



ARCHITECTS' COUNCIL OF EUROPE  
CONSEIL DES ARCHITECTES D'EUROPE

# Sustainability in Architecture and Construction

Bratislava

26<sup>th</sup> May 2011

## Impact of EU Legislation and Policy on Architecture

Focus on Sustainability and the Future

A Presentation by

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Director

# Sustainability in Architecture and Construction

## The ACE - What is it?

- **The Representative Body of the Architectural Profession**
- **Member Organisations from All EU Countries plus Norway, Switzerland and Candidate Countries**
- **46 Member Organisations, Each one Representative at National Level**
- **Regulatory Bodies and Professional Associations**
- **Represents About **520,000** Architects in Europe**



# Sustainability in Architecture and Construction

## Current Priorities of the ACE

- **Raising EU Standards for Training of Architects and of Professional Practice**
- **Seeking to Improve Public Procurement Procedures**
- **Promoting Integrated Approaches to the Creation of the Built Environment**
- **Understanding the Business and Regulatory Environment (Sector Study)**
- **Engaging with Sister Organisations and the General Public**



Signing of Cooperation Accord with South Korea (KIRA)



Cable-Car Station, Innsbruck, Austria  
Zaha Hadid, Architect

# Sustainability in Architecture and Construction

## The Context



- **Global Challenges:**
- **Climate Change**
- **Economic and Financial Crisis**
- **Demographic Change**
- **Political Evolutions**
- **Environmental Degradation**
- **Globalisation**

# Sustainability in Architecture and Construction

## The Context



☞ **European Challenges:**

☞ **Leadership Role**

☞ **Diversity**



☞ **High Standards of Living**

☞ **Skills Gap**

# Sustainability in Architecture and Construction

## The Context



- **City Level:**
- **80% of Population**
- **Potential for real Impact**

# Sustainability in Architecture and Construction

## The Context



- **Cities and Regions have Real Potential to act on:**
- **Buildings Level - Implementation of EPBD**
- **City Level - Covenant of Mayors**
- **Social Level - Quality Housing for All**

# Sustainability in Architecture and Construction

## The Context



Expo Site, Lisbon - After the Show, a Truly Sustainable Quarter is Born



# Sustainability in Architecture and Construction

## The Context



Main Square - Poznan - Urban Regeneration Project Showing Good Practice Approach

# Sustainability in Architecture and Construction

## EU and Other Initiatives

- **Energy Performance of Buildings Directive**
- **Energy Services Directive**
- **Energy Efficiency Plan 2011**
- **Lead Market Initiative on Sustainable Construction**

### Other:

- **Labelling such as BREEAM, LEED, etc...**
- **Research Funding such as FP7, E2BA, IEE, etc...**



Nurse Education Building - Ireland  
A&D Wejchert, Architects  
RIAI Sustainable Building Award 2007

# Sustainability in Architecture and Construction

## ACE Declaration on Architecture and Sustainability 2009

### Commitment to:

- **Changing individual Professional Practices**
- **Promoting Sustainable Design**
- **Fostering Environmental Literacy and Competence**
- **Practicing Institutional Leadership**
- **Collaborating for Interdisciplinary Approaches**
- **Broadening Service and**



Outaniemi Technical University, Helsinki, Finland  
Alvar Aalto, Architect

# Sustainability in Architecture and Construction

## Sustainable Architecture

***“Sustainable Design Integrates Consideration of Resource and Energy Efficiency, Healthy Buildings and Materials, Ecologically and Socially Sensitive Land Use and an Aesthetic That Inspires, Affirms and Enables”***

Union Internationale des Architectes  
Declaration of Interdependence for a Sustainable Future,  
Chicago, 1993



Architecture and Children Programme, Finland

# Sustainability in Architecture and Construction

## The Sustainability Agenda - 1

- ☞ **An Integrated and Holistic Approach**
- ☞ **The Building and its Environments**
- ☞ **The Environment and its Buildings**
- ☞ **A New *Baukultur***
  
- ☞ **Sustainable Architecture**
- ☞ **Energy Efficiency & Climate Change**
- ☞ **Answering the Needs of Society**
- ☞ **Urban Design & Research Needs**
  
- ☞ **ACE Actions**



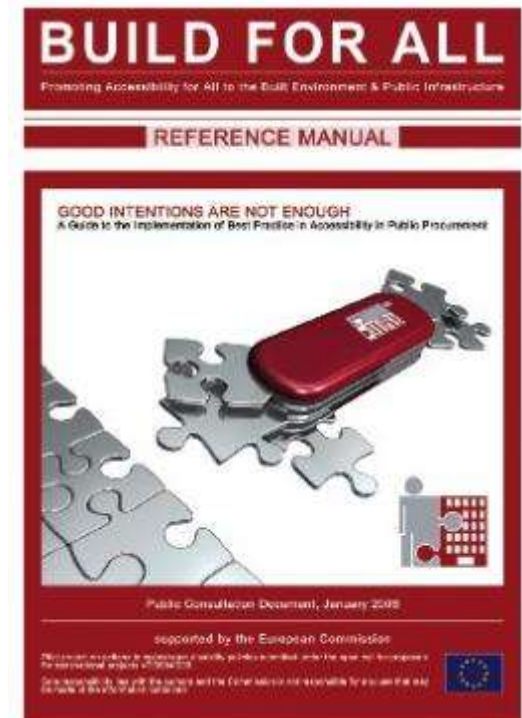
Terraced Housing - Norway  
ROJO Architects  
High Insulation Levels; Ground Sourced Heat  
Pumps; Heat Recovery Ventilation.  
Photo: Elisabeth Lund

# Sustainability in Architecture and Construction

## The Sustainability Agenda - 2

### Overall Integration and Holistic Approaches

- Environmental Implications of Design, Construction and Operation
- Local Materials, Embodied Energy
- Indoor Environmental Quality
- Water Conservation
- Waste Minimisation and Recycling
- Whole Life Cycle, 'Cradle to Cradle'
- Design and Construction Process
- Performance in Use
- Conservation and Reuse of old Buildings
- Urban Design and Spatial Planning
- Accessibility



# Sustainability in Architecture and Construction

## The Sustainability Agenda - 3

### Sustainable Design:

- ☞ **Embodies principles of sustainability combined with an architecture more responsive to climate and human needs**
- ☞ **Building and site design that responds to location and takes optimal advantage of ambient energy sources**
- ☞ **Use of building fabric - walls, roofs, floors, etc., to collect, store and distribute solar thermal energy and to distribute daylight.**
- ☞ **Capable of providing over 50% of building energy needs**



Greenhouse, Czech Republic  
P H Desvignes, Architect