How social media will revolutionise the building industry towards sustainability?
Steve Borncamp
President of Romanian Green Building Council
construction = conservative
construction = conservative
+ only incremental changes?
¡Viva La Revolución!
science
big data
connectivity
measurement
science
big data
connectivity
measurement
meets
9-10 billion people
a powerful tool?
a powerful tool = social media
a powerful tool = social media

why?
benefits

consolidate common interest
benefits

consolidate common interest
bring more to the conversation
benefits

consolidate common interest
bring more to the conversation
democratization of information
challenges

“knowledge hoarding” is difficult
challenges

“knowledge hoarding” is difficult validation of data
challenges

“knowledge hoarding” is difficult validation of data

just because you can... doesn’t mean you should
another benefit

mediocrity filter

instant meritocracy
another benefit

mediocrity filter

instant meritocracy
Britannica VS Wikipedia
wisdom of crowds

the group is smarter than its smartest individual
wisdom of crowds

a community of your peers
recommending and elevating items of importance
must bring the debate closer to the construction community
must bring the debate closer to the construction community

innovation needs integration
two big challenges
two big challenges

0% to 60%
two big challenges

0% to 60%
ASK!!!!
ASK!!!!

improve communication of the full project team
socialize the great ideas!
Steve Borncamp
President of Romanian Green Building Council
David Clark
Partner of CUNDALL Engineering
Raising the Ambition of Europe’s Energy Performance for Buildings
The need for data and good examples

• Energy data on real building performance
  – To turn theory into reality
  – To focus on what actually works
  – To replicate success
  – To avoid repeating mistakes

• Whole Carbon Footprint
  – embodied carbon
  – transport to and from the building
Most case studies are based on Energy Performance Certificates (modelled energy)

We really need Total Energy Consumption (actual performance)
Real performance of green office buildings

Source: various published case studies
Closing the gap between design & reality

Design v Actual CO2 emissions

Source: Cundall
Closing the gap between design & reality

Source: www.carbonbuzz.org
Operational factors

Various factors which influence actual energy consumption that are typically not included in energy modelling

* - expectations includes lighting levels and thermal comfort criteria

Unregulated Energy

Tenant’s equipment (e.g. computers, servers)
Lifts, external lights and other services not included in building regs modelling

Regulated Energy

Whole Carbon Footprint - LCA

• Embodied carbon gaining prominence in UK
• Very few buildings have an LCA
• No consistency between factors used
  – Steel = <1,000kgCO2/t OR > 2,000kgCO2/t?

• Need to consider Whole Carbon Footprint
  – embodied carbon AND
  – transport to and from the building
  – Location matters!
Carbon footprint – new London office

Operating: 150 kgCO2/m²/year
Embodied (initial): 700 kgCO2/m²
Embodied (in-use): 550 kgCO2/m²
Commuting: 800 kgCO2/person/year

60 year period
No energy supply decarbonisation included

Source: Cundall
Carbon footprint – new rural low energy office

- Operating: **20 kgCO2/m²/year**
- Embodied (initial): **700 kgCO2/m²**
- Embodied (in-use): **550 kgCO2/m²**
- Commuting: **1500 kgCO2/person/year**

60 year period
No energy supply decarbonisation included

Source: Cundall
Almost zero carbon rural office

Refurb typical office in central London

Source: Cundall
How c21 could help

• Provide case study data in consistent format
• Encourage operational data rather than design
• Provide whole carbon footprint data
• Share ideas
• Encourage debate

• Part of the jigsaw (gov policy, rating tools, taxes, etc) to reduce the environmental impact of buildings
Véronique Pappe
Project manager of Construction21.eu
at French Institute for Energy Performance in Buildings
The European platform for green building practitioners

http://www.youtube.com/watch?v=fHQ0KHeX3kY&feature=plcp
What is Construction21?

• Become the first meeting place for all green building practitioners
• A social network, made by practitioners for practitioners
• Based on the “word to mouth” principle: practitioners share their experiences with their peers
• At a regional, national and international scale
A multi-lingual platform

In blue: information coming from the national platforms, translated in English
In red: information flowing towards the national platforms, in English

Case studies and news with an international interest consolidated in BUILDUP
A database of exemplary case studies
A focus on performing products and services
Thematic communities to exchange with peers
Anna Braune
Head of PE INTERNATIONAL’s building & construction team
C 21 Communities

5 community(s) set(s)

Energy Performance Contracting in buildings - The Essential
Energy Performance Contracting - Essential Resources
Open community | 12 Members

Life Cycle Assessment of products and buildings
Open community to professionals interested in the application of Life Cycle Thinking into the building sector.
Open community | 130 Members

SEEMPubs
The community about SEEMPubs, a seventh framework project regarding energy saving in existing and historical buildings by ICT-based services.
Open community | 4 Members

EeBGuide Expert Group
Expert Group Community for the EeBGuide Project
Private community | 1 Members

Construction21 project team community
Construction21 project team community
Private community | 27 Members

PE INTERNATIONAL
EXPERTS IN SUSTAINABILITY
**Benefits of C 21 Communities**

- Define topics that you find worth discussing with others
- Create forum, calendar, documents easy on a mouseclick
- Get connected with experts
- Exchange documents
- Exchange events news

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**Join the green revolution! Join Construction21.eu**

- Get informed
  - Access information about your activity easily.
  - Interact with European green building experts.
  - Adopt innovative solutions in construction and refurbishment.
- Develop yourself
  - Promote your achievements in your country and the whole of Europe.
  - Demonstrate your expertise within thematic communities.
  - Develop your company's market share of the green economy.
Benefits of C21 Communities

Start and monitor discussions

Use C21 Communities for your own project work – benefit from secure non-profit platform
Roser Gasol
Communication Manager at the UNESCO Chair in Life Cycle and Climate Change

Gintaras Staukis
Assoc. Prof. Vilnius Gediminas Technical University, Lithuania
What is a case study?

- Exceptional examples of both new and refurbished buildings
- Consistent and comprehensive data
- Outlining outstanding eco-innovations
What is a case study: 8 categories
What is a case study: 8 categories

The project consists of a building with a unitary image as a whole. It consists of three blocks (A, B, and C) in order to adapt itself to the slope of the terrain. It is a type of building with vertical levels and a stepped skyline. The three blocks face three courtyards on its four sides. The access to the building is through the main entrance, which is designed with full and empty spaces, in alternate positions, boosting the presence of the building and improving the thermal inertia of the building.

Functionally, each of the blocks is shaped with two sections of offices and a section of cores, each with two elevators and freight elevators, building with a core in the center and a fire escape. These cores are likewise divided in intermediate positions.

The design is exhaustive in the search for materials to control solar heat, promoting transparency, adopting constructive solutions with stressed fabric.

See more details about this project: http://www.arup.com/Project

Data reliability: 3rd party certified
Example of a case study I
Example of a case study II
Example of a case study III
Examples in 6 European countries

France
Spain
Italy
Romania
Germany
Lithuania
Validation process

- Case study supplier registered → WRITE
- Moderator → REVIEW
- Case study supplier registered → TRANSLATE (optional)
- Administrator C21 → PUBLISH
Your case studies in Construction21: the benefit

- Share information and best practices
- Improve transparency in the European market: replication
- European benchmark
- Promote your products and increase your visibility
- Demonstrate your expertise in Europe
- Influence local and nationals policy makers
- Pool of innovation ideas and contacts
Case studies presented at international events
100 case studies already in the database

• **May 2013: 500 case studies:**
  - France: 85
  - Spain: 85
  - Germany: 85
  - Romania: 85
  - Lithuania: 65

• **June 2012: 93 Case Studies**
  - France: 37 CS
  - Spain: 8 CS
  - Germany: 7 CS
  - Romania: 17 CS
  - Lithuania: 13 CS
  - Italy: 11 CS
Véronique Pappe
Project manager of Construction21.eu
at French Institute for Energy Performance in Buildings
Register on Construction21.eu

• Demonstrate your expertise.
• Develop your professional network.
• Improve your reputation
• Promote your services and achievements

Be a pioneer
Join Construction21 now!
June 2012: opening to new countries

- Selection of new partners: national organization(s) involved in green building
- Integration process
  - Creation of a new platform
  - Training to website management
  - Assistance to mobilize national stakeholders

Amplify your actions by developing your Construction21 platform!
To know more about Construction21.eu

• Questions?
To contact Construction21.eu

• Consense : common booth with World Green Building Council

HALL 2 - stand 2E12

• 2nd conference : “How social media will revolutionise the building industry towards sustainability?”

Interface conference Room C4.1.1 - Wednesday 20th of June – 9.00

• Contact us! Project manager : Véronique Pappe

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