
SmartSat Strategic Plan 2021–2025



SMARTSAT
COOPERATIVE RESEARCH CENTRE

The SmartSat Mission & Vision

Our Mission

To build an Australian sovereign space capability through world-class research and development in space systems, technology and solutions to enhance Australia's economic prosperity and deliver national benefit.

Our Vision

To be globally respected as an innovator in space technology and valued as an enduring, trusted and leading contributor in transforming Australia's space research and innovation ecosystem.

Guiding Principles

Three guiding principles determine the core elements of the strategy. These principles essentially describe the desired strategic outcomes for SmartSat and can be used by the Board as a 'checklist' when reviewing activities and progress.

- ✓ Influential and Collaborative
- ✓ Regular and Valued Impact
- ✓ Resilient and Enduring

SmartSat Culture & Values

SmartSat aspires to build a purpose-driven culture of passion for excellence and collaboration which produces value for our partners, the space ecosystem and the nation. We will be honest, open and constructive, demanding excellence and taking intelligent risks. SmartSat recognises the opportunity it has to help lead in setting the best possible tone for the further development of the culture of Australia's space community. All our values play an equally important part in defining our culture and are applicable across all activities and personnel within SmartSat.

We engender a future-thinking, ambitious and collaborative culture founded on a set of values which ensure a strong and integrated program focused on tangible impact to deliver economic, societal and national benefits for Australia.



The SmartSat Research Framework

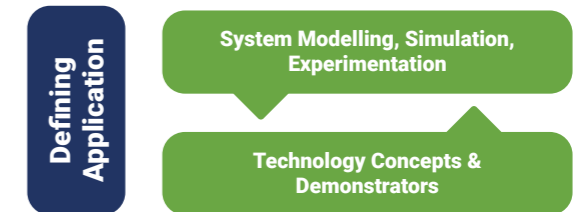
To ensure that SmartSat aligns with its guiding principles it is useful to place the research program within a strategic framework that supports a balance of investments inclusive of:

1. Short, medium, and long term outcomes;
2. Foundation to applications research;
3. From commercial to national need;
4. From novel ideation to end-user driven; and
5. Research projects will be scalable and capitalise on the cross-cutting potential of space technologies across various industries.

The central pillar of this framework is application focused research defined through the End-User Advisory Boards or by direct engagement with end-users in the primary sectors of application. Technology concept and demonstrator development is guided by system modelling, analysis and experimentation which places the technology within the context of the end capability requirements.

Research Program Framework

Application Focused Research

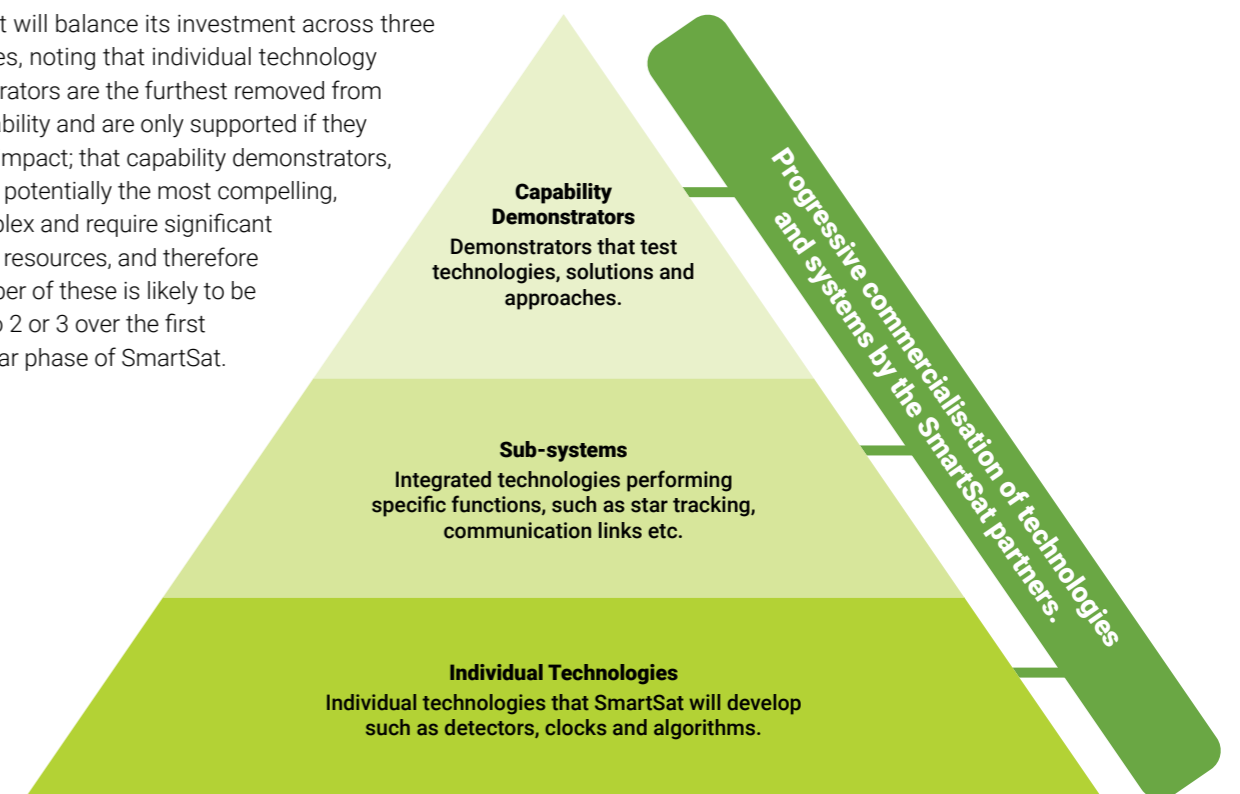


Foundational Research & Capability Building



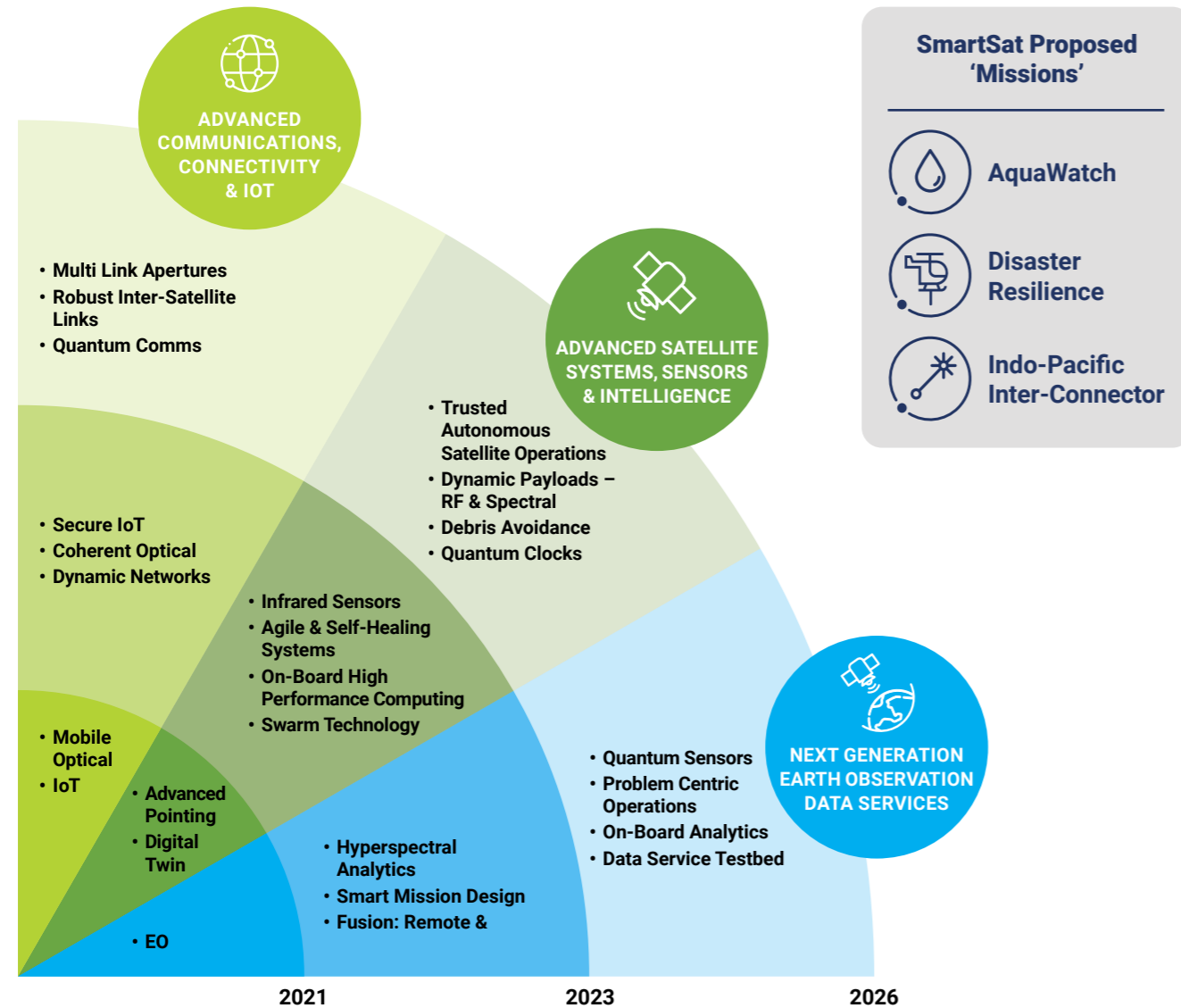
Investment Balance

SmartSat will balance its investment across three categories, noting that individual technology demonstrators are the furthest removed from end capability and are only supported if they are high impact; that capability demonstrators, although potentially the most compelling, are complex and require significant time and resources, and therefore the number of these is likely to be limited to 2 or 3 over the first seven-year phase of SmartSat.



Technology Roadmap

SmartSat has identified a series of technologies as priorities for its collaborative research. These technologies will contribute to enhanced national capabilities in three key areas (advanced communications, connectivity and IoT; advanced satellite systems, sensors and intelligence, and; next generation earth observation data services) and potentially create pathways to delivering on national level missions. In addition, three cross-cutting themes underpin the research through utilisation of: artificial intelligence, cyber-security and resilience and standardisation, and space governance. This technology roadmap has been designed to serve the needs of SmartSat partners and deliver a multi-role space capability.



Cross-Cutting Themes

ARTIFICIAL INTELLIGENCE

CYBER-SECURITY & RESILIENCE

SPACE GOVERNANCE

SmartSat Strategic Objectives

SmartSat will achieve its mission through five strategic objectives. These are outlined in the table (below) along with measures of success and the key initiatives that will assist in meeting these objectives.

STRATEGIC OBJECTIVE	KEY INITIATIVES
Forge Space Systems Research Establish an enduring world-class space systems research capability that is relevant and responsive to national needs	Grow capability in space systems R&D Establish a national collaborative R&D program with a global vision Take a capability approach to the R&D program Develop technologies for 'smart' regional community
Drive Innovation and Transformation Partner with end-users to identify, develop and demonstrate innovative solutions that transform space-dependent business and national capabilities and address critical national challenges	End-user focused project development Transition novel technology to transform key industry sectors Ensure 'Rapid Path to Product' and increase commercial success of R&D
Develop the Space Industry Establish a Utilisation Program to ensure that SmartSat technologies are adopted, utilized and commercialized within our partner ecosystem and beyond so that our industry development goals can be met	Build Australia's sovereign space industry capability Facilitate commercialisation and investment support Build the space start-up community Optimise national space ecosystem coordination
Foster a Space-Smart Nation Develop initiatives for Australia to become a space-smart nation, with the awareness, education and skills to create and seize opportunities	Build capability through academic leadership Develop space industry skills through training programs Facilitate the development of new generation educational programs Inform Government and the general public of the importance of space to our society
Position Australia as a Global Player Ensure that Australia can influence, leverage and contribute to world leading R&D capability through the establishment of national and international collaborative research programs	Establish industry and research National & Global Partnerships Develop space knowledge transition initiatives



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