



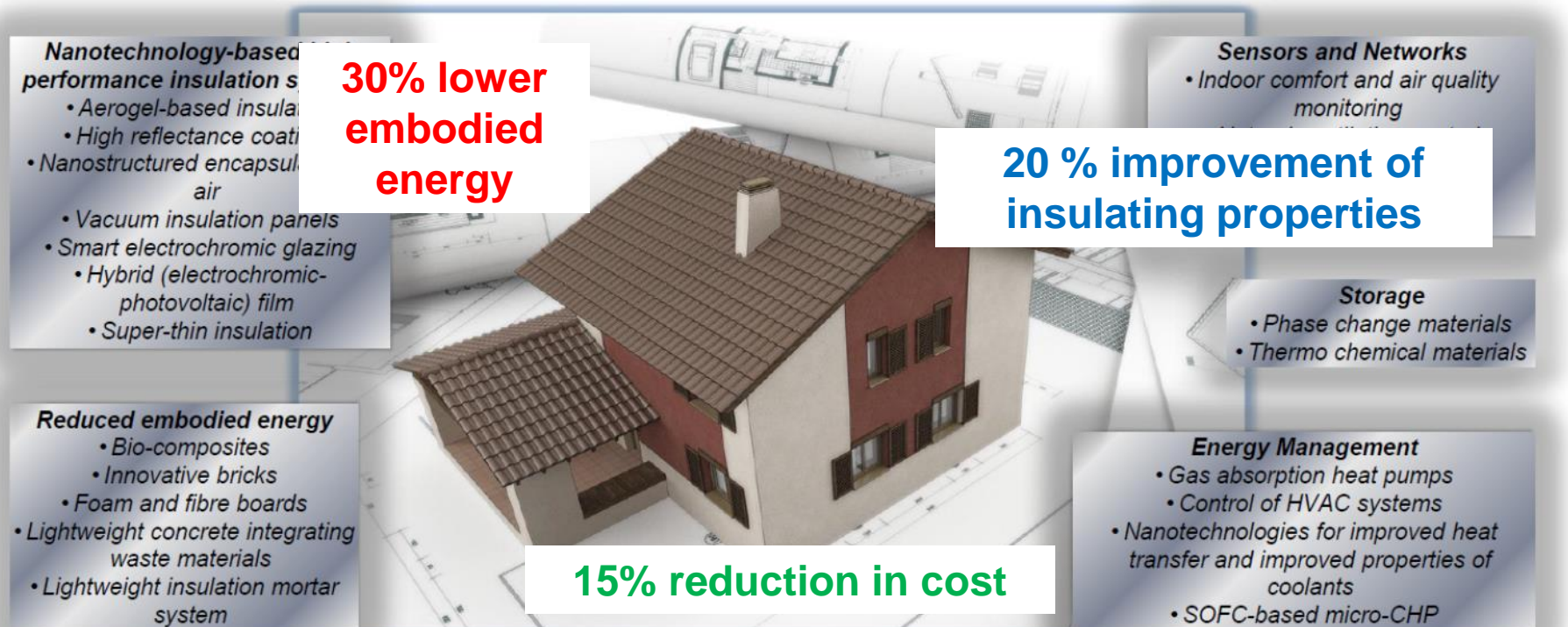
Recommendations to speed-up the application of research results into marketable products



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At the end of a project...



The methodology is conceived to bring results from materials science research and apply them into industrial applications, with a strong market oriented approach, but.....

....it really begins another story to move on the construction market!

Funding: from R&D results to market

Involvement of
Banks and Insurances Company



Intellectual Property
Rights (IPR)
management

STANDARDS



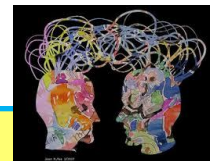
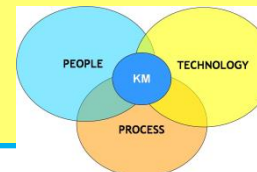
Standardisation

Product Certification



Wider society understanding and acceptance of new technologies and products

Training for workforce



"Whoever sets the standard also makes the market"

- Building upon standards ensures **compliance with market conditions** and increases the **transparency** for prospective customers;
- Being involved in standardization and shaping future **standards helps to translate your research and innovation findings**, including intellectual property rights, into **marketable solutions**. This aspect has been recognized by the European Commission with Horizon 2020;

Standards come into play as they speed up the access to market:

- Europe's future is connected to its power to innovate. **Research** outcomes have to **lead to innovative products** and services;
- the **complexity** and **interdisciplinarity** of today's **products** and services is constantly **rising**;
- customers expect new and **innovative solutions** after increasingly **shorter** periods of **time**.

<http://amanac.eu/achievements/standardization/>

- **Most** standards in construction are **mandatory** in Europe, they can also be helpful to establish new business (implementation of legislation CPD/CPR)
- Standards allow to anticipate future market requirements



Construction Product Regulation n. 305/2011 (CPR)

THE BASIC REQUIREMENTS CPR defines seven basic requirements for construction works:

1. Mechanical resistance and stability
2. Safety in case of fire
3. Hygiene, health and environment
4. Safety and accessibility in use
5. Protection against noise
6. Energy economy and heat retention
7. *Sustainable use of natural resources (new in CPR)*



Survey made in 2014 by the EC on "Which materials for sustainable construction?"

More than 300 construction experts replied ...

- **Lack of specific standards & tests for new materials or concepts** (new binders, wastes, embodied energy...)
- Emphasise performance standards instead of prescriptive standards
- **National certification still required** (national/regional building codes...)
- Reduce standards because they limit developments (time & costs)
- Standards & design rules overemphasise security & safety
- CDW: clarify classification wastes/secondary materials
- Very slow process, hardly adapted to innovation. **Need for updated standards**





- **More EU standards, less national standards**
- **Higher standards for new sustainable buildings**
- **Introduce more stringent performance** requirements & standards
- Ensuring that standardisation is **in line with capabilities of materials** & modelling
- Standardise **predictive testing** of materials
- Put a programme focused on innovation in national standard bodies
- Establish **specific practical rules for new materials**, to be transformed in building code provisions
- Adapt **building codes to innovation**. Performance based building codes
- **Reuse of industrial wastes** need **support of national administrations**
- **Collaborative research** with **certifying bodies**

- Harmonised and simplified way to aggregate info on life cycle impacts of construction products at building level (eg BIM)
- Consensus needed on environmental aspects at end of life, particularly recyclability (mandatory module D in EN 15804) (metal ind)
- Improve ecolabelling of construction materials



Standardisation in Work Programmes EeB-PPP Materials

- **Strong encouragement** to consider standardisation in parallel to research
- Lack of adequate standard can block innovation
- Every project finds its way:
- **Liaison with relevant CEN/TC**
- **Participation in relevant CEN/TC**
- **Regular contacts with CEN**
- **CEN in advisory board**





Rubner wood home

Wood homes: the ideal alternative to masonry construction, but.... due to the ‘cultural problem’ of the fire risk, the insurance companies have some strict guidelines – and sometimes even charge higher rates – for properties made in wood.

COSME Programme

Guarantees to small and medium-sized enterprises for loans mainly up to EUR 150 000.

Equity (growth and expansion stage).

InnovFin Programme (Horizon 2020)

Loans and guarantees to innovative businesses.

Financing of research & development projects.

Equity (early and start-up phase).

The SME instrument offers funding and coaching support to innovative SMEs (Phase 1: Concept & Feasibility, Phase 2: Demonstration, Market Replication and R&D, Phase 3: Commercialisation).

Fast track to innovation

Creative Europe

Loans to small and medium-sized enterprises in the cultural and creative sectors.

Programme for Employment and Social Innovation (EaSI)

Microloans up to EUR 25 000 to micro-enterprises and to vulnerable persons who wish to set up or develop a micro-company.

Investments up to EUR 500 000 to social enterprises.

European Structural and Investment Funds (ESI funds)

Loans, guarantees, equity financing or business grants.

Support is provided from multi-annual programmes co-financed by the EU.

European Investment Bank and European Investment Fund

Business loans, microfinance, guarantees and venture capital.

Private Finance for Energy Efficiency (PF4EE)

Offers funding, risk sharing and technical support to commercial banks to increase financing to Energy Efficiency investments.

Natural Capital Financing Facility (NCFF)

Loans and investments in funds to support projects which promote the conservation of natural capital, including adaptation to climate change.



http://europa.eu/youreurope/business/funding-grants/access-to-finance/index_en.htm

- To have a Intellectual Property (IP) strategy from the **beginning** of a project/collaboration, i.e. an approach targeted to impact, **guided by «business objectives»**



IP Origination



- Background identification / update
- Prompt results notification / disclosure
- Results ownership issues

IP Protection



- Novelty searches, state-of-the-art searches...
- Consultation for IP protection
- Strategy

IP Management



- Access rights
- PEDR drafting

Exploitation



- IP pooling / Clustering
- Direct exploitation, including further collaborative research and contract research
- Indirect: licensing (out), spin off creation
- Freedom to operate analysis

Dissemination



- Outreach activities
- Open Access / Open data

- IP aspects to be managed by staff with complementary background (technical, business, legal)

The aim of many European projects is to develop and **validate training schemes** at EQF level 3 for workers in the building sector, improving their competences in sustainable building. Training courses will be designed balancing theory and practice.



The objective will be reached through the following actions:

-Train the workers: the starting point is the national index of qualifications already agreed by the Regions and Autonomous Provinces.



-Train the trainers: a key action will consist in training professional teachers in the building sector, as stated in the Pillar I. Innovative training methodologies and technical contents will be developed on the priority areas identified and transferred to trainers throughout pilot actions to be carried out with supporting partners.

-Certification and qualification of workers: the recognition and validation systems enhanced by the project will be developed considering the standards required by the recent law decree .

- Ensuring the long term sustainability of the action through a continuous dialogue with social partners.

<http://ec.europa.eu/energy/intelligent/projects/en/project-keywords/workforce-qualification>

Involving students and market players, in a programme to improve energy efficiency in a school facilities can be a good base to establish training courses for students.



The involvement and training of local stakeholders (architects, engineers, public employees, installers, technicians) is crucial for the success of the preparation of a local plan for the retrofitting of schools.



Students are the main actors of the project. They participate in an innovative, practical training experience in tandem with building technicians in team-work activities.



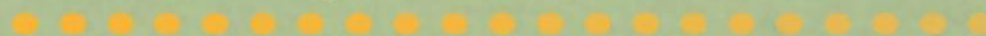
<https://ec.europa.eu/energy/intelligent/projects/en/projects/educa-rue>



Can help to speed-up the application of research results into marketable products



Thanks for your attention!



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