Occupancy Evaluation and User Behaviour as the Basis of the Design of Energy Efficient Dwellings for Temuco-Padre Las Casas, a City Declared Saturated by Airborne Pollution  
**Gabriela Armijo**

P122 Impact of energy supply systems on carbon footprint of existing buildings during the exploitation stage in Poland – case study  
**Dominik Bekierski**

P123 An Experimental Evaluation for an Optimal Control Method for HVAC and Lighting Devices of an Open-Plan Office  
**Hsiao-Yuan Wu**

P124 A study of digitization strategies for realizing sustainable life  
**Ding-Chyu Liu**

## Poster Session 1 - Time: 11:30- 12:00 - Screen: 7

**Labels:** Rating Tools

**P135 Eco-innovation based on Quick-Life Cycle Assessment in designing and manufacturing a Living Wall System**

**Roberto Giordano**

**P136 Building Environmental Assessment – a useful tool in the future delivery of holistic sustainability?**

**Vivienne Brophy**

**P137 Assessment of Multi-Family Residential Buildings in Serbia: A Proposal for System Development**

**Saja Kosanovic**

**P138 Application of sustainability indicators and rating tools: Envisioning 'Life Cycle' assessment for buildings in Malaysia**

**Nurul Mohd Annuar**

**P139 Refurbishment certification schemes: aspects of productivity and sustainability**

**Ahmet Anıl Sezer**

## Poster Session 1 - Time: 11:30- 12:00 - Screen: 8

**Labels:** Renovation retrofitting and regeneration

**P151 The Life Cycle Energy Performance of Monomur in Australian Residential Construction**

**Nicola Simcock**

**P152 Energy efficiency and the need of timing in the renovation process**

**Katharina Reindl**

**P153 Simplified and Detailed Life Cycle Assessment of a Building Replacement with Re-use of Selected Materials**

**Marie Vaculikova**

**P154 Smart buildings and grids in the renovation of the built environment**

**Andrea Boeri**

**P155 Pathways towards an Energetic Refurbishment Replication Strategy for Eastern European Countries - Findings from the EU project BEEM-UP**

**Holger Wallbaum**

## Poster Session 1 - Time: 11:30- 12:00 - Screen: 9

**Labels:** Stakeholders

P173 Sustainability Evaluation and analysis of NGO Methodological Approach of Development Projects in West Bank / Global Communities NGO, West Bank

**Banan Al Fares**

P175 Role of participatory process in the rehabilitation of an Ayyoubid public bath in Damascus, Syria

**Roula Aboukhater**

P176 Early integration of the user's perspective in the renovation process: Experiences from an "In-depth Dialogue Process with Residents" in rental flats from the 1950s

**Camilla Ottosson**

P177 Living in Sustainability 'People-oriented Approach for Revitalization of Public Housing Estates

**William W.L. Ho**

P178 Building Empowerment: Ways of working with children and youth to create sustainable buildings

**Susan Wake**

P179 Madrid Urban Stewardship (MUS). A platform between citizens and public administration for the collective management of public space

**Miguel Gómez Villarino**

## Poster Session 1 - Time: 11:30- 12:00 - Screen: 10

**Labels:** Urban Scale

P200 GIS technologies for Urban Quality of Life analysis

**Ainara Sertutxa Moriano**

P201 Comparison of CASBEE-City assessment results and citizen satisfaction with cities

**Shun Kawakubo**

P202 A methodology for spatial modelling of energy and resource use of buildings in urbanized areas

**Magnus Österbring**

P203 Climate analysis of future scenarios for sustainable buildings-Visualizing climate data for architects and planners with interactive ClimateTool

**Petra Liedl**

P204 Regeneration of the Mithi River: a knowledge transfer based design approach to increase resilience in metropolitan areas

**Marilena Prisco**



## Poster Session 2 - Time: 16:30- 17:00 - Screen: 1

### Labels: Case Studies

P007 Comparison of an off-grid house monitored data with regulatory assessment and complex modelling results to inform the development of modelling requirements of specialised buildings

**Christopher Jensen**

P008 ENERGY LIFE CYCLE APPROACH IN TWO MEDITERRANEAN BUILDINGS: OPERATION AND EMBODIED ENERGY ASSESSMENT

**Marina Mistretta**

P010 Energy rehabilitation of social housing for rent, as demonstrator in the LIFE "New4Old" Project

**Emilia Román López**

P011 Intermediate Report on the Design and Construction of a Net-Zero-Energy Building in Muscat, Oman

**Matthias Rudolph**

P012 Energy efficiency, industrialising and cost control in a Housing Project

**Alberto Coloma Campal**

## Poster Session 2 - Time: 16:30- 17:00 - Screen: 2

### Labels: Construction Systems and materials

P034 Heat-resistant microalgae are good materials for algae cultivation integrating into the sustainable built environment

**Tzan-Chain Lee**

P035 Sustainable Concrete – on the way towards sustainable building

**Petr Hajek**

P036 Ranking Responsible Source assessments for building materials

**Michiel Ritzen**

P038 Potential of hemp as an alternative sustainable component in building material

**Kahilu Kajimo-Shakantu**

## Poster Session 2 - Time: 16:30- 17:00 - Screen: 3

**Labels:** Education and Knowledge Management

P050 FULL HOUSE. Juego de cartas bioclimáticas

**Martino Peña Fernandez-Serrano**

P051 The relevance of the eco-construction Twinning project in Tunisia

**Ghada Jallali**

P052 Strategy for Climate Change Adaptation

**Torben Valdbjørn Rasmussen**

P054 A study on devising ways to study the environment that encourage energy conservation by children

**Hideshige Imai**

## Poster Session 2 - Time: 16:30- 17:00 - Screen: 4

**Labels:** Health and Indoor Quality

P076 Patients well-being in the Healthcare Green Ratings

**Ilaria Oberti**

P077 MANAGEMENT OF INDOOR AIR QUALITY BY IN-ROOM AIR CLEANERS AND VENTILATION

**Edvinas Krugly**

P078 Characterization of Mineral Fibre Emissions from Processes of Building Refurbishment and Operation

**Tadas Prasauskas**

P079 'The Acoustic Performance of Double-Skin Glass Facades: A Design Support Tool For Architects'

**Aireen Batungbakal**

P080 The Road to Zero Carbon - is it as long as it is wide?

**Paul Hicks**

P081 The Sustainable School: Effective and Energy Efficient Ventilation in the Classroom, and the question of Educational Performance and Wellbeing

**Andrea Wheeler**

## Poster Session 2 - Time: 16:30- 17:00 - Screen: 5

**Labels:** Life-Cycle Assessment

P100 Analysis of the ecological footprint produced by machinery in construction

**Antonio Freire Guerrero**

P101 Analysis of different shading strategies on energy demand and operating cost of office building

**Jerzy Kwiatkowski**

P102 LIFE CYCLE ENERGY BENEFIT OF SUSTAINABLE DESIGN APPROACHES FOR INDUSTRIAL BUILDINGS

**Stanislava Krumova**

P103 La capacidad de la Arquitectura para reducir la demanda energética en los edificios  
**Licinio Alfaro**

P104 Considering temporal variation in the life cycle assessment of buildings, application to electricity consumption and production

**Charlotte Roux**

**Poster Session 2 - Time: 16:30- 17:00 - Screen: 6**

**Labels:** Operation and maintenance

P125 Development of a Pilot Mobile Application for User Centered Building Energy Assessment  
**Minhee Chung**

P126 Development research of real-time monitoring and optimized control for energy conservation and CO2 reduction of existing buildings

**Bumpei Magori**

P127 Adaptive model for thermal demand forecast in residential buildings

**Hassan Harb**

P128 ICT solutions for monitoring and evaluation of energy savings in novel refurbishment buildings under iNSPiRe project

**Andres Macia**

P129 Operation and Management of a Large Rooftop Garden on a Commercial Building in an Urban Area and Multicomponent Evaluation of Environmental Performance of the Garden

**Hiroyuki Akagawa**

**Poster Session 2 - Time: 16:30- 17:00 - Screen: 7**

**Labels:** Rating Tools

P140 Comparison Criteria and Certified Scores between G-SEED and LEED Certification Systems in Office Building Cases

**Seonsoo Mok**

P141 Determining Sustainability Impact Assessment Indicators

**Rolf André Bohne**

P142 Assessment System Sustainable Laboratories – Experiences from the initial implementation

**Andreas Rietz**

P143 Proposal for a Healthcare Building Sustainability Assessment (HBSA) Method

**Filipe Mesquita Mateus**

P144 A Study on the Establishment and certification of SBTOOL-PKH established

**Yi- Chun Kuo**

## Poster Session 2 - Time: 16:30- 17:00 - Screen: 8

**Labels:** Renovation retrofitting and regeneration

P156 Old Apartment, New Thought--Transforming the city special phenomenon to approach sustainability

**Cheng Hsin Chung**

P157 Open Building Solutions for Sustainable Renovation of Existing Apartment Buildings in Taiwan

**Kung-Jen Tu**

P158 Sustainability indicators for redevelopment: Assessing the long-term effect of different strategies used in two housing areas

**Maria Liabäck**

P159 OLD BUILDINGS, NEW CITIES: Energy renovation strategies for the historic residential stock of Brussels

**Aránzazu Galán González**

P160 A Study on Vulnerability of Urban for Identifying Urban Renewal Area—A Case Study of Taipei, Kaohsiung City

**Wei Hsuan Shen**

## Poster Session 2 - Time: 16:30- 17:00 - Screen: 9

**Labels:** Stakeholders

P180 THE IN- PROVE METHOD. The role of the citizen in a environmental building evaluation analysis model

**Daniel García De Frutos**

P181 Factors Influencing Human Resource Development in Nigerian Construct Industry

**Ijeko Oyemogum**

P182 COMMUNICATION SKILLS IMPACT ON SUSTAINABLE AND GREEN PROJECT MANAGEMENT

**Benita Zulch**

P183 Energy conservation in construction through concrete demand management in an Egyptian context

**Yasser Sherif**

P184 Innovative design: developing strategies to improve developer attitudes to sustainable housing

**Karen Manley**

## Poster Session 2 - Time: 16:30- 17:00 - Screen: 10

Labels: Urban Scale

P205 SUSTAINABLE URBAN ATTRACTIVENESS SERVING THE REVITALIZATION OF THE ANCIENT TOWN CENTER OF JIJEL

**Bouhelouf Yasmine**

P206 Study of effective energy improvement for area management to optimize low-carbon cities

**Yukiko Yoshida**

P207 PROCESSUAL TYPOLOGY, A KNEW TOOL TO SUSTAINABLE HABITAT

**Bougherira A Hadji Q**

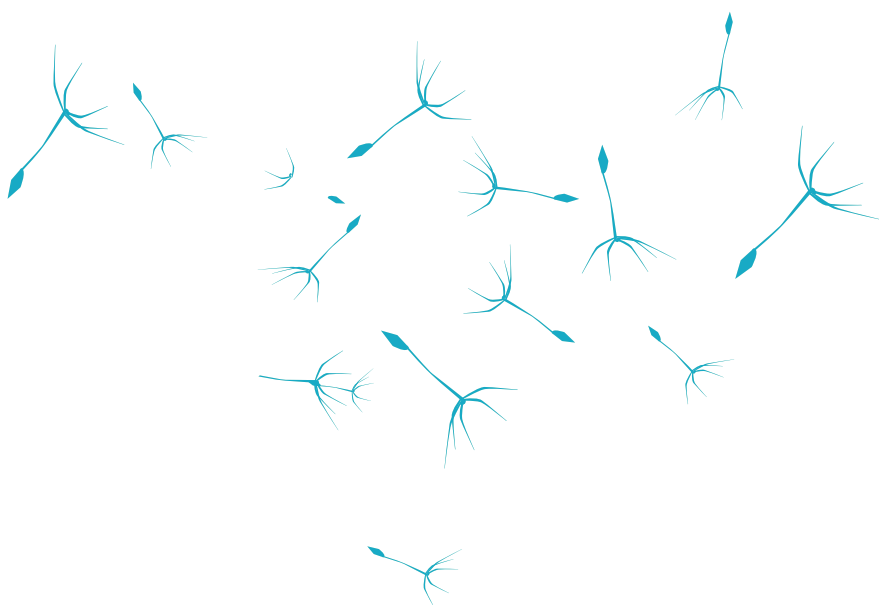
P208 Assessing the energy use of the pre-war residential building stock of Brussels||Capital Region at a neighbourhood scale

**Aristide Athanassiadis**

P209 Urban greenery: increasing resilience to climate change through green roofs and urban forestry

**Susana Saiz Alcazar**





## **Wednesday, 29<sup>th</sup> October**

# **POSTER SESSIONS**

## Poster Session 3 - Time: 11:30- 12:00 - Screen: 1

**Labels:** Case Studies

P013 Window Thermal Performance Optimization in Governmental Emirati Housing Prototype in Abu Dhabi, UAE

**Tareq Abuimara**

P014 LIGHTWEIGHT RECOVERABLE FOUNDATIONS ON SUITABLE GROUND

**Josep Ignasi De Llorens Duran**

P015 What to build after disaster? Sustainability assessment of twenty post-disaster shelters designs.

**Edwin Zea Escamilla**

P016 Spatial analysis of LEED certified buildings in Canada

**Navid Hossaini**

P017 Practical limitations in Embodied Energy and Carbon measurements, and how to address them: a UK case study

**Efstathios Gavotsis**

## Poster Session 3 - Time: 11:30- 12:00 - Screen: 2

**Labels:** Construction Systems and materials

P039 A metaheuristic approach for heat pump scheduling

**Thomas Schütz**

P040 Solar Performance of Elliptical Domes

**Giamal Mashina**

P041 The SYNERGY project: a holistic approach for assessing the energy, hygrothermal, fire and environmental performance of building elements

**Theodore Theodosiou**

P042 QUALITY CONTROL MECHANISMS IN BUILDING PRODUCTION MANAGEMENT IN NIGERIA

**Shehu Bustani**

P043 New generation of curtain walls

**Jan Tywoniak**

P044 Hybrid Roofscape - Development and experimental results of roof-integrated PV/T-collectors for ZeroEmission-LowEx building systems

**Niklaus Haller**



## Poster Session 3 - Time: 11:30- 12:00 - Screen: 3

**Labels:** Education and Knowledge Management

P055 For the last 20 years we have not heard in Russia about the sustainable development  
**Viktoriya Arnold**

P056 Innovating sustainable building design and built environment processes  
**Emilia Conte**

P057 Technical knowledge transfer between Algeria and Italy: Oran, an experience of architectural rehabilitation  
**Dalila Senhadji**

P058 The Challenge of limiting Energy Demand in Hot and Humid Regions and Mega Cities – Analyses with Integrated Building Sector Modelling  
**Jacob Halcomb**

P059 Assessing the use of simplified and analytical methods for approaching thermal bridges with regard to their impact on the thermal performance of the building envelope  
**Theodore Theodosiou**

## Poster Session 3 - Time: 11:30- 12:00 - Screen: 4

**Labels:** Health and Indoor Quality

P082 Energy saving benefits of daylighting combined with horizontal exterior overhangs considering visual comfort in hot-and-humid regions  
**Chun Fu**

P083 Study assessing the environmental performance of natural hydraulic lime  
**Takuya Nagasawa**

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**Labels:** Housing

P084 The effect of material service life on the life cycle embodied energy of multi-unit residential buildings  
**Abdul Rauf**

P085 Sustainable Insulation Solutions: A lifecycle perspective from Cradle to Cradle. Tools for implementation  
**Nicolas Bermejo Presa**

P086 Life Cycle Assessment within BNB1 - Online Tool eLCA and materials data base ÖKOBAU.DAT  
**Tanja Brockmann**

P087 Sustainable urban housing. Strategies for implementation in Bogotá  
**Fernando Gordillo Bedoya**

## Poster Session 3 - Time: 11:30- 12:00 - Screen: 5

**Labels:** Life-Cycle Assessment

P105 Life cycle greenhouse gas emissions of buildings: importance of embodied energy and operational energy use

**Antti Ruuska**

P107 A MULTI-SCALE METHOD TO OPTIMIZE THE SUSTAINABILITY IN CONSTRUCTION WORKS

**Carmen Gargiulo**

P108 Service life of UK supermarkets: origins of assumptions and their impact on embodied carbon estimates

**Stephen Richardson**

P109 A Comparative study of housing life-cycle carbon emissions for the characteristics of structural materials

**JiYeon Park**

## Poster Session 3 - Time: 11:30- 12:00 - Screen: 6

**Labels:** Operation and maintenance

P130 Development of a new type of HEMS (Home Environment and Energy Management System) for cohousing

**Yusuke Nakajima**

P131 The non-use of sustainability performance tools

**Marianne Forman**

P132 Carbon neutral living in a modernised settlement house

**Christian Krüger**

P133 Feasibility study of a hybrid ventilated classroom in hot-and-humid climate

**Ruey-Lung Hwang**

P134 Modulation performances in the building envelope: strategy and project

**Gigliola Ausiello**

## Poster Session 3 - Time: 11:30- 12:00 - Screen: 7

**Labels:** Rating Tools

P148 Assessment Factors of Sustainable and Healthy Environment for Hot Spring Hotels in Taiwan

**Hsing-Hao Chen**

P149 Integral Resilience – an indicator and compass for sustainability

**Edna Peres**

P150 New Generation Sustainability Assessment Models (SAMs) Applications for Urban Districts & Neighbourhoods

**Fodil Fadli**

**Poster Session 3 - Time: 11:30- 12:00 - Screen: 8**

**Labels:** Renovation retrofitting and regeneration

P161 THE REDEVELOPMENT OF NEIGHBORHOODS OF PUBLIC HOUSING

**Silvia Pennisi**

P162 THE ENVIRONMENTAL DIMENSION IN THE URBAN REGENERATION PROJECT OF BARDO'S NEIGHBORHOOD IN CONSTANTINE : TOWARDS AN ENVIRONMENTAL ASSESSMENT OF PLANNING DOCUMENTS

**Boudjadja Rafik**

P163 Residential areas retrofitting towards nearly Zero Energy Districts (nZED). A case study: Valladolid-Cuatro de Marzo

**Miguel Ángel García-Fuentes**

P164 The role of the urban support in the regeneration of vulnerable neighbourhoods

**Carolina García**

P165 A Project to Safeguard an Abandoned Heritage: The revitalization of Golea (Algeria)

**Said Madani**

P166 RESSÒ: energy efficiency urban rehabilitation

**Martí Obiols Galí**

**Poster Session 3 - Time: 11:30- 12:00 - Screen: 9**

**Labels:** Stakeholders

P185 Field Survey on Physical Activity Affected by Housing and Community

**Megumi Yanagisawa**

P186 Music for everyone: "building the space where the differences co-exist"

**Beatriz E. Avila**

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**Labels:** Urban Scale

P187 Embodied energy and embodied CO2 associated with buildings based on detail analysis and simple analysis

**Noriyoshi Yokoo**

P188 Characterization of thermal insulation materials developed with crop wastes and natural binders

**Mariana Palumbo**

P189 UK experience of the use of timber as a low embodied carbon structural material

**Eleni Soulti**

## Poster Session 3 - Time: 11:30- 12:00 - Screen: 10

P210 Challenges of District Cooling System (DCS) Implementation in Hong Kong

**Alvin Lo**

P211 Analysis, valuation and opportunity of energy intervention in historic downtowns of European cities. The "Ensanche Cortazar" of San Sebastian

**Eneko Jokin Uranga Santamaria**

P212 SUSTAINABLE IMPROVEMENT AND MANAGEMENT FOR DETERIORATED URBAN AREA IN DEVELOPING COUNTRIES

**Ayman Afify**

## Poster Session 4 - Time: 16:30- 17:00 - Screen: 1

**Labels:** Case Studies

P018 The methodology and case study of "Standards for Measuring, Accounting and Reporting of Carbon Emission from Buildings"

**Zhang Peng**

P019 Effects of façades on the energy performance of Education building in Saudi Arabia

**Noman Ashraf**

P020 DESIGN AND OPERATION OF A LEED PLATINUM RATED BOTTLING PLANT IN CHINA – SWIRE COCA-COLA LUOHE

**Samuel Kwong**

P021 Rebuilding and a conscious and courageous leadership reduced energy consumption more than 80 percent

**Johanna Westberg**

P022 The Preliminary model for the environmental oriental design of Kaohsiung Houses in Meinong

**Yenyi Li**

## Poster Session 4 - Time: 16:30- 17:00 - Screen: 3

**Labels:** Education and Knowledge Management

P060 Smart Interactive Buildings

**Paolo Civiero**

P061 Claves de la gestión eficiente de proyectos de alta eficiencia y sostenibilidad

**Emmanuel Pauwels**

P062 Architectural Implications in the Building Integration of Photovoltaic and Solar Thermal systems – Introduction of a taxonomy and evaluation methodology

**Constantinos Vassiliades**

P063 Grid Electricity Demand Reduction through Applying Active Strategies in Baghdad-Iraq

**Nadia Badri**

P064 The SUPER HABITAT project

**Oliver Style**

**Poster Session 4 - Time: 16:30- 17:00 - Screen: 4**

**Labels:** Housing

P088 Architectural attributable risks for buildings: results from Scottish Housing||Condition Survey, 2009

**Ivy Shiue**

P089 Typology of Representative Dwelling Designs for Technical and Policy Purposes in Australia

**James Pow Chew Wong**

P090 Modernization of Multi-Storey Apartment Houses

**Ruta Miniotaite**

P091 Thermal Environment in Main Room Models of Contemporary Houses in Hokkaido, Japan

**Kisa Fujiwara**

P092 A critical assessment of the housing sector in Algeria: beyond challenges and opportunities, sustainable buildings at stake

**Lilia Makhoulfi**

**Poster Session 4 - Time: 16:30- 17:00 - Screen: 5**

**Labels:** Life-Cycle Assessment

P110 Lifecycle Analysis of standard and high-performance cements based on carbonnanotube composites for construction applications

**Cristina Marieta**

P111 A Building Products Procurement Platform for Environmental Evaluation of Design Alternatives

**Pouriya Parsanezhad**

P112 Search for the environmental indicators relevant for the building sector

**Karen Allacker**

P113 The Effect of a green roof on thermal comfort and learning performance in a naturally ventilated classroom in a hot and humid climate

**Wen-Pin Huang**

P114 USING EVOLUTIONARY OPTIMIZATION FOR LOW-IMPACT SOLID CONSTRUCTIONS

**Alexander Hollberg**

## Poster Session 4 - Time: 16:30- 17:00 - Screen: 8

**Labels:** Resources and waste

P167 Responsible management of construction resources. Amortization of the concrete's embodied environmental impact as a sustainable strategy

**Alberto Vilches Such**

P168 Rating Resource Efficiency of Building Materials

**Nicole Becker**

**Labels:** Traditional Architecture

P170“ 0-impact street”, for energy, materials, water and food

**Ronald Rovers**

P171 Earthen Architectural Heritage (Rehabilitate the earthen construction in Saharan areas for sustainable development) Case of Wilaya of Adrar

**Hamiane Messaoud**

P172 Examination and assessment of the environmental characteristics of vernacular rural settlements in varying topographies in Cyprus

**Maria Philokyprou**

## Poster Session 4 - Time: 16:30- 17:00 - Screen: 9

**Labels:** Urban Scale

P190 Análisis de la contribución de los aislantes a impactos provocados y evitados en Edificios

**Silvia Herranz Garcia**

P191 Towards Creating New Sustainable Cities in Egypt-Critical Perspective for Planning New Cities

**Nisreen Ellahham**

P192 Indicators of urban sustainability for a model of change. The Ecological Urban Interaction Matrix (MIEU): a methodology –based on bio-construction- to plan the quality of life and the environment of urban settlements

**David Pàmpols Camats**

P194 A New Energy Model for Madrid: 'Urban Nanoclimates'

**Juan Carlos Carmona Casado**

## Poster Session 4 - Time: 16:30- 17:00 - Screen: 10

P215 Methodology for Urban Comfort Management using Geo-Referenced Computer Applications

**Diego Ortega Gozalo**

P216 Bio-climatic Design Handbook: designing public space to reach urban sustainability

**Victoria Fernández Áñez**

P217 Emergent Trends in Architecture and Urbanism in Modern Cairo: Shifts in the Built Environment

**Rowaida Rashed**

P218 An approach to urban micro space sustainability. Sustainable assessment instrument

**Nersa Gomez**

P219 The effect of land cover and land use on urban heat island in Taiwan

**Feng-Chi Liao**







## Thursday, 30<sup>th</sup> October

# POSTER SESSIONS

## Poster Session 5 - Time: 11:30- 12:00 - Screen: 1

### Labels: Case Studies

P024 Mutual impact of design decisions and environmental considerations: Life Cycle Analysis of an Alpine Hut

**Patricia Schneider**

P025 The potential of BIM Platform at building modernization aiming to environmental certification

**Fabiana Dias Da Silva**

P026 Sustainable building optimization - A systemic approach

**Helmuth Kreiner**

P027 Social Indicators in the Sustainable Refurbishment: Calculating Quality of Life Indicator in a Residential Building in Málaga

**Izaskun Gallo Ormazábal**

P028 CONSOLIDATION OF DISTRICT TAFOURA IN CENTRE OF ALGIERS

**Farah Hadji**

## Poster Session 5 - Time: 11:30- 12:00 - Screen: 3

### Labels: Education and Knowledge Management

P065 Environmental Performance of Adaptive Building Envelope Design: Urban housing in Seoul, Korea

**Jeewon Paek**

### Labels: Financing and New Business Models

P068 Organizational Transformation Strategies to Support Sustainability in the Construction Industry

**Yong Han Ahn**

P069 Decision support for planning Sustainable Energy Management in Underground Stations

**Alberto Giretti**

## Poster Session 5 - Time: 11:30- 12:00 - Screen: 4

**Labels:** Nearly Zero Energy Building

P093 Residential Energy Services Demand: Lisbon case study towards Net Zero Energy House

**Hang Dao**

## Poster Session 5 - Time: 11:30- 12:00 - Screen: 5

**Labels:** Life-Cycle Assessment

P115 ECOMETRO Y las Declaraciones Ambientales del Edificio DAE

**Iñaki Alonso**

P117 A Life Cycle Based Green Building Product Labelling SchemeS

**Thomas Ng**

P118 Calculation of Carbon Footprint in Building Project

**Mariluz Baldasano Valdes**

P119 Life cycle assessment of buildings - ANZEB case using streamline and conventional analysis

**Paulo Partidário**

## Poster Session 5 - Time: 11:30- 12:00 - Screen: 9

**Labels:** Urban Scale

P195 Urban sprawl and city compactness. A proposal for regional sustainability indicators. Case study of the towns of Alcorcon and Majadahonda (Comunidad de Madrid, Spain)

**Dario Rivera Blasco**

P196 GREEN URBANISM AND DIFFUSION ISSUES

**Timothy Rose**

P197 Proposal of urban mobility model from the modal integration Santa Maria do Leme river basin: subsidies for the expansion at São Carlos city, São Paulo State, Brazil

**Isabel Sousa**

P198 Rapid urbanisation and housing transformations in Tlokweng, Botswana

**Faustin Kalabamu**

P199 Sustainable indicators for quality evaluation in urban contexts neighbourhoods

**Ioanni Delsante**

## Poster Session 5 - Time: 11:30- 12:00 - Screen: 10

P220 Housing plans and urban rehabilitation in Spain, 1992-2012

**Iván Rodríguez-Suárez**

P221 The Study of Vegetation Effects on Reduction of Urban Heat Island in Dubai

**Tahereh Rajabi**

P222 New indicator for resource accessibility assessment, based on surface land cover

**Dimitra Ioannidou**

P223 Design of an indicator system for habitability monitoring in the historical city of San Gabriel (Ecuador)

**Elena Usobiaga Ferrer**

P224 Sustainable development of three Taiwan's communities

**Chen-yi Sun**



## **POWERING TRANSFORMATION CONTEST. UNIVERSITY COMPETITION.**

**Organized by ASA (Sustainable and Architecture Association)**

**Sponsored Award: Hewlett Packard.**

### **Jury Members:**

Felipe Pich-Aguilera, architect and GBCe President, Spain . Miguel Angel Diaz-Camacho, architect and ASA President, Spain . Peter Rich, architect of South Africa. Stephen Lau, architect of Hong Kong. Antonio Elizalde, sociologist of Chile.

Secretary: Teresa Batlle, architect and ASA Vice President

Actives members of the competition process: Mireya Reguart, Borja Barros, Miguel Pich-Aguilera, Enric Vijande. Architects.

**POWERING TRANSFORMATION** has been a contest that promoted the university projects participation, in complicity between teachers and students, from global and transverse views of the architecture.

The contest, in addition to the quality and intensity of the project, valued their contributions on five specific criteria, scales cross-cutting, multidisciplinary, horizontality, interactivity and innovation.

The competition received 48 projects from 14 countries and 30 universities where 128 professors and 313 students have participated.

The analysis of proposals has brought a common discourse and dialog about environmental, social and economic sustainability. Sustainability and its implementation in the different realities have engaged all projects.

The most interesting and powerful conclusion of the contest, it has been the work and answers to each project in relation to their conditions of climate and social environment. All the projects focus their proposals on the natural and social complexity and the resources needed to make this a sustainable living space.

To compare the results between those sites where the climatic and natural conditions are the main aspects with which to work, against those environments where nature is benign and the social aspects are the most pressing issues, is one of main points of dialogue.

Ideas such as, how to prevent flooding, how to propose a closed water cycle, how to reuse urban and natural spaces, how to rehabilitated and revitalized; concretions in relation with involve the citizens in the action, innovate in production energy, management of energy and mobility for the city, have been present in all the projects.

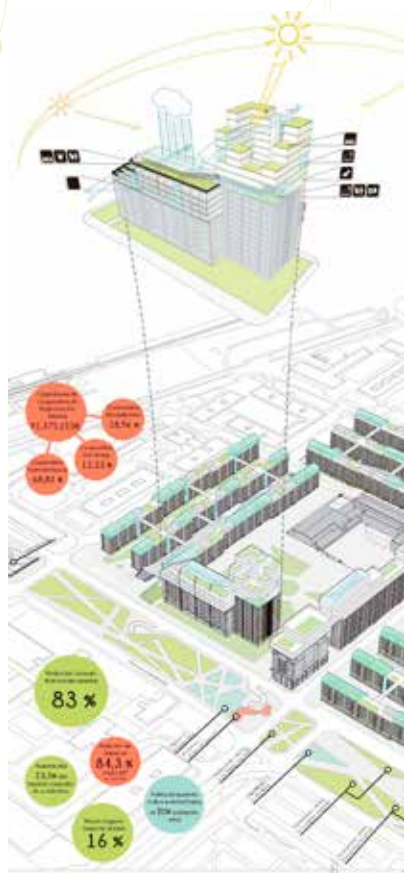
The three winning teams try to be a synthesis of the aspects worked in most of the projects.

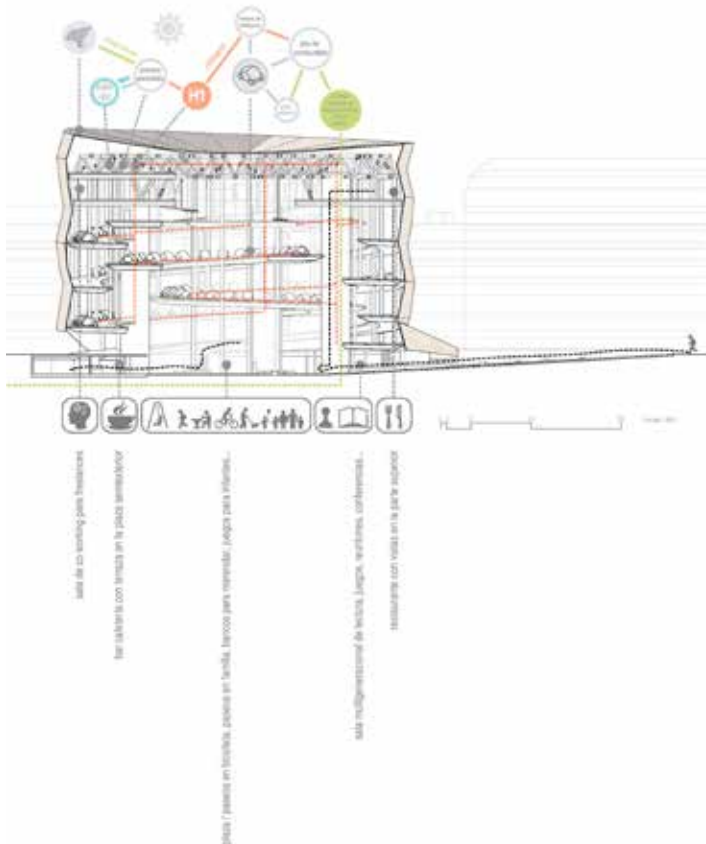
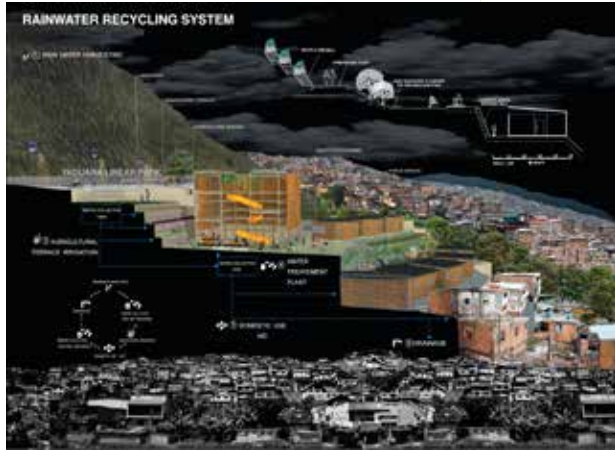
• **FIRST PRIZE:** COOPERATIVENESS FOR SUSTAINABLE REGENERATION. EUROPEAN UNIVERSITY. SPAIN. Number of participants: 2 professors and 25 students. "The proposal explores the possibilities of self management of neighbours in sustainable urban regeneration, using cooperative associations as basic tools". The project presents real solutions in a real district.

• **SECONF PRIZE:** WATERNET\_LA YAGUARA RESILIENCE PARK. SIMON BOLIVAR UNIVERSITY. VENEZUELA. Number of participants: 3 professors and 4 students. "Proposal of an urban project which provides solutions to water problems through canalizations, without demolish and with urban agriculture terraces". A building manages the different problems around the water and resources.

• **THIRD PRIZE:** PLUGGED MOBILITY\_CAR LOAN ENERGY STATION. BARCELONA. SEVILLA UNIVERSITY. SPAIN. Number of participants: 1 professor and 1 student. "The Project is integrated into a single intervention storing a set of car loan, a public space with meeting places for people from neighbourhood and co-working facilities". A building with different floors is, at the same time, public spaces, office building and parking.

The three winning projects get raise real ideas to the problems identifies. Is possible that the innovation of our times is to find real proposals to the current complexity?.





## The SB Challenge: do our buildings perform as intended?

Sustainable Building Challenge (SB Challenge) is a side event at each global SB conference, consisting of a display and discussion of high-performance case studies. SB Challenge is not a competition, but places emphasis on comparisons of high-performance buildings. As a key feature of the Barcelona World SB conference, SB Challenge places emphasis on a sample of existing buildings around the world that can provide information on their performance in use, as well as the performance that was at the design stage. The use of Key Performance Indicators (KPIs) provides objective measures of performance, and comparisons of the predictions with actual performance will provide results fully compatible with the theme of SB14, Are We Moving Quickly Enough?

Two separate sessions will present the results of 14 project assessments, and additional performance summaries will be shown in poster form in the exhibition area.

## SB Challenge presentations at the WSB14 Conference

Two separate sessions will present the results of project assessments, and additional project performance summaries will be shown in poster form in the exhibition area.

Session 95, Room E6: Wednesday 29 Oct. 17:00-18:30

Moderator: Gord Shymko, P. Eng., G. F. Shymko & Associates Inc.

This session will be a panel discussion of the lessons learned from carrying out building performance assessments for 9 Canadian buildings, including five academic buildings, three Office buildings, and one community building

Session 144, Room E6, Thursday 30 Oct. 12:00-13:30

Moderator: Andreas Rietz, Federal Institute for Research on Building, Urban Affairs and Spatial Development

German projects include two office buildings and a customs office. Other assessed buildings include a Belgian office building and a renovated public building from the UK.

Summary results from seven other projects from Mexico, Singapore, Japan and Hong Kong are shown in poster form, but are introduced in this session by Nils Larsson.





# General Information

## Industrial Exhibition

Booths are located in the Exhibition Area (Level 0). Attendees are encouraged to spend time visiting the booths and interacting with the exhibitors, commercial and nonprofit exhibitors.

### Commercial Exhibition Schedule:

October, 28th 09:00h - 19:30h

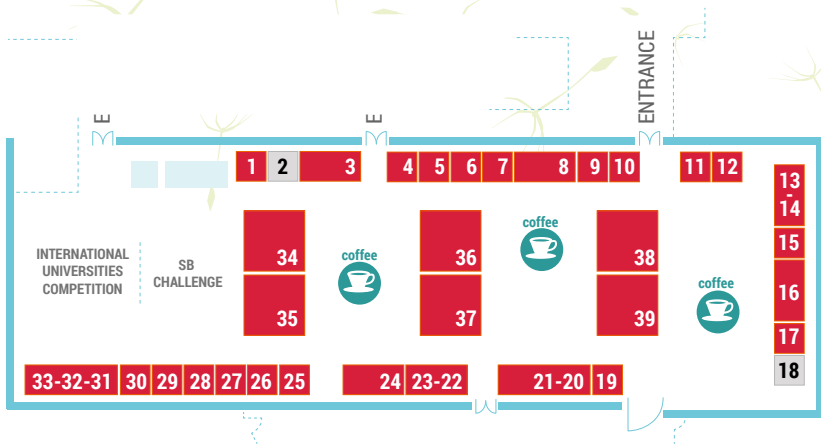
October, 29th 09:00h - 19:30h

October, 30th 09:00h - 18:00h

### Exhibition Dismantling:

October, 30th 18:30h - 02:00h

## Exposition Plane and expositors list



| Exhibitor                 | Confirmed Booths | Size   |
|---------------------------|------------------|--------|
| Taylor & Francis          | 1                | 9 sqm  |
| SAINT GOBAIN              | 3                | 18 sqm |
| Kömmerring                | 4                | 9 sqm  |
| CYPE                      | 5                | 9 sqm  |
| HILTI                     | 6                | 9 sqm  |
| CEMEX                     | 7                | 9 sqm  |
| Ferrovial                 | 8                | 18 sqm |
| IBERMAPEI                 | 9                | 9 sqm  |
| SIKA                      | 10               | 9 sqm  |
| BREEAM                    | 11               | 9 sqm  |
| Rosagres                  | 12               | 9 sqm  |
| Cosentino                 | 13-14            | 18 sqm |
| Casbee                    | 15               | 9 sqm  |
| Ayuntamiento de Barcelona | 16               | 9 sqm  |
| Construmat                | 17               | 9 sqm  |
| Active House Alliance     | 19               | 9 sqm  |
| Germany Ministry          | 20-21            | 27 sqm |
| Rockwool                  | 22-23            | 18 sqm |

| Exhibitor   | Confirmed Booths | Size   |
|---|------------------|--------|
| Knauf   | 24               | 18 sqm |
| PEFC  | 25               | 9 sqm  |
| UPC   | 26               | 9 sqm  |
| Swedish Research Council Formats / Swedish Green Building Council | 27-28            | 18 sqm |
| ISOLANA   | 29               | 9 sqm  |
| ijSBE Canada  | 30               | 9 sqm  |
| ijSBE Internacional / CIB / UNEP - SBCL / FIDIC                   | 31-32-33         | 27 sqm |
| Gobierno de España  | 34               | 36 sqm |
| Marie - Area Sponsor  | 35               | 36 sqm |
| Ursa  | 36               | 36 sqm |
| Generalitat de Catalunya  | 37               | 36 sqm |
| HK GBC  | 38               | 36 sqm |
| GBCe  | 39               | 36 sqm |

## Venue

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**Venue:** Palau de Congressos de Barcelona

**The Conference will be held in the Palau de Congressos de Catalunya in exclusivity:  
Av. Diagonal 671 Barcelona**

This venue offers a wide space for commercial, cultural and scientific events with all the necessary technical facilities. Located in the business area of Barcelona, it allows easy access to all historical and tourist attractions, hotels and shopping areas.

**The venue is easily accesible:**

**By subway:** Line 3 – Zona Universitaria Station

**Or bus:** Lines 33 – H6

**WSB14 counts with:**

- . 2000 sqm for industrial exhibition and poster presentations
- . Auditorium with a capacity of over 2000 attendees
- . Breakout rooms

### Badge Pick up

Technical Secretariat is in the Hall of the Congress Centre.

**Bags and accreditations can be picked up:**

- . **Tuesday, October 28th:** from 09:00 to 19:30
- . **Wednesday, October 29th:** from 09:00 to 19:30
- . **Thursday, October 30th:** from 09:00 to 17:00

**Important:** Only the Delegates with General Registration or Basic Registration that have purchased the pack of 3 lunch+ documentation have the Conference Documentation included.

## Language

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- The oficial language of the WSB14 is English.
- Sessions at Auditorium, Room F, Room J and Room A will be provided with simultaneous translation (English-Spanish-English).
- Sessions number 61 and 66 will be in Spanish.
- The other session will be in English.

## Coffee Breaks and Lunch

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Coffee breaks and Lunch will be served at the Exhibition Area

**Coffee breaks:**

**Every morning:** 11:30 to 12:00

**Every afternoon:** 16:30 to 17:00 (except Thursday)

**Lunch Every day :** 13:30 to 15:00

**Important:** only the Delegates with General Registration or Basic Registration that have purchased the pack of 3 lunch + documentation, have the lunch included.

**The Delegates with only Basic Registration have only included the coffee breaks.**

# General Information

## Internet Access

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**There is free wi-fi internet access at the meeting venue.**

**Network:** sustainablebuilding

**Password:** barcelona2014

## Author's Information

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### Oral presentation's Upload

You can upload your presentation in the Speakers' Room located in Level -1  
Acceptable presentation format is PPT (using the template provided).

The presentation must be given in the day before except for Tuesday that the presentations must be uploaded at least two hours in advance.

### Poster Presentations

The poster screens are located in the Exhibition Area on the Level 0.  
Posters are divided in five poster sessions as follows, during the coffee breaks:

- **Tuesday October 28th:** 11:30 to 12:00 and 16:30 to 17:00

- **Wednesday October 29th:** 11:30 to 12:00 and 16:30 to 17:00

- **Thursday October 30th:** 11:30 to 12:00

Each poster will be showed in the corresponding screen. Authors are kindly requested to be available in order to reply the questions raised by the delegates.

### Certificates

All the certificates will be sent by email after the conference

## Gala Dinner

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**Date:** October 29th at 20:45 to 23:45

**Venue:** Palau de Pedralbes - Av. Diagonal, 686 - Barcelona

Dress code: Business

How to get there: Metro - Line 3 - (Palau Reial station) / Bus: Line 7 - 33

Note: Please note that transport to the conference gala dinner site is not provided by the organization.

Important: All delegates are requested to wear their badge to access the Gala Dinner as well as the corresponding "Gala Dinner Ticket".

## About Barcelona

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Barcelona is a dynamic, welcoming city and one of the major economic and business centers of the Mediterranean Europe. The Catalan capital has a modern hotel infrastructure and boasts first rate shops and leisure, cultural and tourist attractions; all these traits have made Barcelona a first class tourist destination, and the ideal place for meetings and congresses. Barcelona enjoys a Mediterranean climate with mild, sunny winters, warm summers and relatively low rain fall. Temperatures during October are usually mild (15 to 20 degrees Celsius).

### Getting around

Barcelona has a complete public transport network including metro, tramway, buses and local trains. Sants Station is a multi modal station (train, bus and metro). In Sants Station you can go in highspeed to Madrid or Seville.

### From the airport:

An aerobus departs every 5 minutes from the Barcelona airport and stops at Plaça Espanya (the stop is located at 15m in public transportation from the venue) and Plaça Catalunya (City center).

### Taxis

Taxis in Barcelona may be ordered by phone, picked up at authorized taxi stands or flagged

down in the street. Taxis must usually be paid in cash though some accept credit cards.

**Radio Taxi:** +34 933 03 30 33

**Taxi for disabled people:** +34 935 51 93 68

### Commercial opening times

**Opening times for banks:** In general, banks and savings banks open from 08:30 to 14:00 from Monday to Friday. There is an extended cash-point machines all over the city.

**Shopping centers are open Monday – Saturday from 10:00 - 22:00.**

### Useful telephones

**For emergencies:** 112

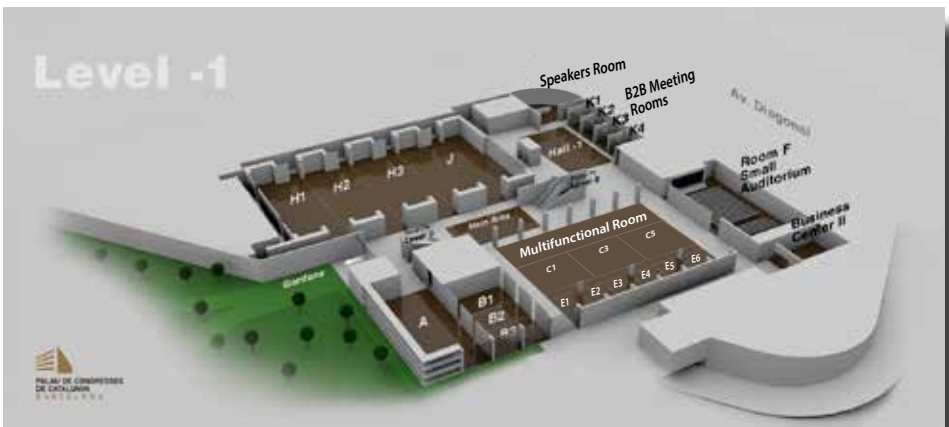
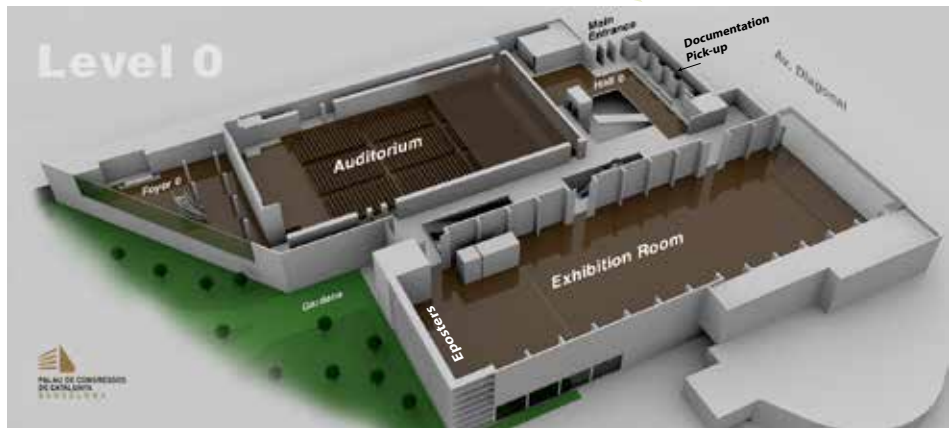
**Municipal Police:** 092

**Bus station:** +34 934 913 183

**RENFE (Spanish railway):** Customer Service + 34 902 320 320

**Barcelona Airport:** +34 902 40 47 04

CONFERENCE VENUE LEVELS



This Conference is the result of a tremendous work in which lots of people from all around the world have been involved. As organisers of WSB14 Barcelona, GBCe wants to thank them their commitment and help through the last 3 years:

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with the participation of



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Borja Barros  
Aurora Rebollo  
Cynthia Echanove  
Sonia Montané  
Miguel Pich-Aguilera  
Beatriz de Diego  
Margarita Botet  
Aurelio Monterde  
Sander Laudy  
Antonio González  
Cristina Galluza  
Virginia Alfaro

And for their very professional work:

Communication: CPAC Comunicación, Habitat Futura



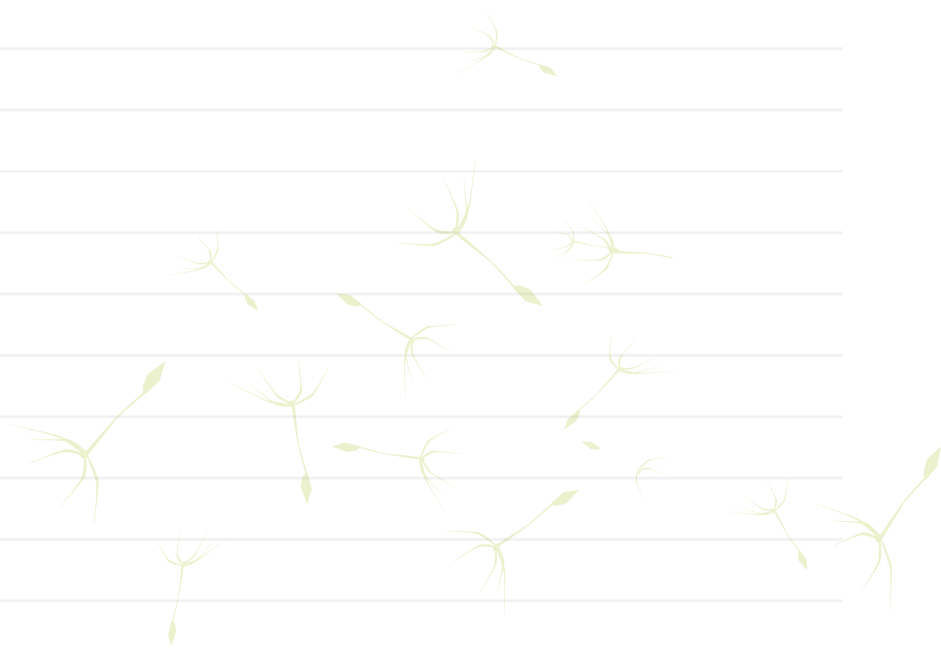
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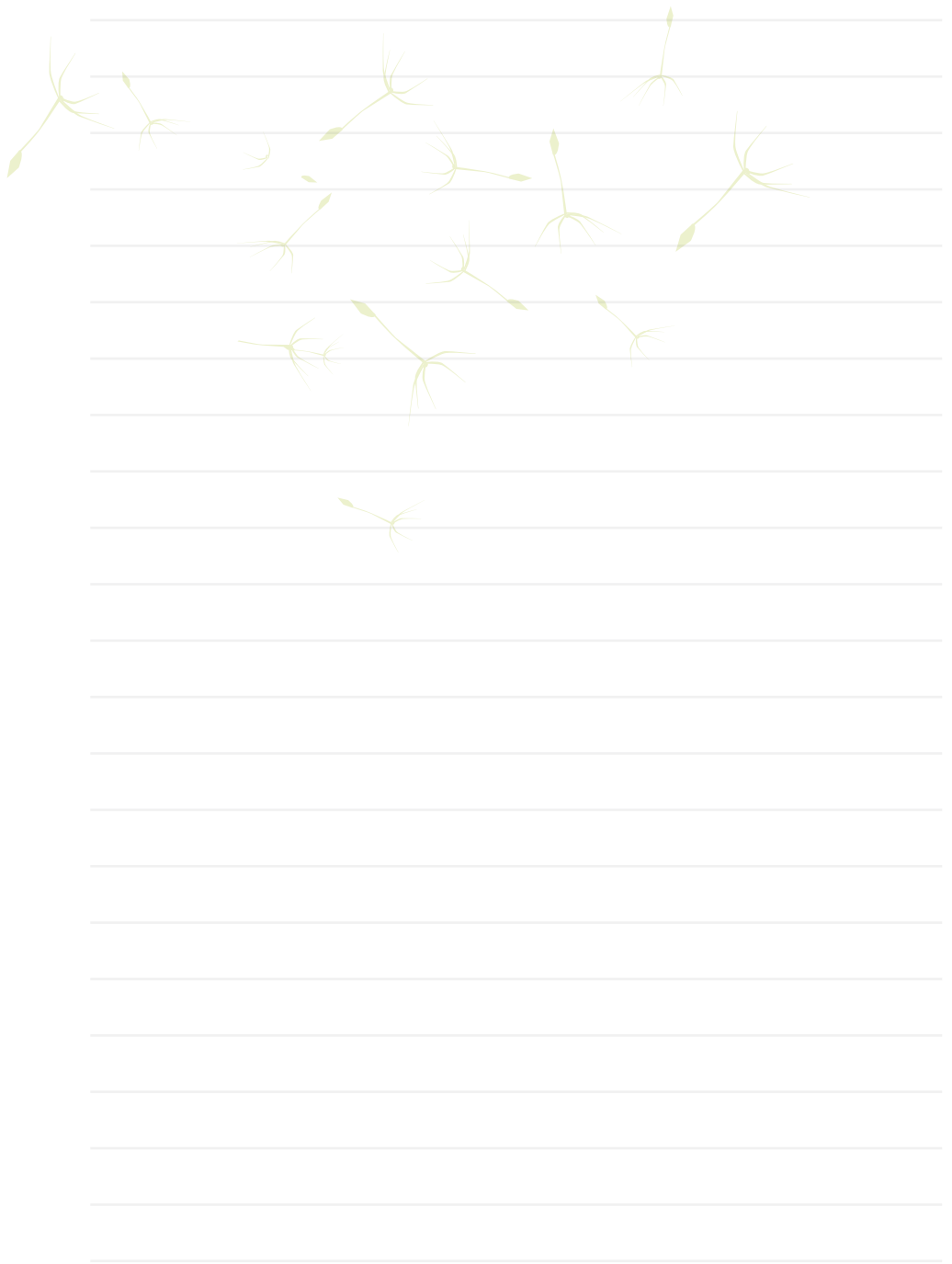
Web and graphics design: Dixi Grafismo, S.L.



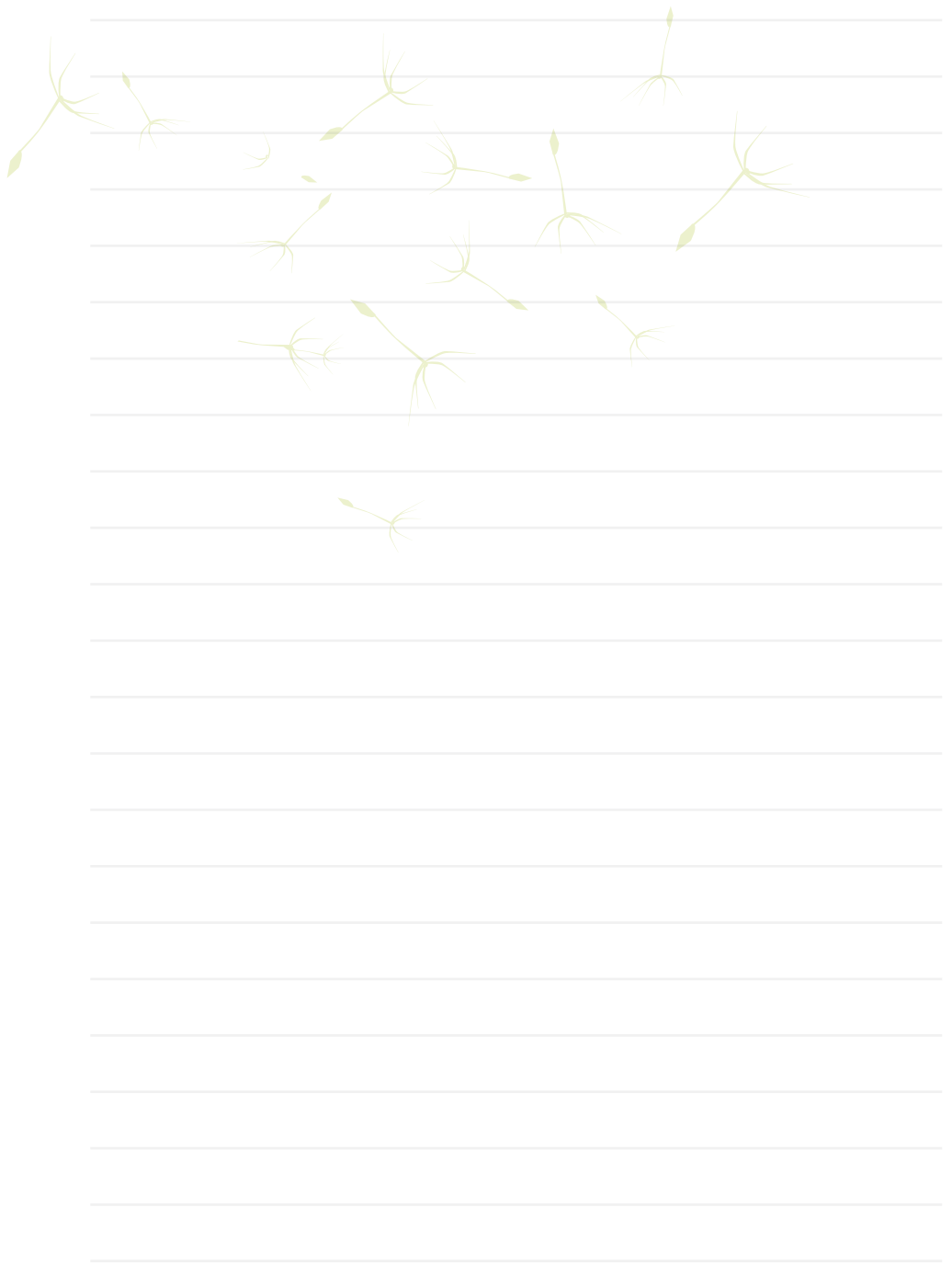
Logo design: Iván Pajares



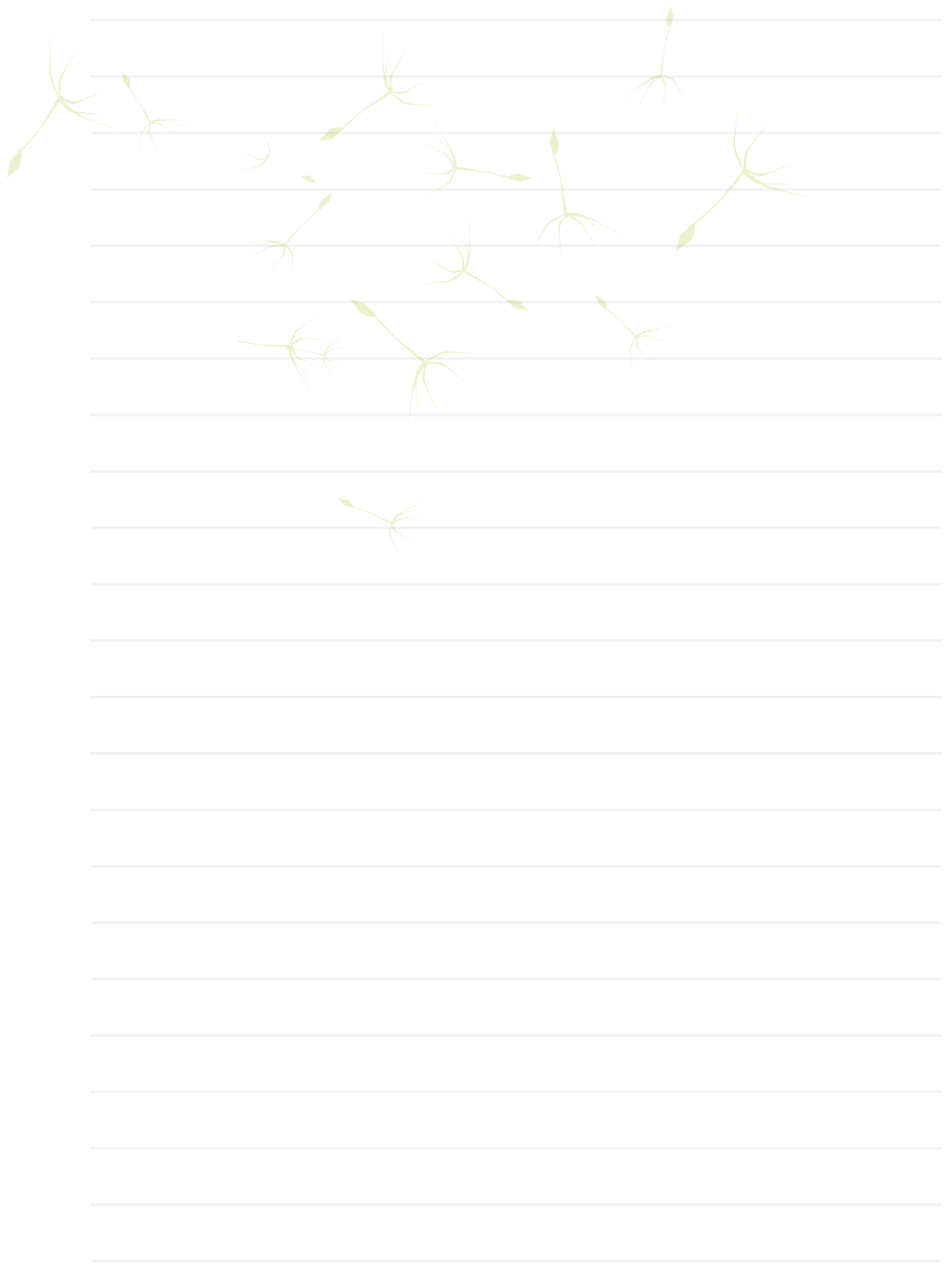


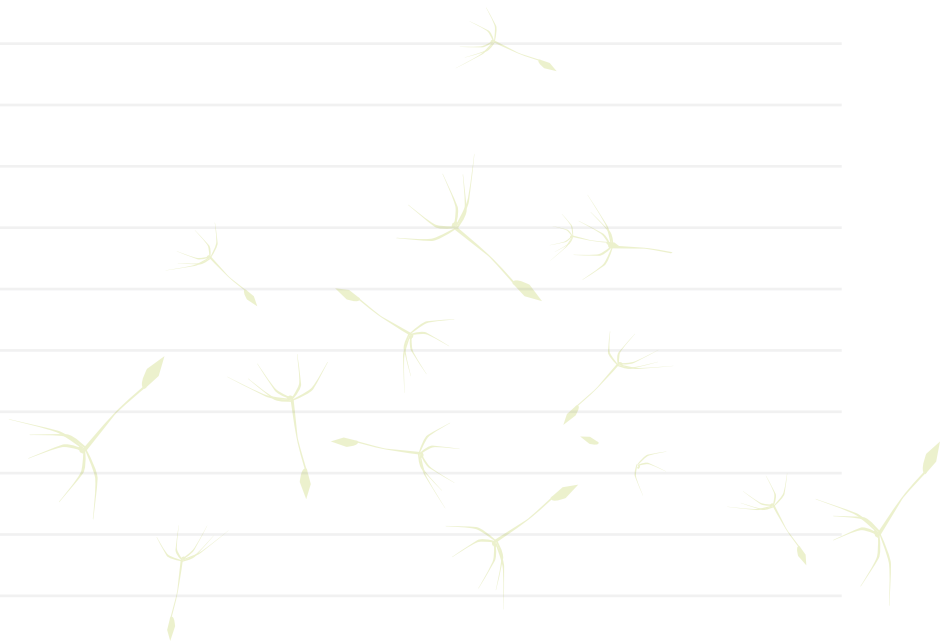


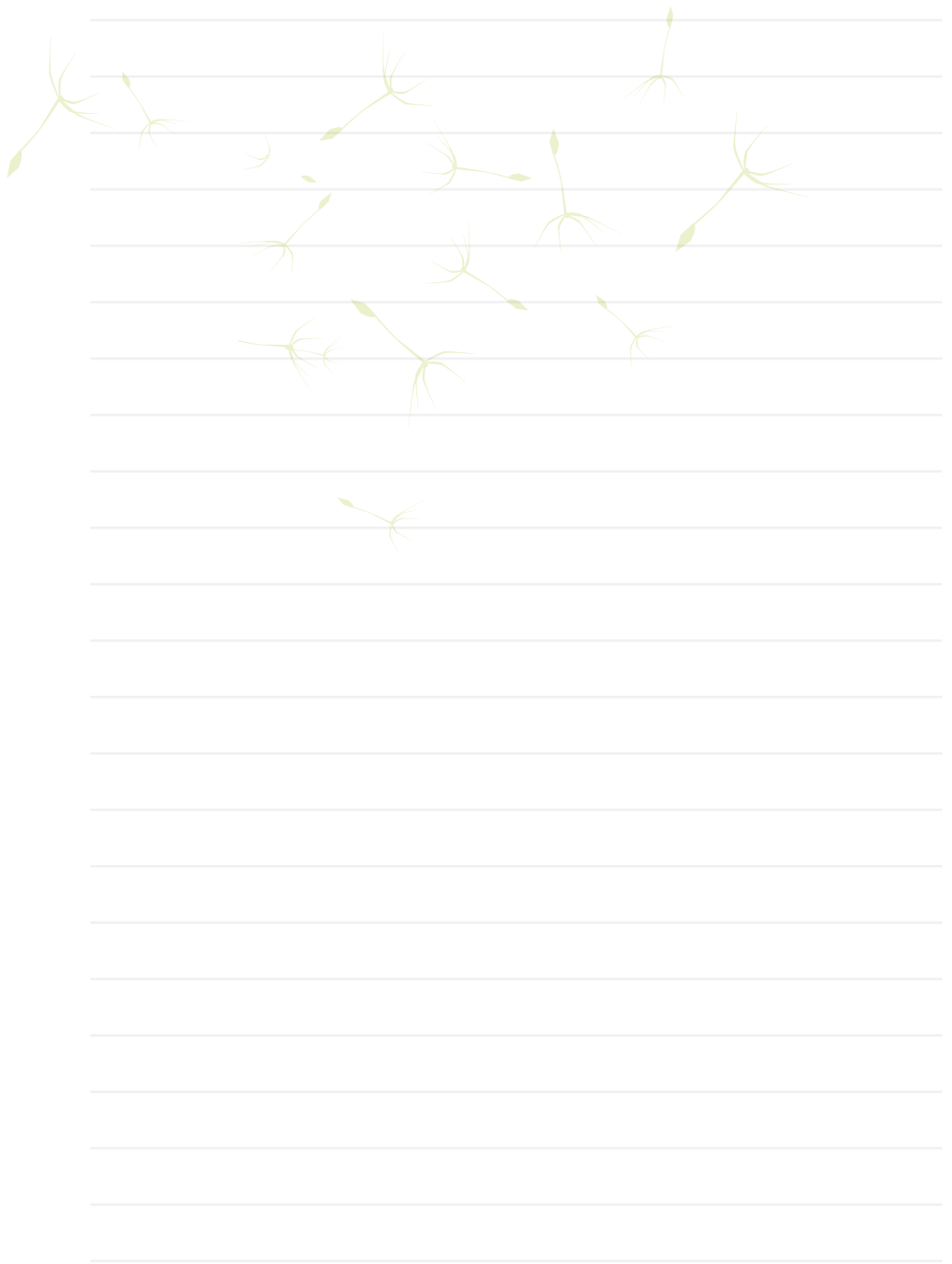


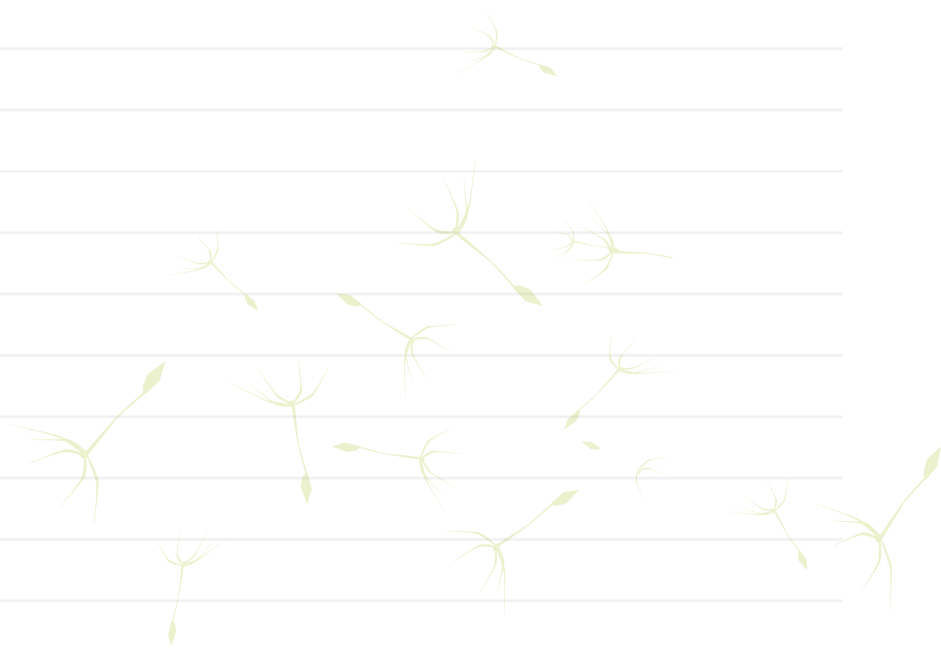




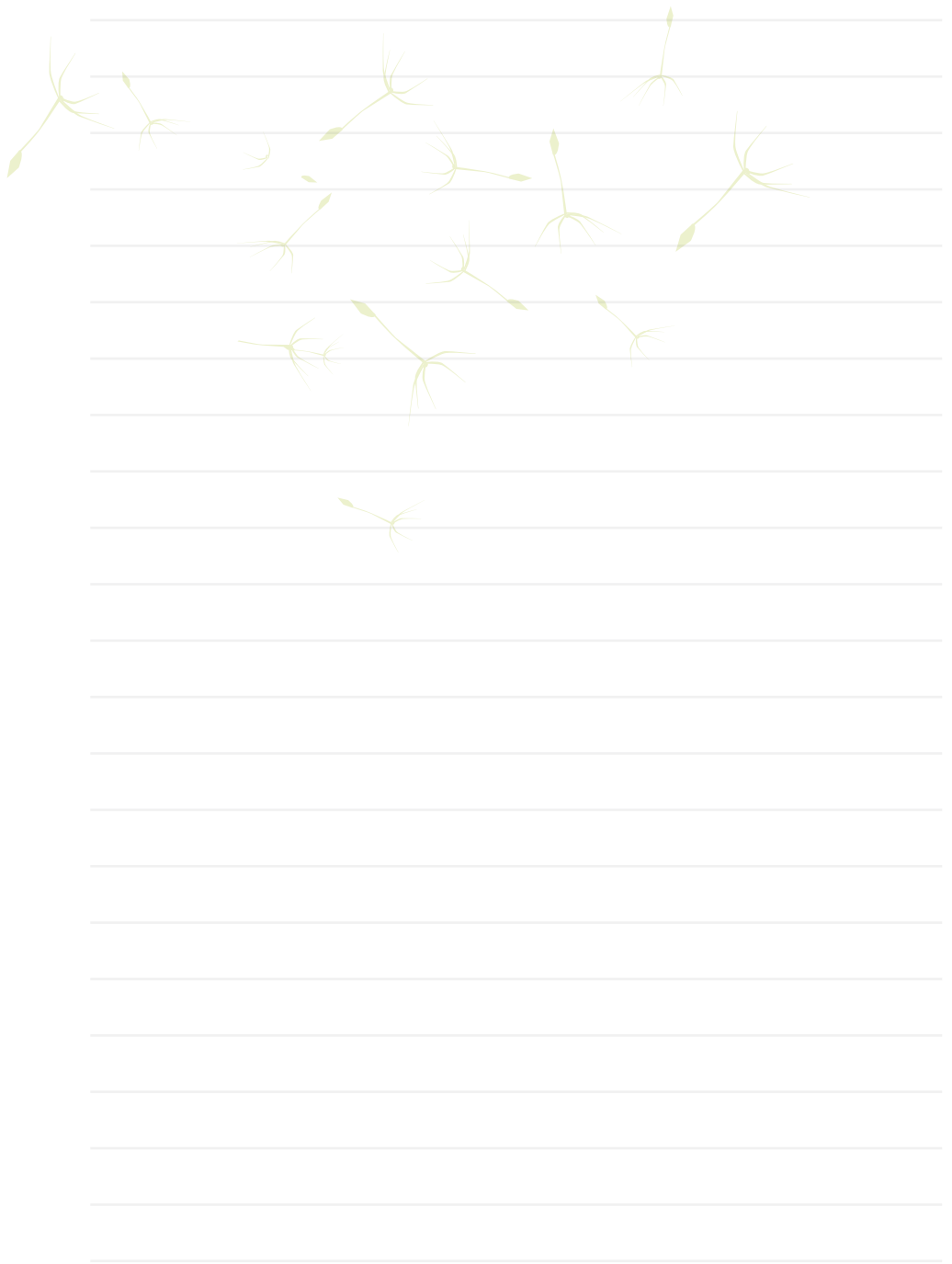




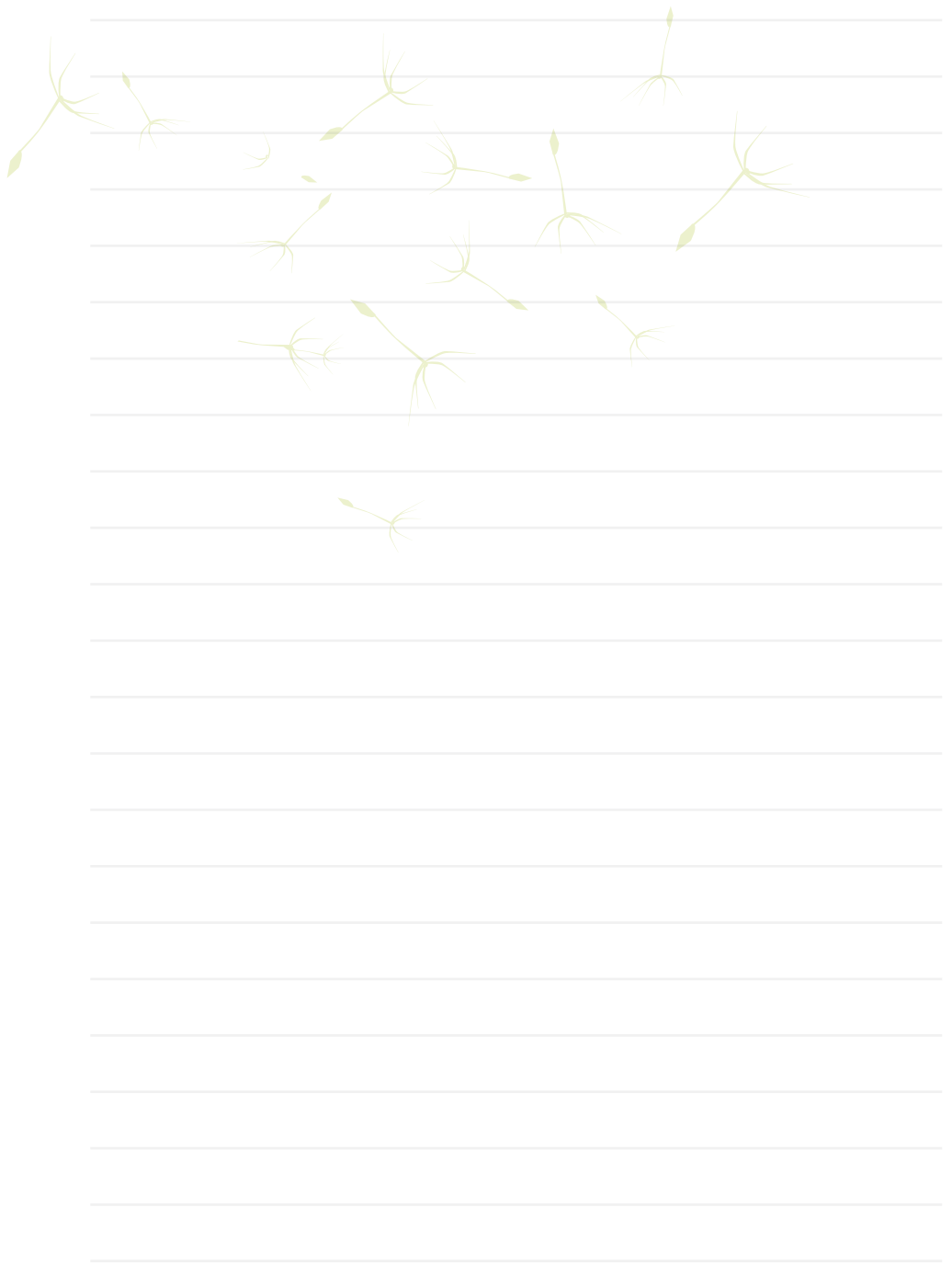




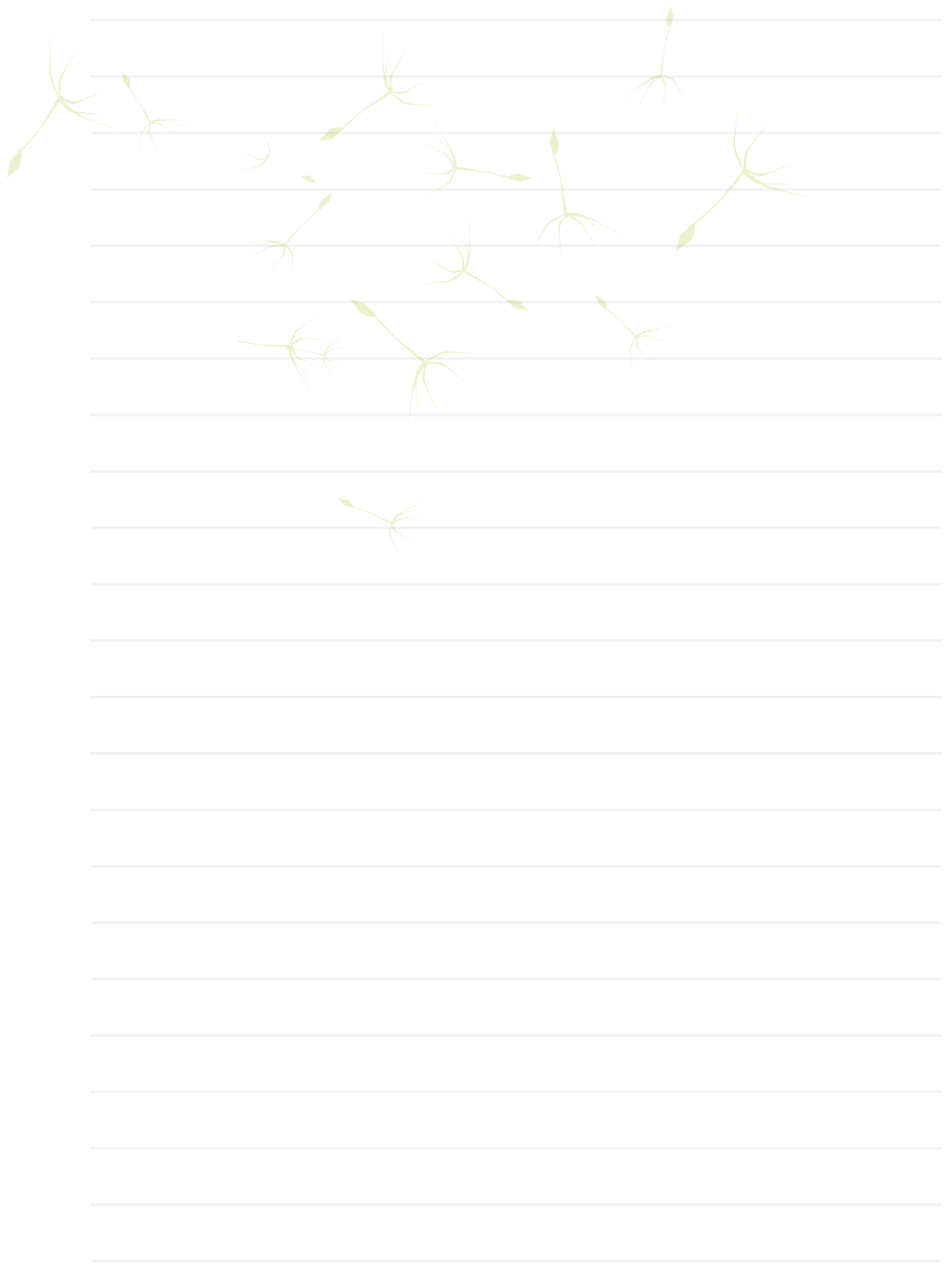


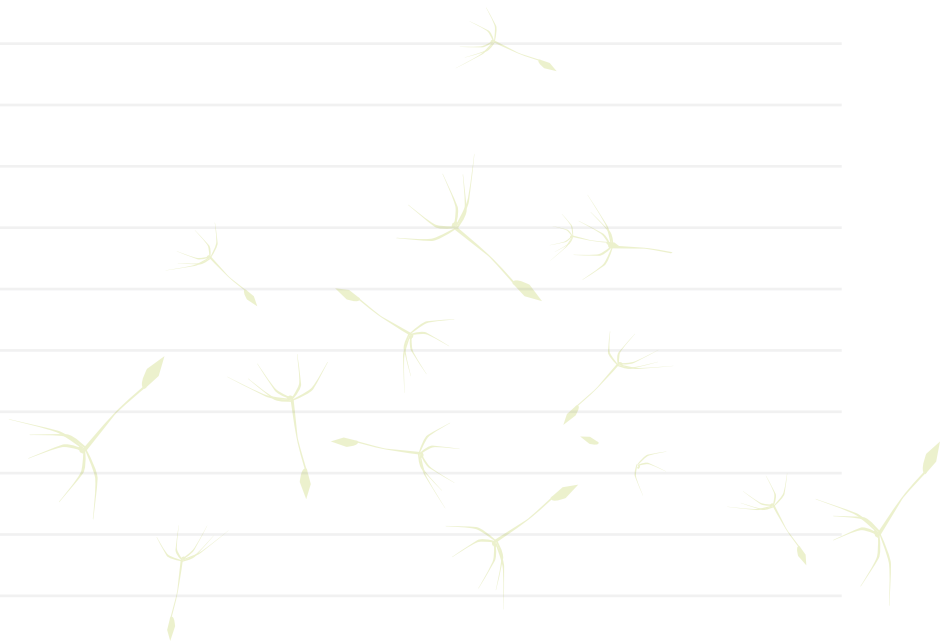


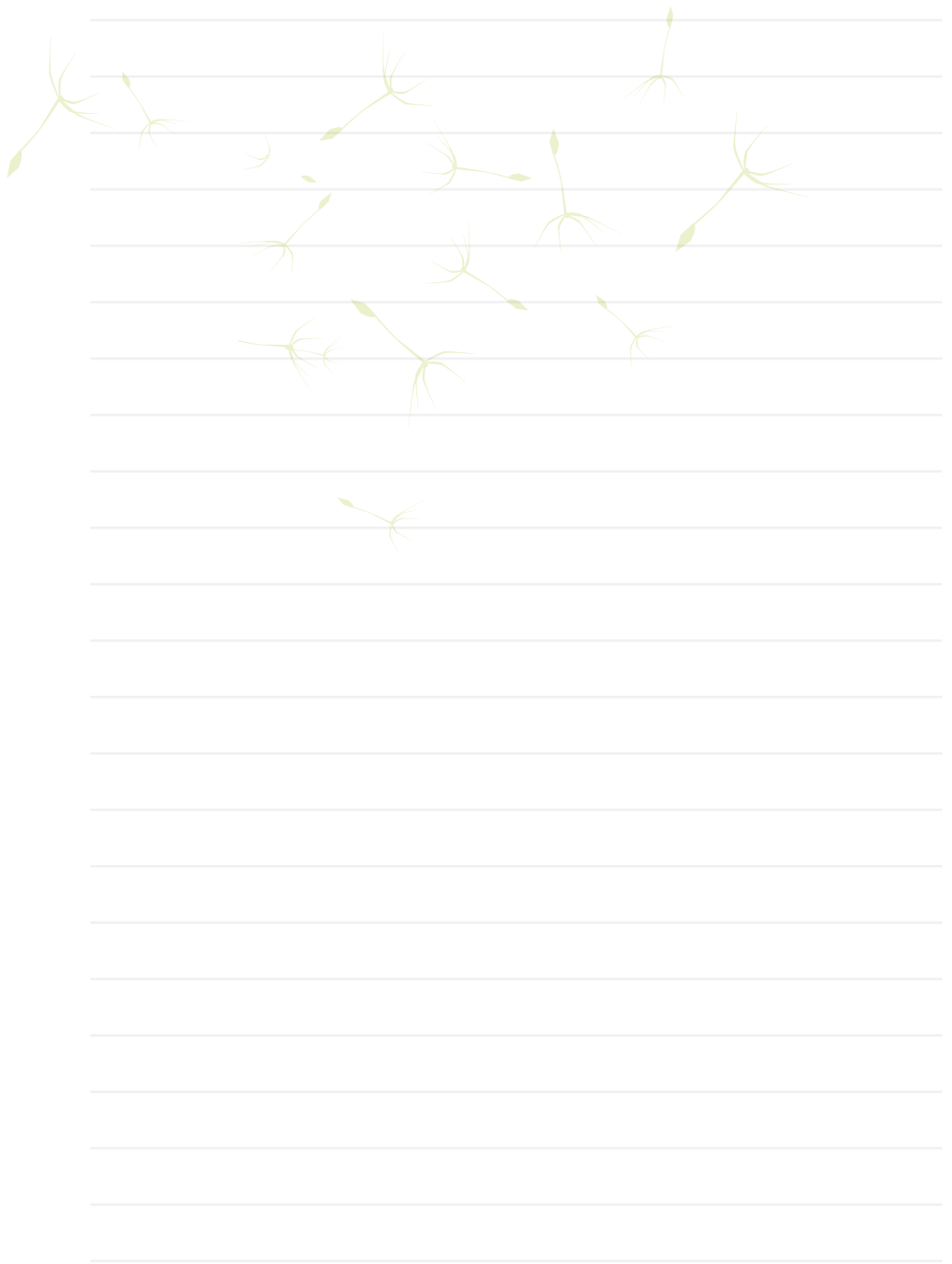


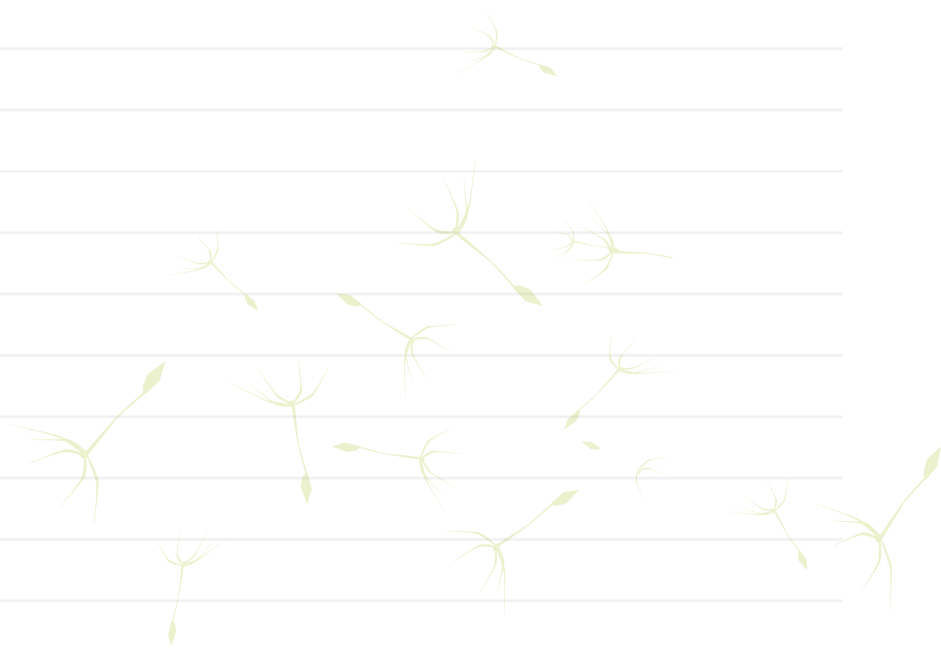




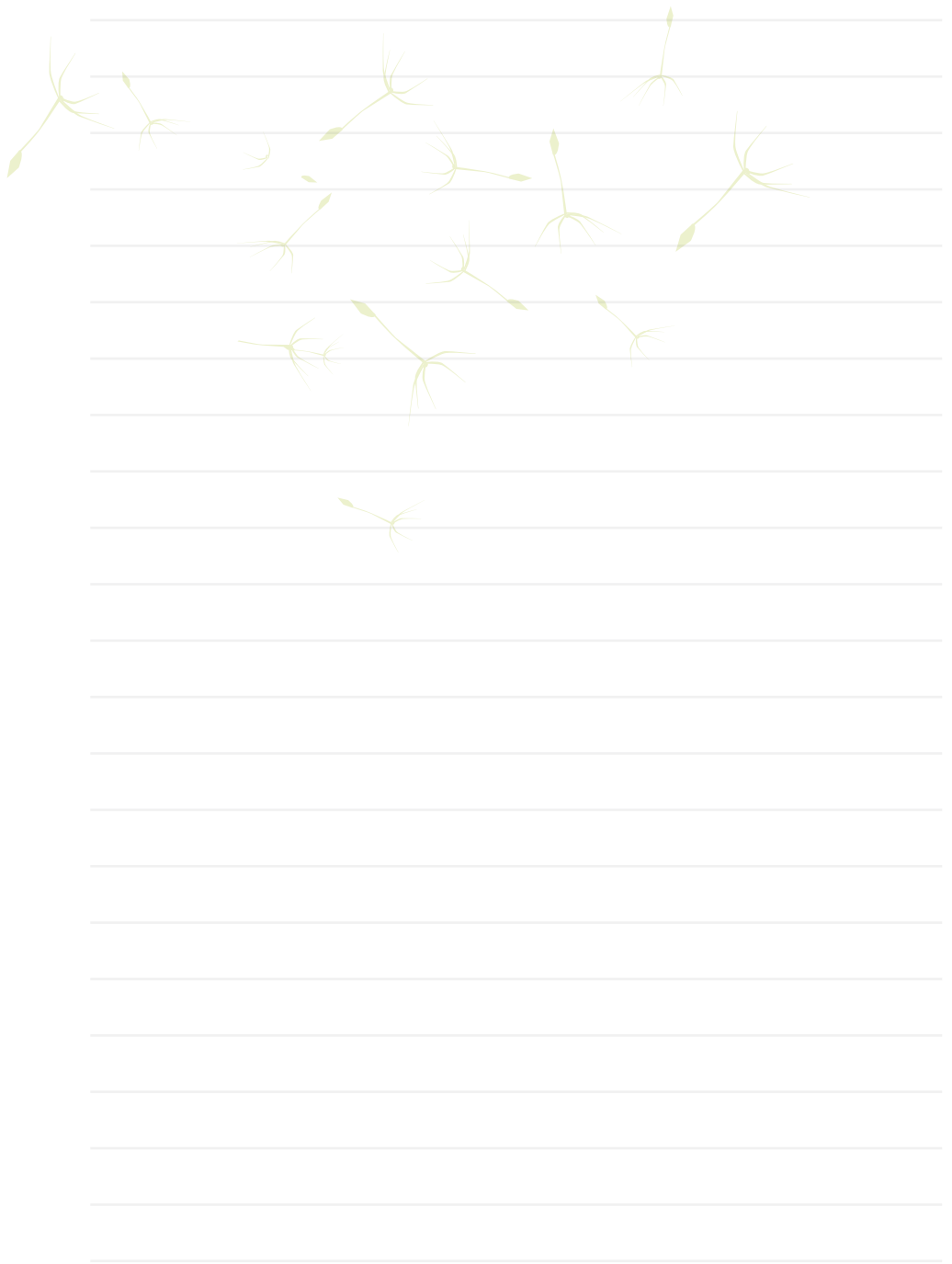




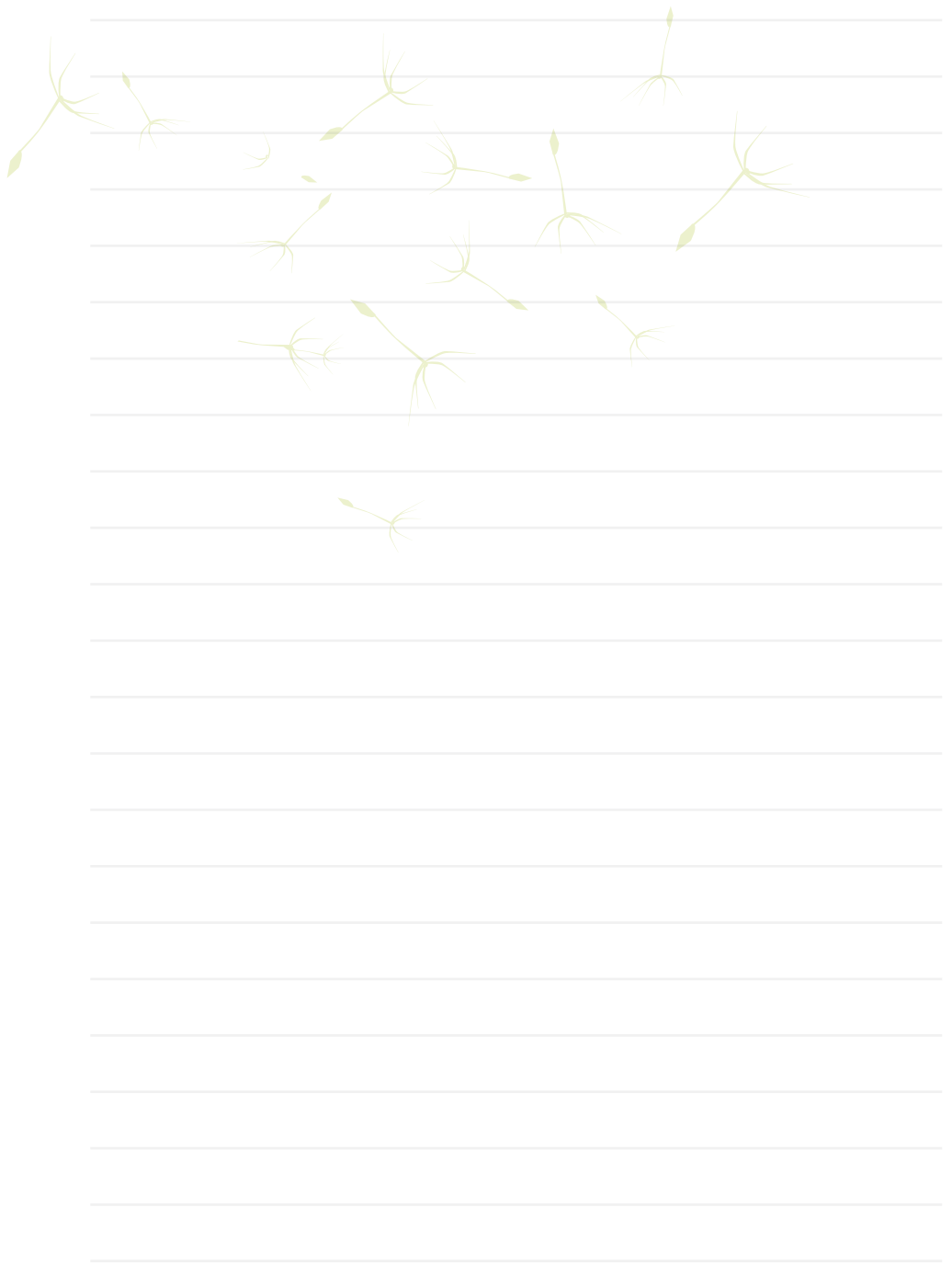














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Technical Secretariat: Barceló Congresos - Pl. Europa, 17-19 1st Floor

08908 L' Hospitalet del Llobregat - Barcelona

Telf.: +34 93 882 38 78 - [wsb2014@barcelocongresos.com](mailto:wsb2014@barcelocongresos.com)