

SmartCrete CRC alignment to Infrastructure Australia 2019 Infrastructure Audit Outcomes

In a recent post Peter Colacino (Chief Policy and Research at Infrastructure Australia) highlighted the need for a renewed focus to our thinking about resilience and sustainability, identified in the 2019 Australian Infrastructure Audit*.

The report provides a valuable insight into the “Future of Uncertainty” and the subsequent challenges and opportunities facing Australia including the intersection between the demand for infrastructure, the user outcomes, industry capability, the escalation in costs, asset maintenance and sustainability.

The SmartCrete CRC (Cooperative Research Centre) is focussed on improved productivity, lower costs, improved asset management and the development of a sustainable supply chain.

Through outcomes-based R&D SmartCrete CRC is applying high level Technology Readiness Level (TRL) projects to deliver improvements in Concrete to facilitate the innovative design and construction of the next wave of infrastructure designed to stimulate the Australian economy.

SmartCrete CRC has three program areas designed to meet tomorrows needs with “Fast Start” projects for near term results and three further rounds of projects over the next seven years.

The Federal Government grant funding of \$21m, supports the \$69m raised in cash and in-kind contributions from industrial, government agencies and universities to support the \$90m in research project across the three program areas:

- **Engineered Solutions** - This program is concerned with improving the way we engineer concrete structures and includes development of smart cladding, reduced noise pavements, 3-d printed concrete structures, self-healing, fire resistance stronger and more durable concrete. lightweight concrete and safety in design.
- **Asset Management** - This program is concerned with the way we manage our concrete assets and includes development of sensing systems to monitor structural health and usage, inform lifetime models and extend the service life of concrete infrastructure.
- **Sustainability** - This program includes bio-concrete, use of artificial aggregate, CO2 absorbing concrete, luminescent concrete, energy producing concrete, waste disposal in concrete and cement less concrete.

These industry-led themes provide a forum for the development of truly cooperative research projects targeting specific industry outcome to address the productivity, cost, resilience and sustainability of the concrete industry.

Importantly, this focus provides an open environment to bring new players into the supply chain from for example the waste industry, with recycled product forming a key element of the future sustainability of the supply chain.

SmartCrete CRC is addressing the “Future of Uncertainty” with resilient and sustainable research outcomes, supporting new industries and skills development across Australia.

Stephen Harmer Interim CEO

June 2020