

PRESTO

ECTP Conference

Steinbeis-Europa-Zentrum
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Brussels



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Identification of **P**riority **RES**earch **TO**pics for SMEs associations in the construction sector with focus on new technologies in the Energy, ICT and New Material domains

Duration:

Febr. 2008 – January 2010

- Summary

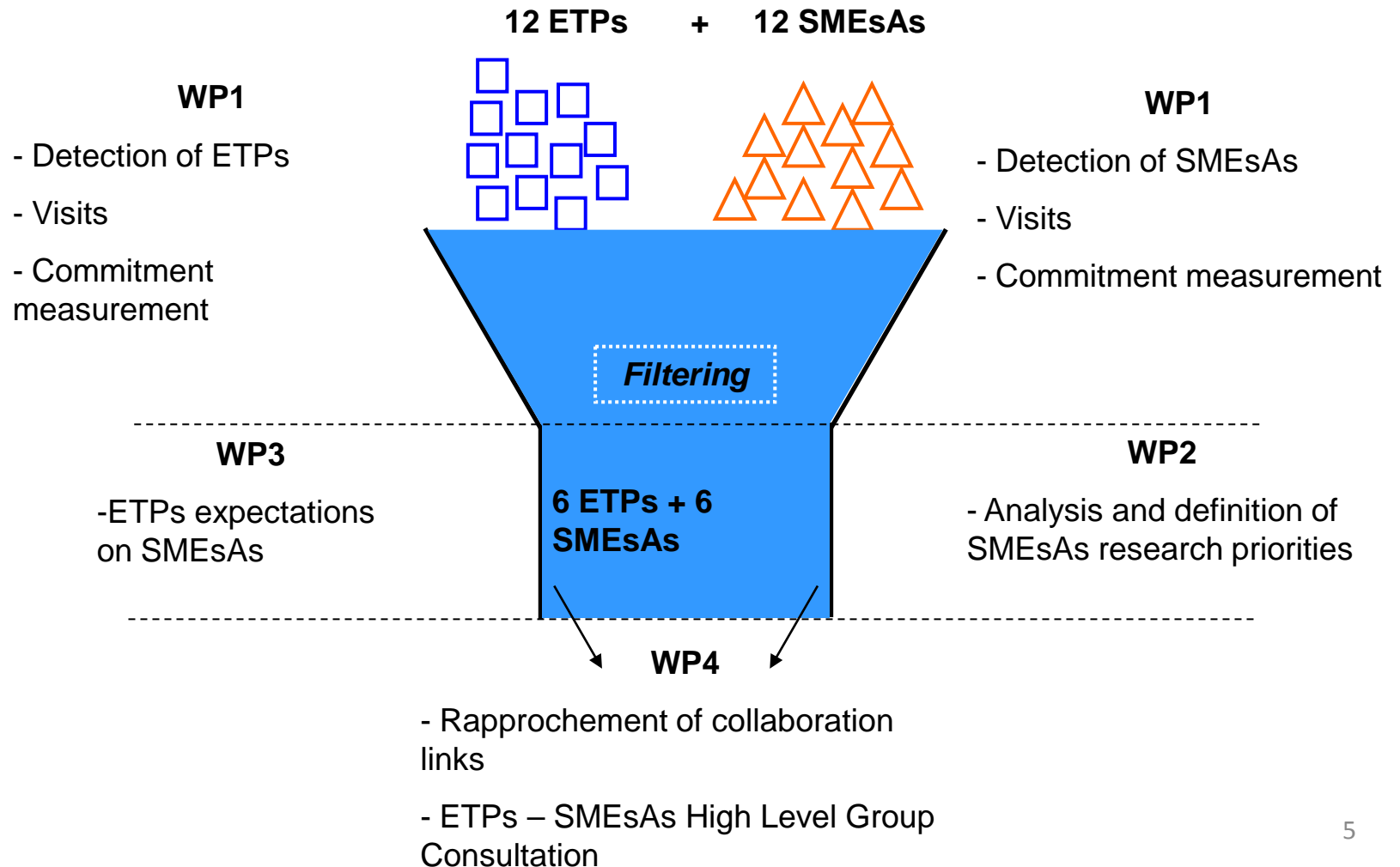
PRESTO aims at facilitating the **identification of priority research topics for SMEs associations** by establishing a close and sustainable dialogue with ETPs.

PRESTO will **bring SMEs associations and ETPs closer** by enacting a series of activities oriented towards the rapprochement of links of collaboration among them.

- Summary

PRESTO is concentrated on one main industrial sector -**Construction Sector**- and will devote a specific focus on new technologies of three construction-ancillary domains -**Energy, Information and Communication Technologies (ICT), and New Materials** - which play not only a significant role in the European economy but, more importantly, which are Small and Medium-sized Enterprises (SMEs) intensive sectors.

■ Implementation



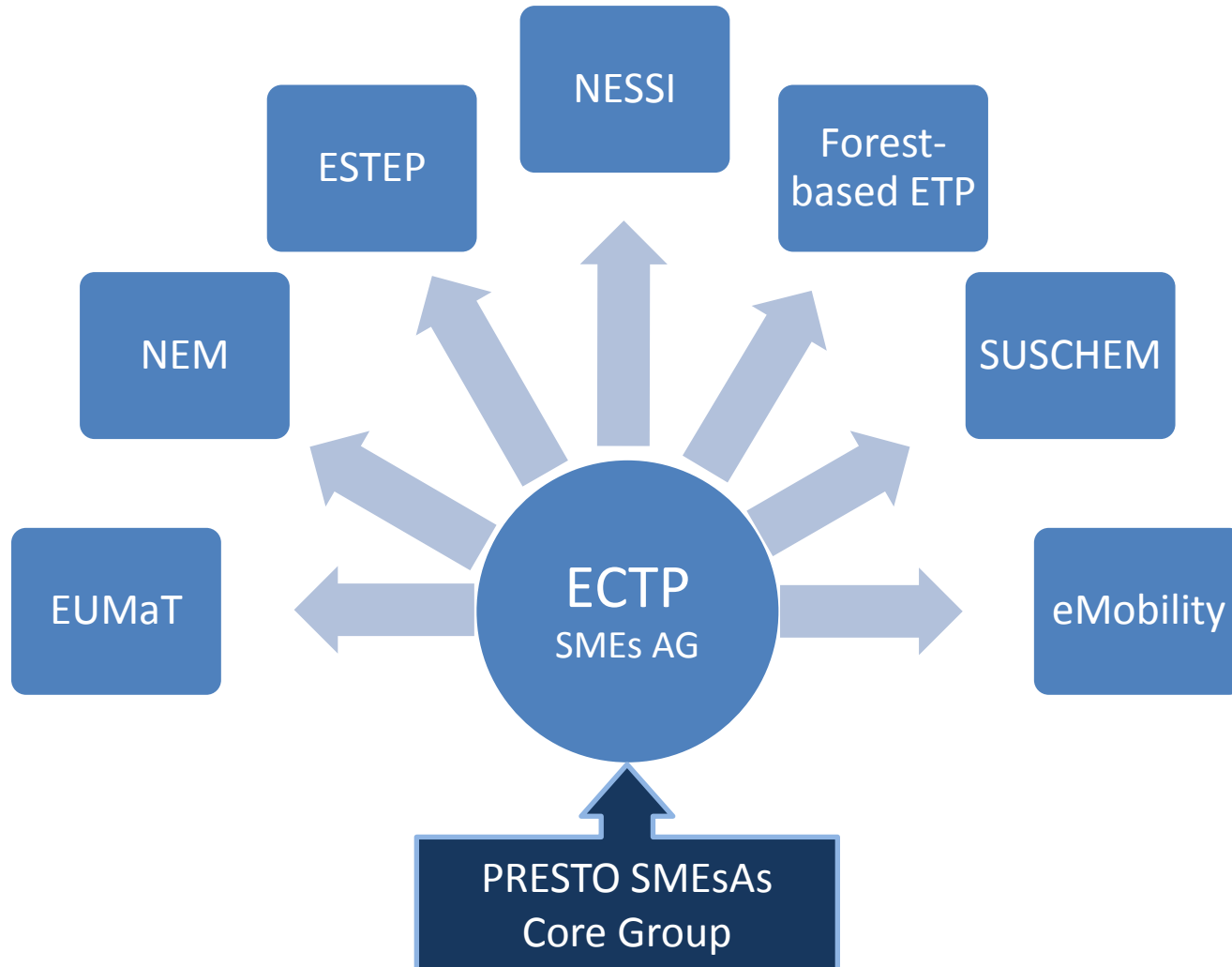
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Results achieved so far

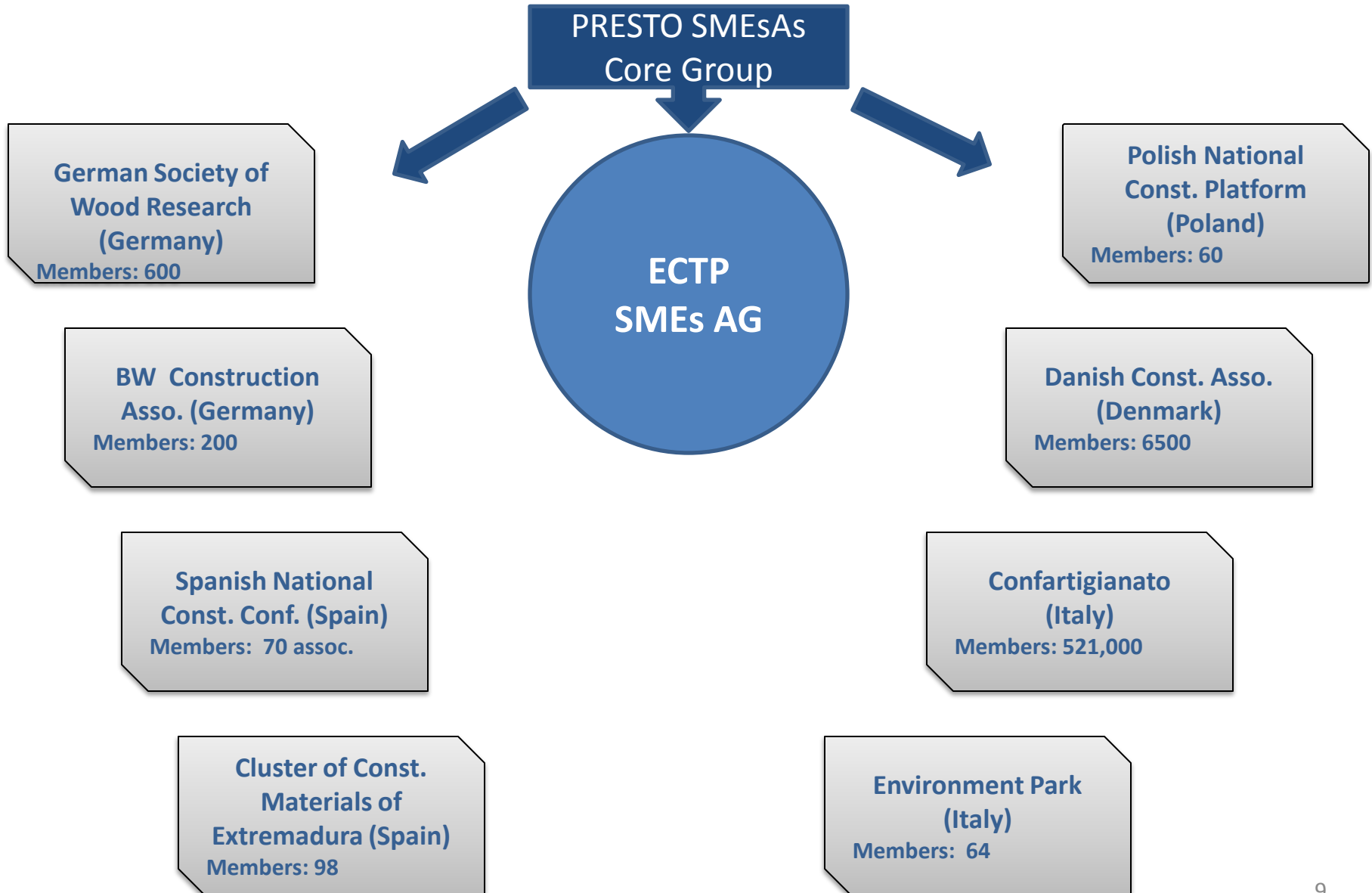
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Core Group

PRESTO Core Group - ETPs



PRESTO Core Group - SMEsAs



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SWOT Analysis

■ Strengths

- Around 54% of all SMEs interviewed either have a RTD department or are thinking on setting one up
- Most SMEsAs and SMEs agree on the importance and relevance of RTD, innovation and new technologies
- At least a third of all SMEs consider themselves innovative companies
- More than 40% of all SMEs defined by SMEsAs as innovative
- SMEs and SMEsAs are aware of the key relevance of cooperating with universities and RTD centres

■ Weaknesses

- For more than a third of all SMEs establishing cooperation with RTD performers is not a priority (universities and RTD performers are perceived by SMEs as too distant)
- Lack of capacities of SMEs as main factor hindering cooperation with RTD
- **SMEs paradox** – innovation is important, however they have no time for it
- SMEs have normally a short-term perspective - RTD does not pay off quickly enough
- SMEs lack of knowledge to identify most important technology trends
- SMEs cannot clearly identify how innovation contribute to them, and how it could benefit their companies
- SMEs are not fully aware of the financial support (funding) they can get for RTD activities

■ Weaknesses

- SMEs are, most of the times, dependent on usual suppliers to get information on new technologies and innovations
- Concerning support to innovation and uptake of new technologies, SMEsAs seem not to deliver the assistance SMEs expect and require from them
- Sometimes SMEsAs tend to underestimate the innovative character of their members (SMEs perceive themselves more innovative than SMEsAs perceive them)
- SMEs appear to be only tenuously linked to RTD institutions and major research infrastructure; usually either by attending courses and seminars but little hands-on-access to practical technology development.

■ Opportunities

- Tendency: SMEs want to participate in RTD
- SMEsAs could incentive spill-over effects: SMEs already involved in RTD sharing their experiences with SMEs not involved in RTD at all
- SMEs aspire to RTD and innovation as they get larger
- Cooperation based on contract among SMEs and RTD institutions should be reinforced
- There is demand -from the SMEs side- for research facilitation SMEsAs could, hence, play a more active role as link between their members and RTD organisations
- Establishment of better channels of communication and networking between SMEs and RTD performers

■ Opportunities

- Innovation is perceived as positive and good for companies' image
- SMEsAs could focus more on supporting innovation and RTD issues, through establishing cooperation agreements with companies doing research, clusters, technology transfer centres, etc.
- Better integration of the value-chain (the usual supplier) in the dissemination of innovations and new technologies in order to achieve a better flow of information and, ultimately, favour the uptake of new technologies and innovations

■ Threats

- RTD funding mechanisms are too complex and time consuming for SMEs
- SMEs do not always perceive SMEsAs as source of information on innovative technologies and RTD (SMEsAs themselves do!)
- SMEs often conduct RTD work in the guise of technical problem-solving; technical innovation of this kind, however, is not perceived or rewarded as RTD investment by the 7th Framework Programme

■ Threats

- Construction sector is not very dynamic concerning the uptake of new technologies and innovations (construction sector is low saturated of new technologies and innovations)
- Regulations change sometimes too quickly and SMEs have difficulties to adhere to them
- Information on RTD and innovation is very much dispersed

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Priority Research Topics for SMEsAs and their members

- Four Key Trends Identified

- Key Trend 1 Sustainable Construction
 - A) Energy Efficiency: management and consumption
 - B) Sustainability and recycling technologies
 - C) Underground Construction
- Key Trend 2 Ambient Assisted Living – More control of living environment
- Key Trend 3 Sustainable Construction – Safety, Health and control of indoor and working environment
- Key Trend 4 Industrialisation and Automation of Construction process

- **Key Trend 1 Sustainable Construction**

- A) Energy Efficiency: management and consumption

PRT1 → New materials for maintenance, rehabilitation and construction of buildings in order to comply with energy efficiency-related regulations

PRT 2 → Improved construction processes to reduce completion times and therefore energy consumption at construction in-sites, improve processes efficiency and productivity as well as minimise mistakes

PRT3 → Development of new technologies for more efficient energy consumption and better energy management in buildings' life-cycle

- **Key Trend 1 Sustainable Construction**
 - B) Sustainability and recycling technologies

PRT4 → Improving reparability and recycling of products and materials.

PRT 5 → New construction maintenance techniques for the preservation and rehabilitation of cultural heritage buildings

PRT 6 → Improved demolition techniques to lower the use and impacts on natural resources.

PRT 7 → Development of durable materials with prolonged and predictable service-life under aggressive conditions

- **Key Trend 1 Sustainable Construction**
 - C) Underground Construction

PRT 8 → High durable new materials flexible and strong enough to withstand ground pressures and movements in underground environment

PRT9 → New techniques and methods for ground treatment

PRT 10 → Fully automated excavation processes

- Key Trend 2 Ambient Assisted Living – More control of living environment

PRT 11 → New technologies for remote control of home environment and security installations

PRT 12 → Development of mobile devices and microelectronics to surveil and monitor elderly or disabled people at home

PRT 13 → New methods and materials for noise reduction

- Key Trend 3 Sustainable Construction – Safety, Health and control of indoor and working environment

PRT 14 → Optimisation of healthy and comfortable indoor environment

PRT 15 → New materials and techniques for reduction of CO₂ and NO_x emissions

PRT 16 → Human-friendly construction environment and socially sustainable working conditions for construction workers

- **Key Trend 4 Industrialisation and Automation of Construction process**

PRT 17 → Software tools and methods for virtual prototyping of design, manufacture and operation and management of buildings

PRT 18 → High quality and more efficient modular construction (off-site manufacture) as a method to achieve higher efficiency and productivity, lower costs and volatility of materials' prices and as an option to overcome labour shortages.

PRT 19 → Improved accessibility to innovative products and technologies through user-friendly and adequate online databases and catalogues

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ETPs Consultation Panel
Turin, Italy

Main results

PRESTO – ETPs Consultation Panel Meeting

- Aims of ETPs Consultation Panel
 - Jointly analyse ETPs expectations on SMEsAs
 - Foster and facilitate community and confidence building among ETPs representatives
 - Set the foundations for the elaboration of a sustainable cooperation strategy among ETPs and SMEsAs

PRESTO – ETPs Consultation Panel Meeting

- ETPs Consultation Panel phases
 - ETPs presentations
 - Short presentation of main results emerging from the questionnaire “ETPs expectations on SMEs Associations”
 - Validation / amendment of results
 - Prioritisation of issues towards the definition of key factors for a successful and sustainable cooperation between SMEsAs and ETPs.
 - Definition of concrete courses of action according to priorities identified

PRESTO – ETPs Consultation Panel Meeting – Main Results

- Key Factors for a Successful and Sustainable Collaboration with SMEs Associations (1)
 - There must be an interest in working together, so both ETPs and SMEs Associations must dedicate enough time and resources (personnel and money) to carry out the joint activities, being always pro-active.
 - A closer cooperation among ETPs must be encouraged, possibly with a multidisciplinary and holistic approach.
 - Links between ETPs and National Technology Platforms must be strengthened and improved where already existing (we must pay attention that there are some “sleeping” NTPs and get advantage of the active ones!).

PRESTO – ETPs Consultation Panel Meeting – Main Results

- Key Factors for a Successful and Sustainable Collaboration with SMEs Associations (2)
 - ETPs must inform SMEs Associations and SMEs what their outputs are. The pieces of information must be simple, meaningful, concrete and showing tangible results (also focussing on the short term) aiming at reinforcing trust between the players.
 - Strategic Application Agendas or Working Groups Implementation papers rather than just the Strategic Research Agendas which are sometimes “too high-level” should be brought to SMEs Associations attention to favour their engagement. Inputs from hi-tech firms are highly welcome in drafting these documents.

PRESTO – ETPs Consultation Panel Meeting – Main Results

- Key Factors for a Successful and Sustainable Collaboration with SMEs Associations (3)
 - SMEs and SMEs Associations should be given early information on upcoming EC calls and told easily how to apply for the right funding.
 - Carefully selected (thanks to SMEs Associations) SMEs should attend training courses and be shown new technologies. It is important that SMEs understand that innovative ideas can be brought to market and can be profitable. A cross sectoral approach should be followed.

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High Level Group Consultation Meeting
Bilbao, Spain

High Level Group Consultation Meeting

- Presentation of Strategy for a Sustainable Cooperation between SMEsAs and ETPs („Pilot Plan“)
 - Attendees:
 - 5 ETPs (& E2B)
 - 8 SMEsAs
 - Two steps approach:
 - **Phase 1**
 - ❖ “softer” activities
 - ❖ get to know each other better and test the water
 - ❖ try out what works and adapt level of commitment
 - **Phase 2**
 - ❖ once relationships established and proven
 - ❖ more complex “in-depth” activities

High Level Group Consultation Meeting

- Presentation of Strategy for a Sustainable Cooperation between SMEsAs and ETPs („Pilot Plan“)
 - Main objectives:
 - **Making construction SMEs heard** - to leverage the voices of construction SMEs in the European RTD policy making arena
 - **Greater construction SME involvement** - to improve the participation level of construction SMEs in European RTD activities
 - **Greater uptake of new technologies** - to strengthen the links between technology producers and technology users
 - **Going beyond the immediate construction environment** - to foster collaboration with associated domains, exploiting synergies, capturing and creating new opportunities.

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Next steps

PRESTO – Next steps

- PRESTO Final Conference 21st January 2010 → Within the context of the BUDMA “Sustainable Construction” Trade Fair (Poznan, Poland)

Thank you for your attention..!

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