

AEROSPACE INDUSTRY SUPPORT INITIATIVE

AT A GLANCE



Supporting the industrialisation of CFRTP clips for Airbus.
Photo Credit: Airbus



Aerospace Industry Support Initiative

an initiative of **the dti**



the dti

Department:
Trade and Industry
REPUBLIC OF SOUTH AFRICA



An initiative of the **Department of Trade and Industry**, managed and hosted by the CSIR

AISI

VISION & MISSION

VISION

To position South African aerospace and defence-related industry as a global leader, in niche areas, whilst ensuring effective interdepartmental participation and collaboration.

MISSION

To enhance the global competitiveness of the South African aerospace and defence industry by:

- Developing relevant industry-focused capabilities and facilitate associated transfer of technology to industry;
- Providing a platform for facilitating partnerships and collaboration amongst government, industry and academia, locally and internationally;
- Identifying, developing, supporting and promoting the interests and capabilities of the South African aerospace and defence industry;
- Accelerating the achievement of government strategic objectives including growth, employment and equity.

The Department of Trade and Industry (**the dti**), through its Advanced Manufacturing Chief Directorate, established the Aerospace Industry Support Initiative (AISI) to support the South African industry to improve its competitiveness. The AISI plays a complementary role to the support offered by additional government departments and support initiatives in the National System of Innovation (NSI).

The AISI takes its strategic direction from government's objectives with a specific emphasis on industrialisation of technology. **the dti** utilises the CSIR and its position in the National System of Innovation (NSI) to give industry access to national expertise and infrastructure to improve its capabilities and offerings.

Industry Support Investment:	R21 855 922.00
Number of Projects Undertaken:	31
Number of Organisations and SMMEs Involved:	64



AISI-supported projects and its contribution to the aerospace and advanced manufacturing industries.

The AISI implements its projects through four operating programmes, with an additional fifth programme dedicated to the coordination, promotion and awareness creation for industry by the AISI. These programmes are implemented to address the strategic objectives of **the dti**, and in doing so, address the requirements of the aerospace industry. The operating programmes of the AISI are:

1. Industry Development and Technology Support
2. Sector Strategic Support Initiatives
3. Supplier Development
4. Sector Specific Skills Development
5. Coordination, Promotion and Awareness.



Radiation Screening Services
Nano-Satellite Space Imager
Stellar Gyro Development

Rhomboid Wing Aerodynamic Investigation
Hyperspectral Sensor Upgrade
Small Gas Turbine Technology Improvements

Laser Shock Peening Phase III
Transversely Excited Atmospheric (TEA) CO₂ Laser
Natural Fibres in Aerospace Structures
Process Design of Continuous Fibre Reinforced Thermo-Plastic (CFRTP) Joining Methods
Process Design of Titanium Fluid-Cell Forming
Ultra High Cycle Fatigue (UHCF) Design and Testing of High Strength Aerospace Materials
Localisation and Industrialisation of Insulation Blankets
CFRTP Overlap Joining Method

Datalinks and Antenna Solutions
Ground Control Station Product/Capability Development

SKA PC Board Localisation

-  Industry Development & Technology Support
-  Sector Strategic Support Initiatives
-  Supplier Development
-  Industry-Focused Skills Development

Additive Manufacturing
Avionic Component - Local Design and Manufacture
Mode S Technology Development
SatAuth Technology Demonstrator
Identification Friend or Foe Interrogator
Design and Manufacturing of Aerospace Fuel Tank Structures

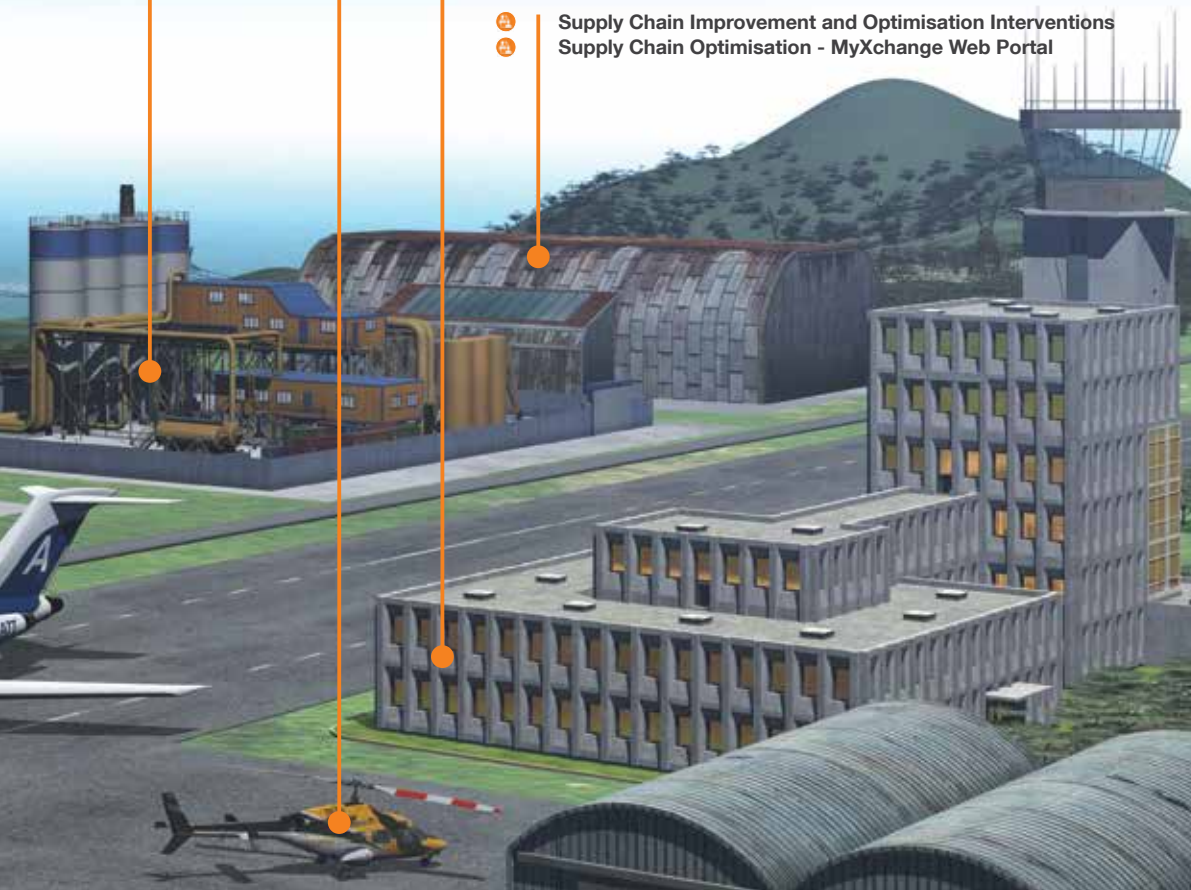


Industry-Focused Skills Development

Helicopter Simulator

**Capacity Building in International Air,
Space and Telecommunications Law 2015**

Supply Chain Improvement and Optimisation Interventions
Supply Chain Optimisation - MyXchange Web Portal



PROGRAMME 1

Industry Development and Technology Support

The aim of industry development and technology support is to improve the competitiveness of the local industry through the industrialisation of technologies. This will add to the product offerings of the benefiting organisation, which in turn increases its competitiveness.

Programme Focus	Technology Advancement
Predominant Technology Stream	Aeronautics, Defence, Space, Materials and Manufacturing
Industry Support Investment	R12 778 503.00
% AISI Investment of Programme Budget	59%
Number of Projects Undertaken	19*
Number of Organisations Involved	20**
SMMEs Involved	12
Resulting Impact on Industry	
New Technologies and Developments	14
Manufacturing Processes	2 processes supported to improve competitiveness within the aerospace manufacturing industry <ul style="list-style-type: none">• Additive Manufacturing• Laser Shock Peening
Business Opportunity	1 SMME able to offer radiation screening services for satellite components
Import Substitution	1 project promoted imported substitution
Collaboration with Academia and Research Councils	2 universities, 2 research councils and 1 national laboratory collaborated with industry
Projects Aligned to National Programmes	3 projects aligned with the requirements of the South African National Space Agency (SANSA) 1 project aligned with the development of the Square Kilometre Array (SKA) 2 aligned to national Unmanned Aerial Vehicle (UAV) activities
Exposure to National Infrastructure	1 project exposed an SMME to national infrastructure

*8 projects completed, 11 projects on-going

**certain organisations are supported for more than one project



PROGRAMME 2

Sector Strategic Support Initiatives

The Joint Aerospace Steering Committee (JASC) was established to provide strategic guidance and positioning to the local aerospace and defence industry. The focus of this programme is, firstly, the hosting of the JASC and its secretariat and, secondly, the hosting and implementation of JASC flagship projects. These projects are technology advancement projects with the specific aim of addressing technology gaps in strategic areas, as identified by the JASC and its subcommittees.

Programme Focus	UAVs
Predominant Technology Stream	Ground Control Stations
Industry Support Investment	R1 577 400.00
% AISI Investment of Programme Budget	7%
Number of Projects Undertaken	2
Number of Organisations Involved	12
Resulting Impact on Industry	
New Technologies and Developments	1
Skills Development	2 interns
Project Aligned to National Programmes	Alignment to national UAV activities

PROGRAMME 3

Supplier Development

Supplier development aims to ensure that the supplier base participating in the economy is broadened. It provides enabling mechanisms to assist industry to improve its competitiveness, productiveness and quality management systems.

Programme Focus	Supplier Development
Predominant Services Stream	Standards, Accreditation and Quality Management Systems, Technology Transfer
Industry Support Investment	R5 276 749.00
% AISI Investment of Programme Budget	24%
Number of Projects Undertaken	9*
SMME Involved	24
Local OEMs Involved	2
Resulting Impact on Industry	
Efficiency and Profitable	Full supply chain visibility through web-based procurement portal utilised by 21 suppliers and one OEM

*2 projects completed, 7 projects on-going

**certain organisations are supported for more than one project

PROGRAMME 4

Industry-Focused Skills Development

The focus of the AISI's interventions in industry-focused skills development is firmly on utilising industry knowledge and technology to improve the human capital in the aerospace industry. It also addresses **the dti's** strategic objective to "create a fair regulatory environment" by focusing projects on space regulations.

Programme Focus	Skills Development
Predominant Skills Development Stream	Law, Policy & Strategy Engineering
Industry Support Investment	R1 221 537.00
% AISI Investment of Programme Budget	6%
Number of Projects Undertaken	2
Number of Organisations Involved	13
Resulting Impact on Industry	
Capacity Development	7 Internship placements 22 Trainees in Air, Space and Telecommunications Law
Scarce Skills Development	Air, Space and Telecommunications Law Engineering
Transformation	45% of Trainees PDIs 85% of Interns PDIs
Exposure to National and International Experts	2
Alignment to National Councils and Programmes	South African Council for Space Affairs (SACSA) CSIR
Alignment to National Policies and Strategies	South African context for Space Law Alignment to national UAV activities

The collaboration between the local aerospace industry and the AISI is a key element in improving competitiveness and establishing a global footprint in the advanced manufacturing environment. The aerospace industry is urged to collaborate with the AISI to create successful partnerships that position the industry at an international level.

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