

Waarom doen we mee?

Scope van De EIP:

- Energie efficiency, duurzame en leefbare steden
- Market uptake van 'op de markt' innovatieve oplossingen
- Stimuleren en behoud van kennis en werkgelegenheid
- Aandacht voor de bebouwde omgeving en de nadruk om alle oplossingen, dus ook materialen, en de gebouwde schil en hardware mee te nemen en te overwegen.
- Sterke aandacht voor renovatie en nieuwbouw
- Cross sectorale aanpak en de outreach naar bedrijfsleven, kennisinstututen en overheden.
- Europa als 'launching ground' gebruiken
- Aandacht voor nieuwe business modellen. LCC, TCO, financiële modellen, etc.

AkzoNobel gelooft dat dit moet kunnen door slimmer met elkaar samen te werken, vernieuwender. Niet noodzakelijkerwijs door subsidiering.

Alleen al de uitwisseling van kennis, aannames, begrip voor vraagstukken en dilemma's, zijn waardevol..

Who is AkzoNobel?

- Global producer of paints, coatings and specialty chemicals
- Consistently ranked as the global leader in sustainability for materials. In ICT it's for example Siemens.
- Revenue 2012: €15.4 billion
- 50,000 employees, 50% in Europe
- Operations in more than 80 countries
- Strong presence in the high growth markets (44% of our sales)
- Leadership positions in many markets
- Track record of sustainable innovations and products
- Strong brands, both in consumer and industrial markets

MEMBER OF
**Dow Jones
Sustainability Indices**
In Collaboration with RobecoSAM



Onze markten



Context EIP Smart Cities & Communities

- September 2012: AkzoNobel engaged in EIP Smart Cities & Communities (SCC).
- EIP SCC: Most important European program to develop policies and implementation plans for the urban environment.
- Priority area EIP: 'Districts & Built Environment' with a strong focus on (accelerating) refurbishment and new built.
- Role EIP SCC: Guides future urban policies and funding calls.
- Focus EIP SCC: Market uptake/Scale up and business modelling innovations.
- Position AN: In the EIP SCC: Member of the governance structure (Sherpa) and co-author of the Strategic Implementation Plan and Operational Plan. Action leader of the districts and built environment chapter. As a Sherpa representing the Stakeholder Platform and AkzoNobel.

Recent developments

New phase in EIP SCC:

- Towards operational implementation and developing consortia. Active engagement is asked and expected.

Vehicles:

1. Apply for funding and engage actively in consortia (deadline 2014 passed)
2. Submit lightweight engagement to the invitation for commitments (deadline June 15th). No financial or organizational consequences.

What is a Commitment?

Engagement – underwriting the Partnership and its objectives, specifically:

1. Demonstrating a clear link towards the overall goals of the Partnership;
2. If relevant, using agreed standards, protocols and common data formats that facilitate interoperability across systems, prevent vendor lock-in and foster competition;
3. If relevant, making data accessible also to third parties (whilst fully respecting consumer privacy and protection of legitimate business interests) so to foster the development and uptake of novel applications;
4. If relevant, re-using existing infrastructure and put it to multiple use.

B. Inclusiveness and Partnership – widely involving relevant stakeholders:

1. Uniting actors across the ICT, energy and transport and mobility sectors;
2. Involving actors across the innovation chain
3. Involving private as well as public partners
4. If relevant, identifying other optional or essential partners that you would want to partner with for your intended engagement
Means that not all partners need to be on board yet..

Delivery – timely delivery of agreed outcomes/output:

1. Describing a tentative level of contribution, direct or indirect, in terms of financial and other resources, including free or favorable access to infrastructures and/or research
In kind contribution and knowledge are well accepted...
2. Defining a tentative timeline and schedule of the activities contributing to the implementation of the commitment
eg: workshops, research, phase 1...
3. Identifying possible indicators to measure progress of your commitment

How formal is the commitment?

- **It is a formal commitment, signed by the partners**
- **BUT...No financial or legal commitment**
- **It's a serious intention...**

Procedure

For the commitment

- **Deadline June 15th**
- **Application through online form**
- **Amount of paperwork around 5A4**
- **Lightweight screening and selection**

After the submission

- **If accepted become an approved 'EIP Smart Cities and Communities Partner'**
- **Allowed to use the logo/wording in your communication**
- **Enter an Action Area (policy area/marketplace)**
- **Become an active member of the EIP and gaining/keeping direct access to policy development and policy influencing**
- **Networking opportunities and developing consortia for upcoming funding calls.**

Goals of the EIP SCC to relate to

Primary goals

- a significant improvement of citizens' quality of life
- an increased competitiveness of Europe's industry and innovative SMEs
- a strong contribution to sustainability and the EU's 20/20/20 energy and climate targets.

Achieved through the wide-reaching roll out of integrated, scalable, sustainable Smart City solutions – specifically in areas where energy production, distribution and use; mobility and transport; and information and communication technologies are intimately linked.

Secondary goals:

- Overcome the challenges that remain as road blocks on our way to 'smartening up' Europe's cities.
- Create value for Europe by, helping to align existing city initiatives and projects, helping to create economies of scale and more effective knowledge sharing.
- Establish strategic partnerships between industry, innovative SMEs, European cities and other stakeholders at local level and across borders in Europe.
- Major challenges include adopting a cross-sector approach, and making necessary change in the existing financial models, procurement regimes, regulatory framework and knowledge base.

Some potential ideas...

Rapid Action – Rapid Benefits

- ❑ **100 City – Industry – RTO/NGO transfers starting now!**
(Knowledge Share idea #1)
- ❑ **City Advisory Boards (Knowledge Share Idea #8)**

Medium Term quantum improvement

- ❑ **The “Humble Lamppost” (Int Infra # 1)**
- ❑ **The “Green Network“ (Districts & Built environment # 2)**
Large scale testing of new solutions and business models in renovation and/or new built

Two ‘gaping holes’

- ❑ **Integrated City Simulation & Visualisation (Integrated Planning #3; Citizen-Focus #9)**
- ❑ **City Information Platform (Int Infra #2)**

Example Commitment

We commit to organize and facilitate 10 City-Industry-RTO/NGO knowledge transfers in 2015 across Europe

- **Format:** made to measure fitting the challenge of the city/region/local partners involved.
- **Scope is the Built environment.** District renovation and new built
- **Starting with materials as well as behavioral/experience perspective (critical), and open to other disciplines (urban planners, architects, ICT, etc.)**

Current partners in the engagement:

- **Materials:**
 - AkzoNobel, BASF, Arkema, Cefic, Suschem
- **Behavioral**
 - Motivaction
- **Cities with renovation/development/new built challenge:**
 - Almere, The Netherlands
 - Tarragona, Spain
 -???

Rationale Commitment

A few figures (reports from ICCA and IEA):

75 % of European citizens live in Cities

160 millions buildings (40-50% are pre-1960)

1% new building /Year

**1,7% refurbished (from « light » to « deep »)
buildings / Year.**

**40 % of primary energy is used for buildings' heating
and cooling.**

***Using established energy efficiency solutions can
reduce the primary energy use by 70%.***

But a silo approach and medieval business model



Some *EU* figures

Sales:

- 539 billion euros p/y

Direct employment:

- 1,19 million people

R&D investments:

- 7,7 billion euros p/y
- AkzoNobel: 400 million p/y

**It's not about having
all the answers.
It's about having all
the questions**

AkzoNobel's company line is 'Tomorrow's Answers Today'. But we can only arrive at those answers by constantly looking beneath the surface to question the way the world works and the way that we work. This spirit of intellectual adventure has led to an endless variety of innovative and sustainable solutions. They include coatings that make ocean liners more fuel-efficient, environmentally responsible paints, and chemicals that enhance the performance of countless every day products. We've even started using renewable ingredients such as potatoes to develop adhesives. Asking 'Is there a better way?' and discovering there usually is, has enabled AkzoNobel to become the world's largest coatings and specialty chemicals company. Feel free to contact us if you have any questions about a career with AkzoNobel.

At this moment we have the following vacancies:

- Research Technologist
- Process Engineer
- Research Employee
- Analyst
- HR Business Partner

Please visit www.akzonobel.nl/careers for more detailed job information or contact our recruiters at phone number +31 (0)88 010 6789.

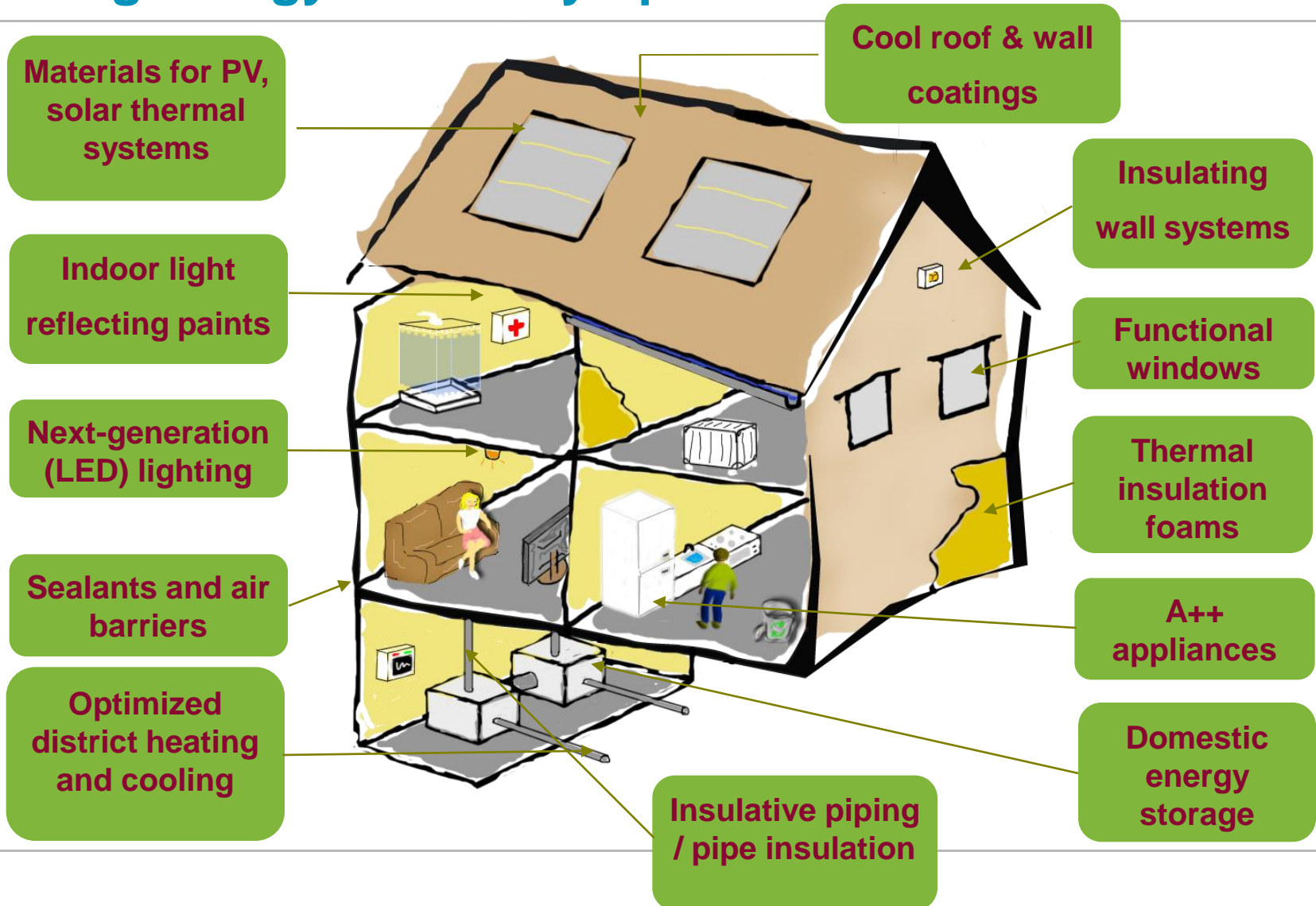
Agency calls are not appreciated.



AkzoNobel
Tomorrow's Answers Today



Some chemical industry solutions to building energy efficiency up to 70%



How do we bridge the valley from small scale projects to offer competitively priced solutions and make cities more energy efficient, livable and resilient?

AkzoNobel

Result of several workshops with Cities, Urban Planners Architects, etc.

**One hurdle:
Knowledge transfer/sharing between Industry, Cities, Urban Planners, Architects: a more holistic organic learning approach is needed, towards co-creating**

Dialogue across the value chain

AkzoNobel

To understand needs and develop solutions in dialogue

- Pich-Aguilera Architects
- London Sustainability Institute
- City of Taragona
- Comsa-Emte
- Acciona Infraestructuras

- Bayer
- BASF
- AkzoNobel
- MAPEI
- DOW Corning
- Arkema



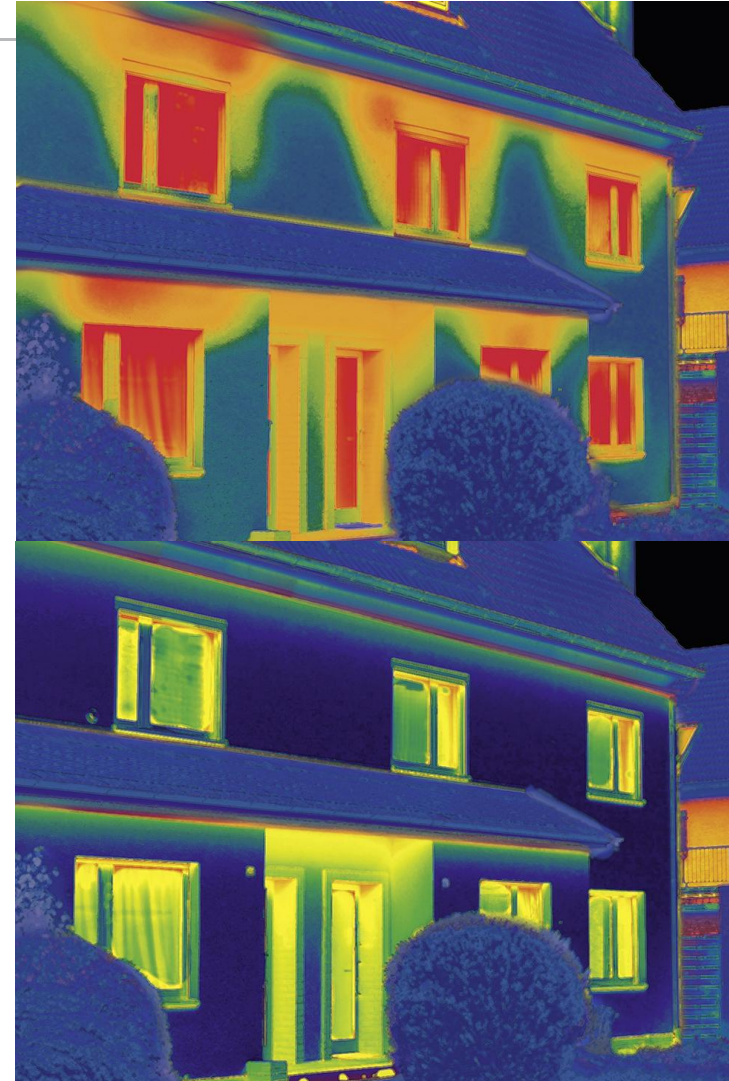
High reflectance outdoor coatings

- Saves easily up to 15% energy used for air conditioning
- Allows downscaling the size of the air conditioning system
- The reflection of the sun's energy reduces roof temperature
- Life expectancy: 12-15 years depending on climate
- Costs: affordable and reasonable payback times



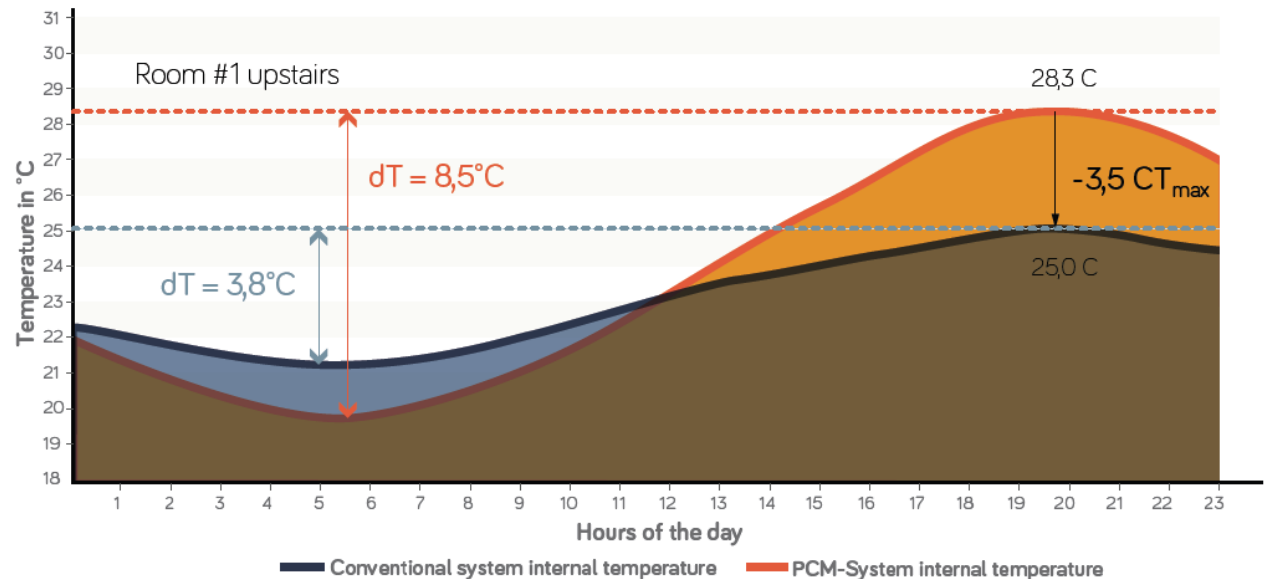
Advanced Insulation foams

- Three different types:
 - Insulation in wall cavities
 - External insulation
 - Internal insulation
- Use thermal storage capacity of the building's external walls
- Lifetime expectancy: up to 20 years of external insulation
- Costs: depending on location and building



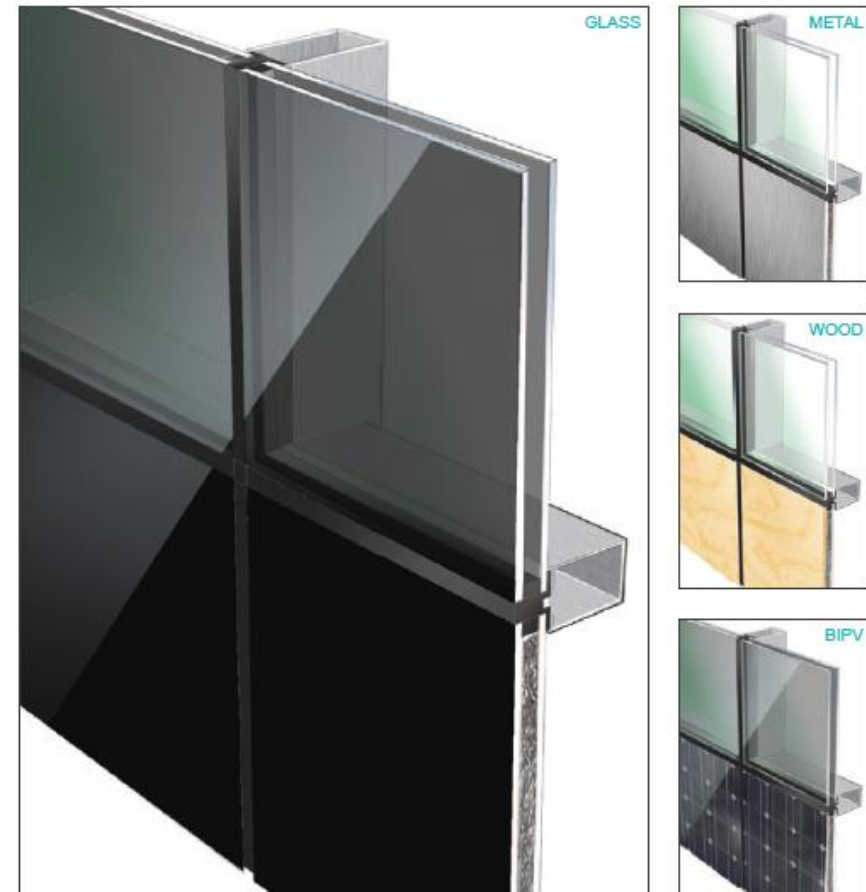
Phase Change Materials

- Reduce fluctuations of inside temperature
- Reduce number of hours inside temperature exceeds 26°C
- Up to 10% of energy savings on cooling
- Allows downsizing the AC system
- Lifetime expectancy: 30 years without losing any performance
- Cost: depending on location and building



VIP modules

- Freedom of design when refurbishing glass facade building
- Performance: 3 times higher than conventional insulation materials
- Thermal conductivity: 0,004 W/(m*k)
- Lifetime expectancy: 30 years with very limited loss of efficiency (20%)
- Cost: depending the mm of VIP and the glass type



Combined materials and solutions make the difference

