

Promoting the Use of Solar Cooling and Heating (PUSCH) in Australian Buildings

Partners :CSIRO, Coolgaia, AIRAH

Project background

- Funded as a part of Australian Renewable Energy Agency emerging renewables program

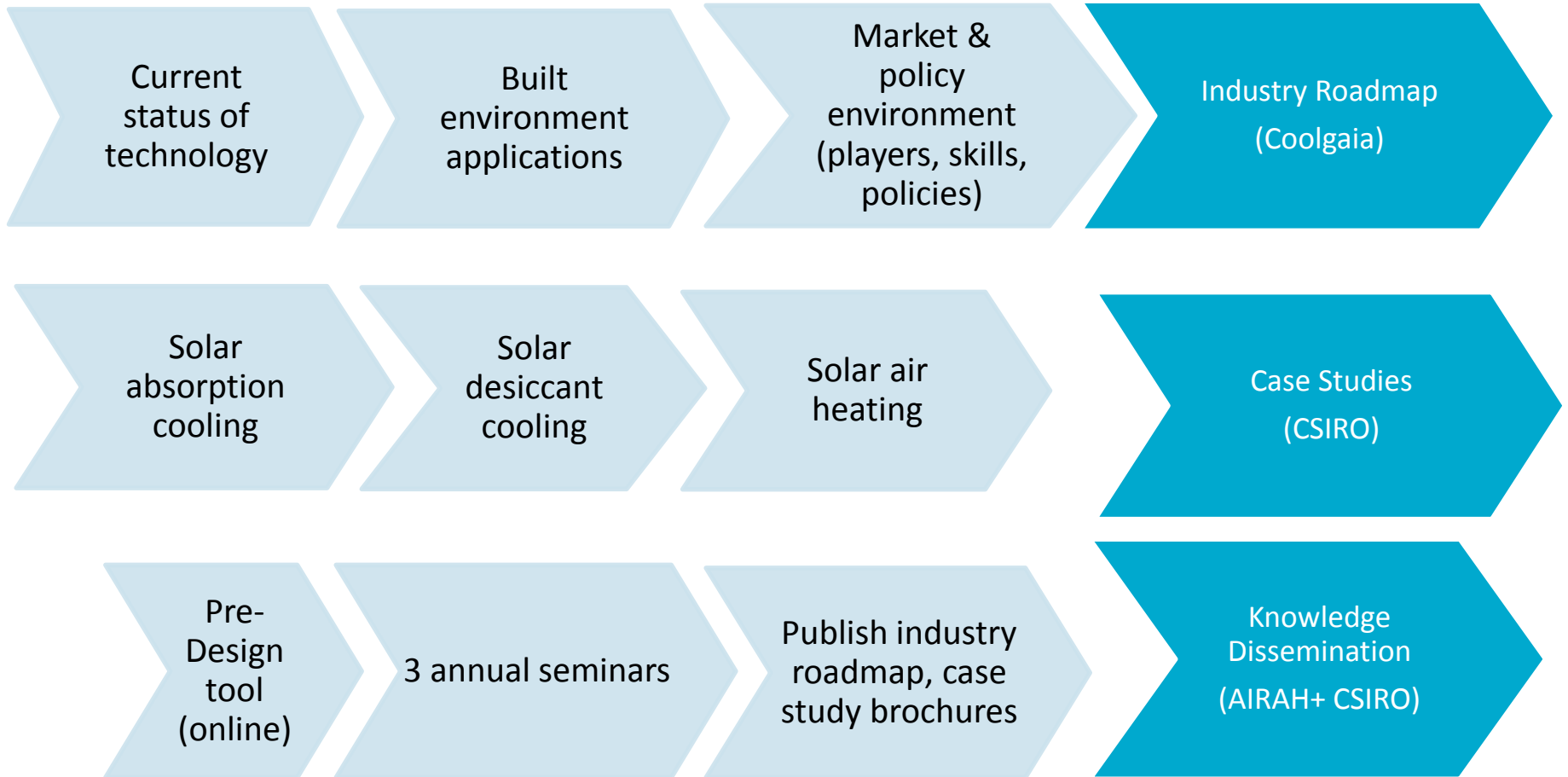
Objective : Capacity building and knowledge sharing to address awareness and skills

barriers to increased utilization of SHC technologies in Australian buildings.

key questions :

- What are the barriers to large scale deployment of solar heating and cooling technologies in Australian buildings
- How to improve the skills and knowledge of Australian building industry in providing SHC based technical services

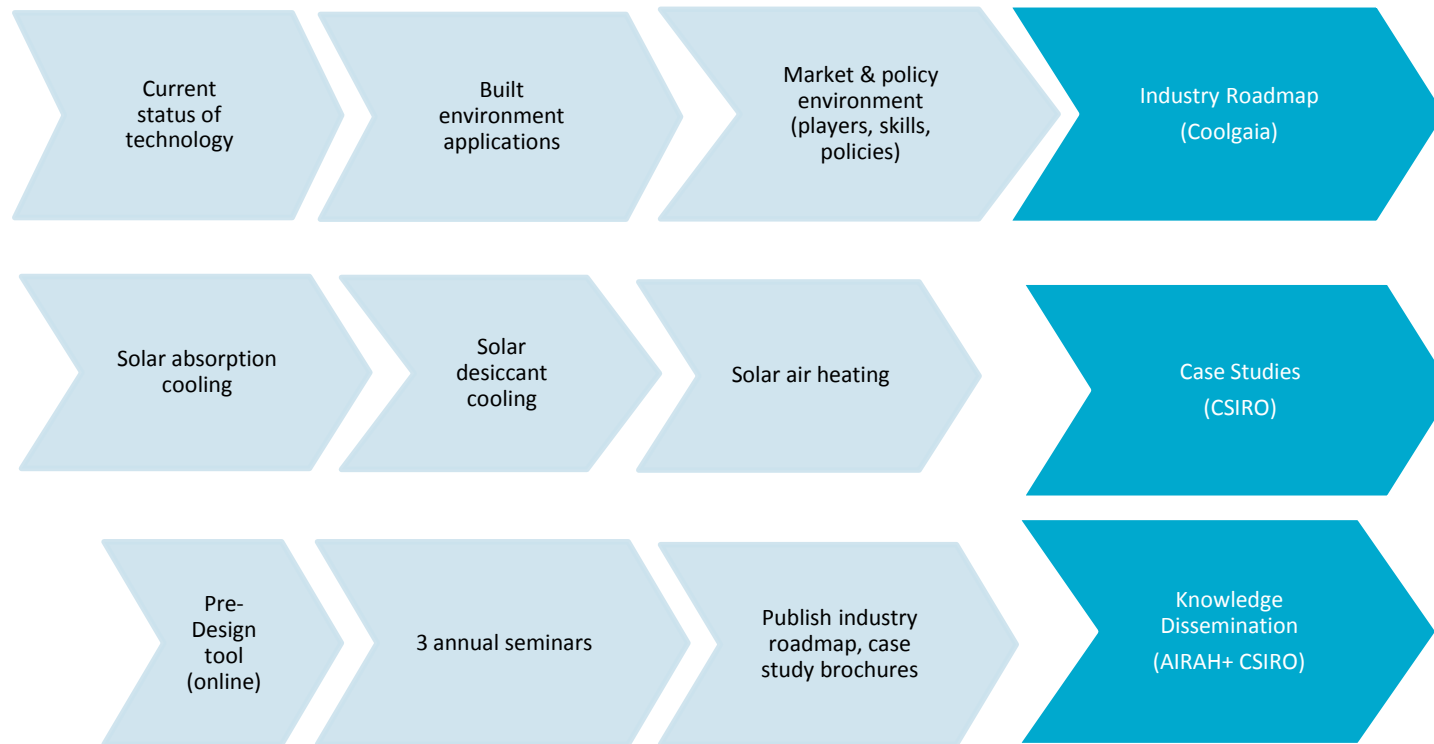
Project details



Project outcomes

Number	Output details
1	Publish industry roadmap on Solar Heating and Cooling (SHC) technologies . This roadmap will include both market and technology perspectives and provide a number of possible pathways to achieve set targets for increased uptake of SHC technologies.
2	Publish three case studies on functional SHC technologies. This will include performance data of these technologies for at least one annual cycle , key learnings during implementation and operation of these technologies.
3	A predesign tool for sizing and down selection of components for three SHC technologies. This tool will provide guidance to engineers as well as building owners in identifying a suitable SHC technology for a given location and application.
4	Deliver three SHC seminars suitable for engineers and architects . These seminars will include learnings from case studies, findings from industry roadmap.

Project inputs



Steering group, industry expert group (AU)
IEA task 53 (international)

WP2 : Case study details

Case study type	technology	location	Data collection approach
I (public building – hospital)	Solar absorption chiller	Echuca, Victoria	Working with Echuca on phase I data access, PID changes for phase II
I (Public building - Educational)	Solar assisted heating & cooling & DHW	TAFE, Hamilton, Newcastle	Existing instrumentation. Add few more specific instrumentation
III (residential property)	Solar air heating + ventilation	Sydney suburbs, NSW	Air collector heat delivered, room temp data. Site visits done, instrumentation design

WP2 : Echuca hospital

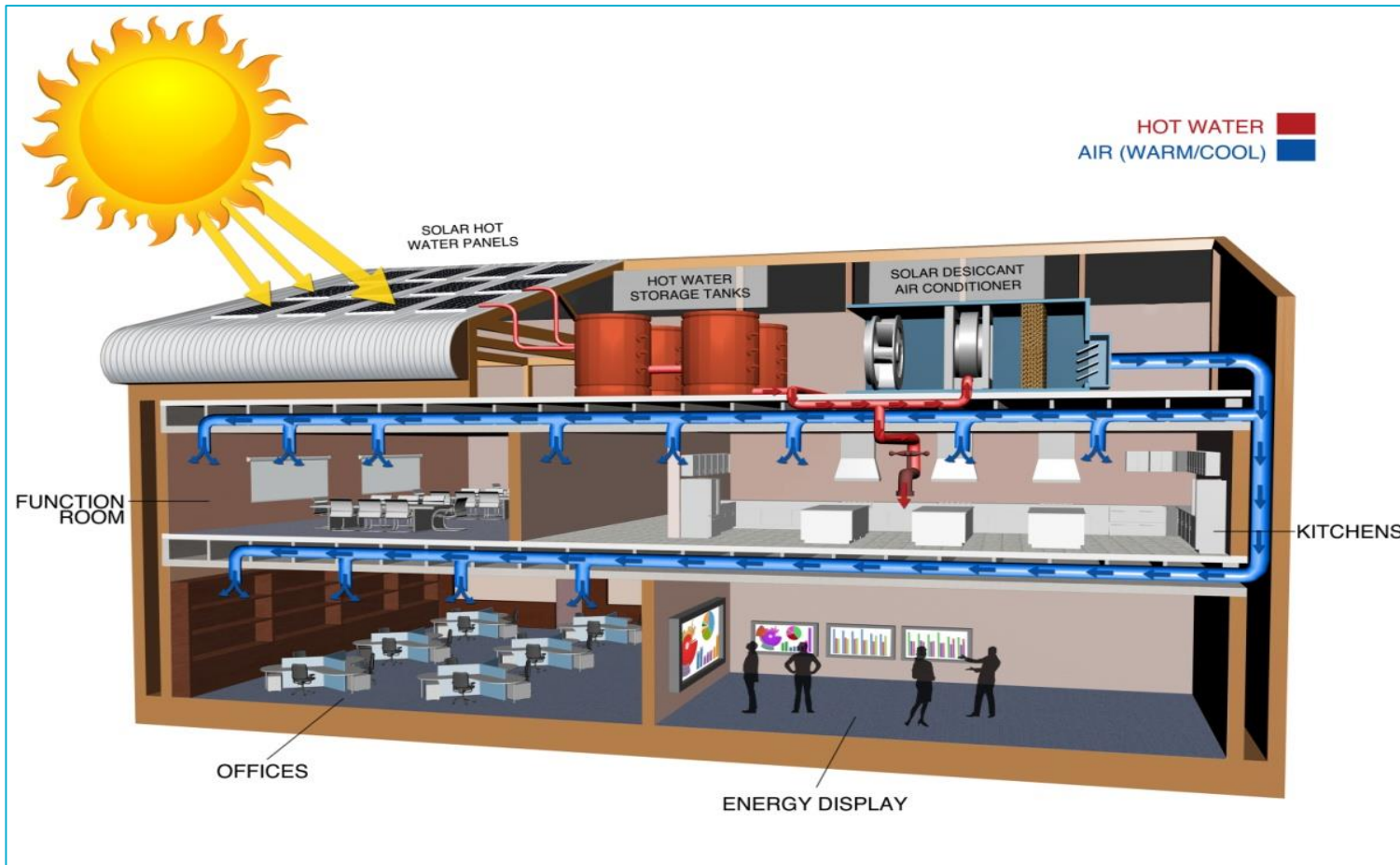


144 collectors ; 500 kW Broad chiller

WP2 : Echuca hospital



WP2 : TAFE, Hamilton



15,000 m³/hr air flow, ~80 KWc solar desiccant air conditioning + hot water

WP2 : Sydney houses



Thank you

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