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The idea of the project focuses on the concept that a better knowledge of the building current conditions will lead to clever decision making and control strategies. However, this data gathering could be expensive due to installation and maintenance costs of sensors...

**TIBUCON** proposes a solution for constant and intensive monitoring of the building conditions based on the **Self Powered Multi Magnitude Wireless Sensor Networks**.

**Project details**
- **Project Acronym**: TIBUCON
- **Project Reference**: 260034
- **Start Date**: 2010-09-01
- **Duration**: 36 months
- **Project Cost**: 2.46 million euro
- **Contract Type**: Collaborative project
- **End Date**: 2013-08-31
- **Project Status**: Execution
- **Project Funding**: 1.59 million euro

**SP-MM-WSN** results in an easy-to-deploy and maintenance-free building monitoring system that makes it **the ideal candidate for either new or existing HVAC installations**.
Project Objectives

- Empower old and new building monitoring through extremely cost effective SP-MM-WSN
- Develop Continuous Commissioning tools based on the information collected by the sensors in order to detect system faults and to improve/tune control strategies.
Considerations:

1. The IDEA:
   - **Novel Idea** based on the integration of existing technologies rather than developing new ones.
   - **ICT Driven!** We all know that replacing the boiler will bring an energy efficiency improvement, but the Commission is looking for novel ICT-based solutions. The question is: What can the ICT exactly do to improve the energy efficiency?
   - **Viability of the Solution**, not only technical viability, but also the economic. The PPPs are industry driven initiatives, so a clear outcome is expected from the project results. Is the proposed solution affordable for the target customer? Which is the payback period? We must be able to answer these questions within the proposal if we want to prove the viability of the solution.
Considerations:

2. The Consortium:

   • **ICT + EBB** = **ICT + ENERGY + BUILDINGS**… so bring together experts from all these different worlds.

   **TIBUCON case:**

   • **Buildings&Construction**: Mostostal, E&L Architects
   • **ICT**: Tekniker, University of Southampton
   • **Energy**: Giroa, Katholieke Hogenschool Kempen

   • **ESCO-Energy Services Companies.** The profile of this kind of companies makes them very attractive for an ICT-EEB consortium. They are experts in energy, in solutions for improving the efficiency, in the validation of installed solutions
Considerations:

3. The Demonstration:
   • Whatever it is stated in the text should be validated in real life demos.
   • We need to provide real numbers to feed into the proposed business case:
     • Total cost of operation
     • Improvement in the efficiency
     • Installation and setup time & cost
FP7-EEB Project: Success Case

Considerations:

4. The Dissemination:
- Web based platform www.tibucon.eu
- Scientific papers, technical publications
- Workshops (including meetings E2B)
Expected Impact

- **Energy Efficiency Improvement** thanks to a better knowledge of the building conditions, the possibility of using the solution in HVAC system retrofitting, assures an enormous potential consumer market and the consequent energy use and CO2 emission abatement.

- **Clear Business Model through the ESCO** (Energy Services Companies)
  Giroa-Dalkia is planning to adopt TIBUCON solution as a tool for rapid and low cost energy audits.

- CO2 Emission Reduction and Battery use reduction

- Further Business Models to be explored at the end of the project
Thank you for your attention