Solid Life project overview

Project Management

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With the contribution of the LIFE financial instrument of the European Community
A new class of lower-carbon products

The Solid Life project intends to show industrial feasibility to produce Solidia Cement™ and Solidia Concrete™ precast products offering:

- Equivalent or reduced costs,
- Superior strengths & aesthetics performances,
- Up to 70% reduction in CO₂ emissions

compared to conventional Portland precast concrete elements.
Solidia Cement: a Low-Calcium Silicate Cement (CSC)

Who is Solidia Technologies?

• US start-up founded in 2008
• Funding: $80 Millions from investors
  • Kleiner Perkins Caufield & Byers, Bright Capital, BASF Venture Capital, BP Ventures, LafargeHolcim, Total, Air Liquide, Oil & Gas Climate Initiative…

Development of a non-hydrating binder that reacts with CO₂ for precast concrete
Solidia Technologies solution

Technical solution: cement & concrete

- Same raw materials
- Same kiln
- Same mix components
- Same mixer
- Same cycle time
- Same forming casting
- Same cycle time
- CO₂-Curing
- Reduced curing times (24 hours vs. 28 days)

CO₂ emissions at cement plant reduced by 250 kg (per ton of clinker)

Up to 300 kg of CO₂ permanently stored in concrete (per ton of cement used)
EU expectations in the LIFE framework

- **Demonstration** at industrial scale
- **Validation of technical & economic viability**
- **National & transnational** character
- **Focus on Energy intensive industries** to reach EU 2030 targets
- Innovative and **cost-effective technologies**, with the objective of **reducing the GHG emission intensity** of manufacturing and process industries
- Focus on the design, development and implementation of breakthrough solutions mainly via **demonstration** program with a **long term impact**, including in **real industrial environments**
- Activities are **expected to be led by industries** involving partners and technology providers
- Demonstrate the **viability of new low-carbon technologies**
- Projects should deliver **economically viable solutions** and technologies or **new raw materials** that allow a **reduction in specific GHG emission intensity by at least 15 %**

**TRY TO ANSWER A MAX. EU TECHNICAL CRITERIA**
Project Management

• Steering committee in between partners every 6 months
• Main achievements related to each action with defined action leaders
• Involvement of the partners
• Common web platform to share data related to the project
• Additional meetings if blocking points

Steering Committee (SC)
Role: strategic decision, overall management
Chairman: project coordinator (LCR)
Members: 1 representative of all partners

Management Support Team
Action F1
• Project coordinator
• External support
Day to day management support
Before each steering committee meetings:
- Filling of excel expenses sheets from all the partners
- Filling all invoices with the right reference to the project (project stamp if necessary)
- Filling timesheets every months and transfer on the web platform
- Internal software to follow time of co-workers, create a specific project code/number for the european project
- Budget deviations are allowed to a certain extent and when well justified

Store all papers from all partners regularly on a web platform that everyone can reach
→ Easier for intermediate reports, EU visits and final financial audit
Reporting and communication

Reporting & communication to EU:

- Make it clear and easy to read!
- Anticipate delays from your partners and internal delays for validation
- Help of NEEMO to pre-read the reports
- Put details in milestones & deliverable reports and synthesis in intermediate reports
- Deviations to initial plan: amendments need time but are sometimes necessary, NEEMO is there to support you. If justified, no problem!

External communication:

- Be ready to communicate heavily on your project, mandatory for EU:
  - Brochure
  - Layman report
  - Noticeboard
  - Conferences
  - Videos
  - Website
- Ensure your organization is aligned with this and that you involve the right persons to do these tasks: webmaster, communication agency...
Solidia low carbon binder: from cement to precast industry

SOLIDIA, A LOW CO₂ SOLUTION
From the cement plant...
- Raw mix using less limestone than OPC → less CO₂ emissions than OPC
- Solidia Cement produced at lower temperature: lower fuel consumption and CO₂ emissions reduction

30% CO₂ emissions savings can be achieved at cement production level

... to the Precast plant
- Precast elements using same raw materials as OPC
- Same precast process except for the curing part
- Solidia Cement reacts with CO₂ during curing, not with water. Temperature and humidity atmosphere equivalent to OPC.
  The carbon footprint can be reduced by up to 70% vs OPC

On the concrete side:
- More than 50 pilot tests worldwide
- 3 industrial pilots installations

On the cement side:
- Lab scale
- Pilot scale
- Industrial scale
  More than 30 plants assessed at lab scale
  4 plants assessed at pilot scale
  3 times 5000t produced worldwide

Durability & Market Acceptance:
- ETA for the cement on-going
- Long-term durability assessment
Solid Life Project

Thank you for your attention

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