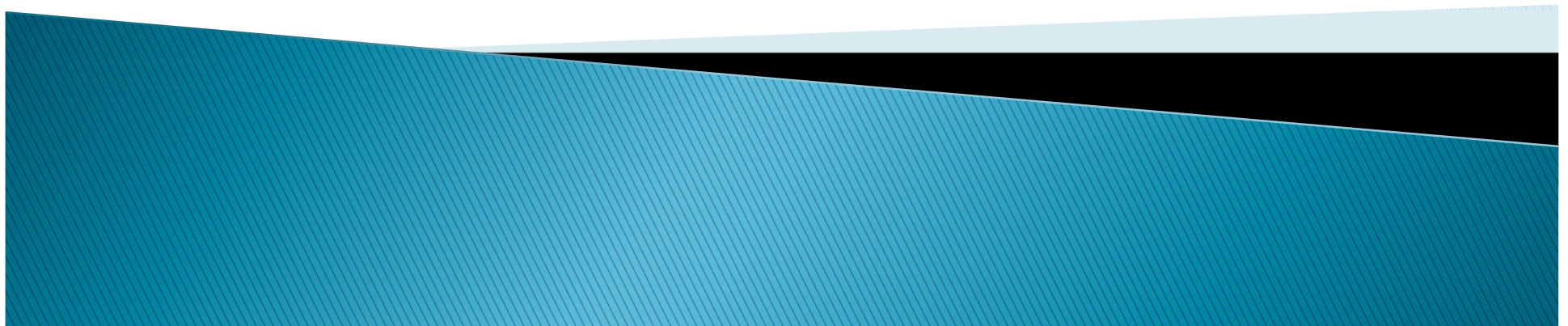


ECCE Knowledge & Technology

57th General Assembly

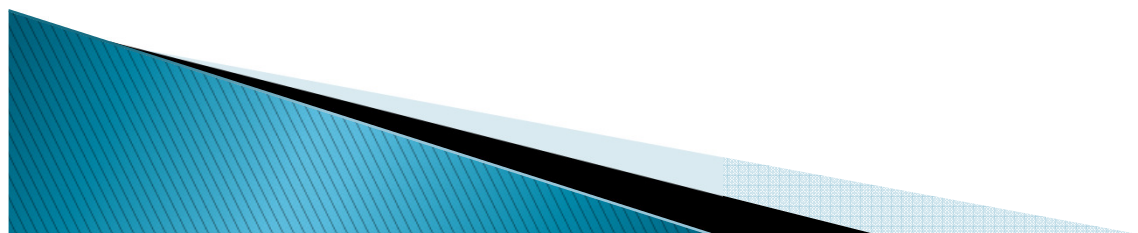
Lisbon Portugal, May 2013

Prof. Asko Sarja (Chairman) &
Ruben Paul Borg (Vice Chairman)



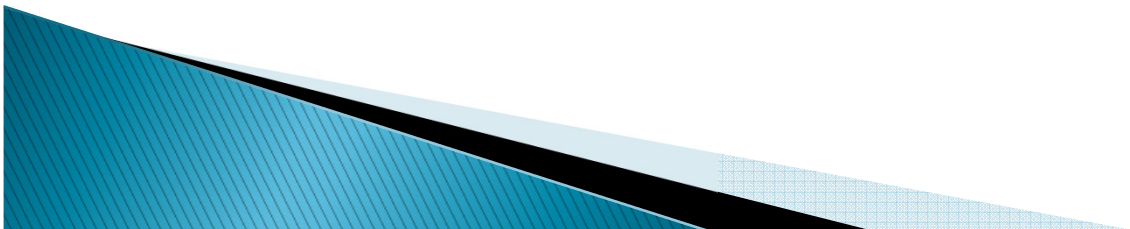
Review of the Knowledge and Technology Standing Committee Meeting

Lisbon 31st May 2013



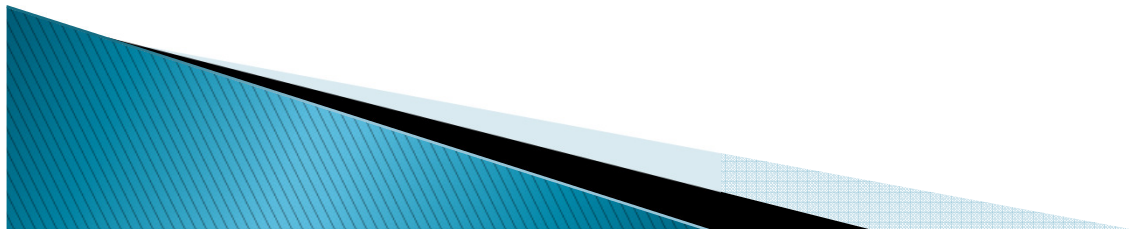
Matters Discussed

1. ECCE Knowledge & Technology Survey
2. nZEB – Life time structural Engineering
3. Discussion & Conclusions / K&T



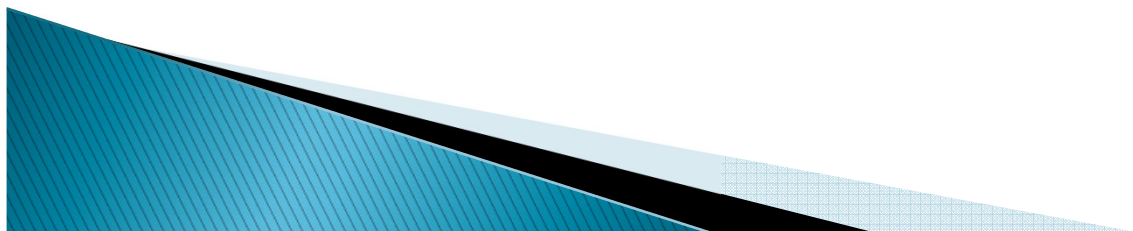
1. ECCE Survey

- ▶ Pilot Study Preliminary results presented by Ruben Paul Borg / Study conducted with the support of Hayley Coleman.
- ▶ Main results of the Pilot survey provide enough information to devise a detailed survey for further analysis in Phase 2.
- ▶ Proposal for ECCE Longer term Analysis of trends rather than a snapshot



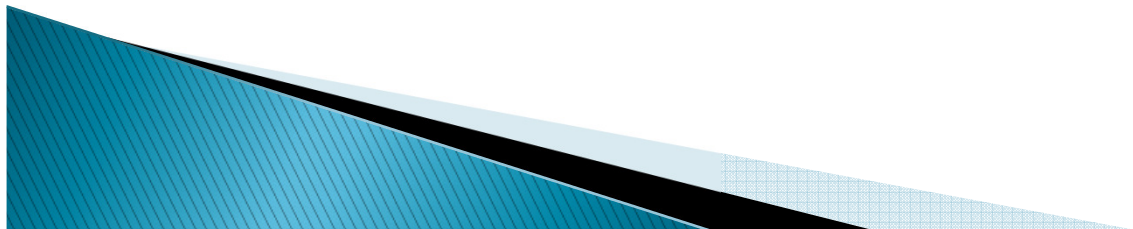
ECCE Survey Continued

- ▶ Analysis of trends
- ▶ Phase 1 / Pilot Study to be followed by Phase 2 detailed survey and longer term assessment
- ▶ Identification of Indicators
- ▶ Analysis of Studies conducted by different organisations and published results.
- ▶ Assess Civil Engineers and other Stakeholders including Construction Companies.



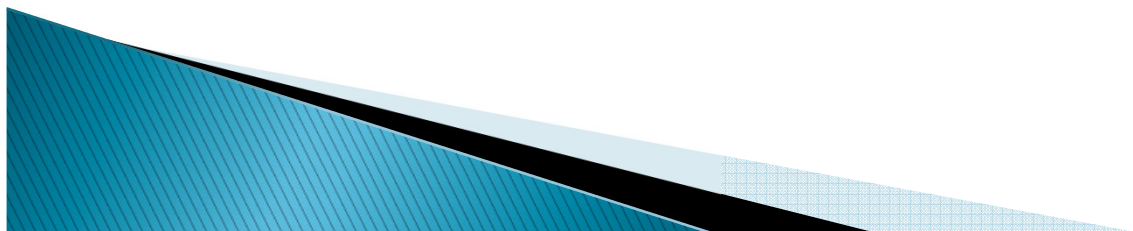
2. Presentation nZEB

- ▶ Professor Asko Sarja Presentation on nZEB
- ▶ nZEB targets for public and private buildings
- ▶ Building refurbishment
- ▶ RES produced on site
- ▶ Low Energy Buildings characteristics
- ▶ Timeline for the Implementation of the EPD
- ▶ Relationship between Energy efficiency and costs – Optimisation.
- ▶ Discount Rates and Energy Price Scenarios – Recommendations EU Guidelines – Country Parameters.



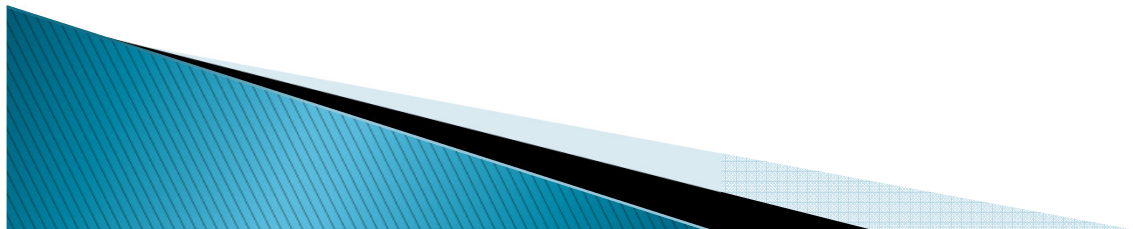
Presentation nZEB

- ▶ Variation of Parameters in Sensitivity Analysis
- ▶ Primary Energy demands vs Net energy demands
- ▶ Implementation in Renovation
- ▶ Energy Costs / Balance of trade
- ▶ Barriers in Renovation – Financial, Institutional and Administrative, Awareness, advice and skills
- ▶ Separation of expenditure and benefit.
- ▶ Required increased renovation rate of building stock to achieve 90% reduction of CO₂, 2020–2050.

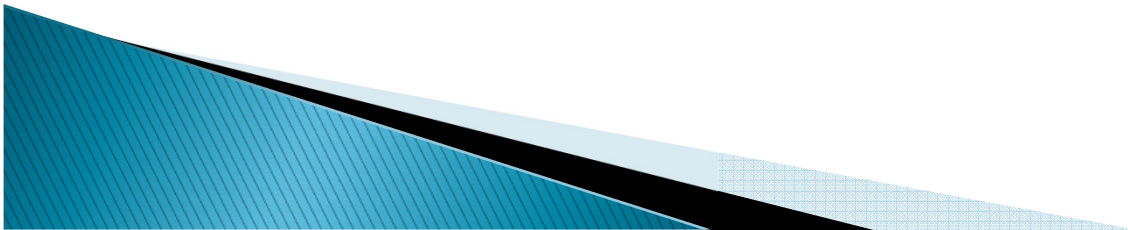


Presentation nZEB

- ▶ Building Performance Institute Europe – Belgium – source of information.
- ▶ nZEB Standards
- ▶ RES / Geothermal heating, air heat energy – air heat pumps and exhaust air heat pumps, Solar energy – solar panels and electric solar cells, Wind energy.
- ▶ Selection on basis of geographical location and economy.



3. Discussion & Conclusions



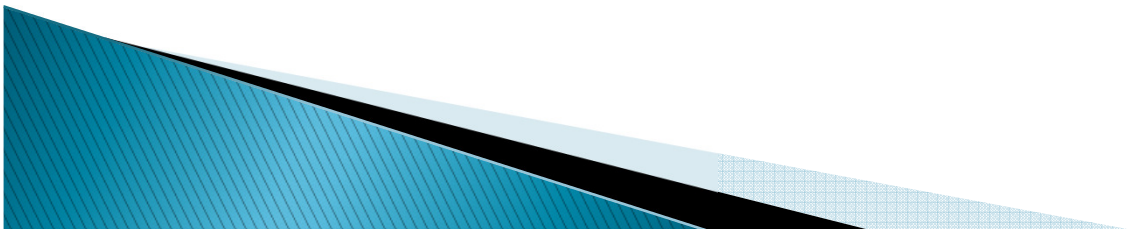
Knowledge and Technology: Sustainability

- ▶ BIM and ICT issues of fundamental Importance.
- ▶ Smart Building and Zero Energy.
- ▶ Importance today of Lifetime Engineering Research and implementation.
- ▶ EU priority areas / support research and development.



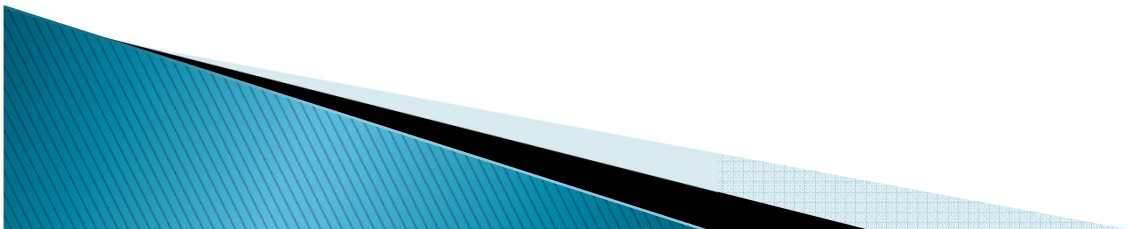
Knowledge and Technology

- ▶ Knowledge – main scope of the K&T Standing Committee.
- ▶ Horizon 2020 Project considerations including funding opportunities.



Comments and feedback

- ▶ Horizon 2020
- ▶ Consideration of improved qualifications of Civil Engineers and life time training.
- ▶ Education Materials – source
http://ec.europa.eu/energy/intelligent/index_en.htm
- ▶ Finnish Guidelines for low energy buildings and life time engineering buildings and infrastructures.
- ▶ Training Courses for Engineers – lifetime engineering and sustainability
- ▶ Assessment of different skills and specialisation for Engineers – requirement for all new buildings and eventually for refurbishment strategies.
- ▶ Certification activity – energy efficiency



End of Meeting

Thank you

