

UK Concrete Platform

Research and Innovation Task Group

Commercial needs and R&D themes in the concrete and cement sector

**“Targets and themes for the next 5 to
10 years”**

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Research and Innovation TG – UKCP RITG

- Established by the UK Concrete Platform in Dec 06.
- Membership: British Cement Association, The Concrete Society, The Concrete Centre, Quarry Products Association/BRMCA, British Precast Concrete Federation
- Work is in early stages

Objectives

- Understand and monitor current research and innovation activities – including maintenance of an online database
- Produce a vision and a research & innovation strategy for the sector
- Prioritise research and innovation activities which benefit performance and increase effectiveness.
- Maintain a register of experts on cement and concrete matters.

Main commercial and R&D themes

Resource efficiency and use of different waste streams:

- End-of-life, design for deconstruction & reuse.
- Use of recycled & secondary aggregates in products.
- Cement additions and clinker performance.

E-Tagging RFID Technology:

- Intelligent monitoring in production, stock control.
- RFID Technology and facilities management.

Structural performance

- Tensile properties of concrete, composite reinforcement systems (e.g. carbon and other fibre + rebar), efficient use of cement.
- Improvement of construction processes.
- Ultra-high strength concrete and SCC.

Main commercial and R&D themes

Service Life design:

- Fib model code for service life design for concrete.
- Sulphate and thaumasite attacks (SD1: 2005).
- Extending design life for concrete structures in BRE LCA to 120 years.

Sustainability:

- Thermal Mass Concept – inclusion in SAP 2005 & CfSH.
- Responsible/ Sustainable Sourcing.
- Re-carbonation of concrete, Carbon capture.
- Healthy indoor environments, ionizing radiations from building materials into indoor air.
- Performance-based concrete mixes – a full interactive database showing all combinations of cementitious products, aggregates, admixtures and water, and their predicted performances