



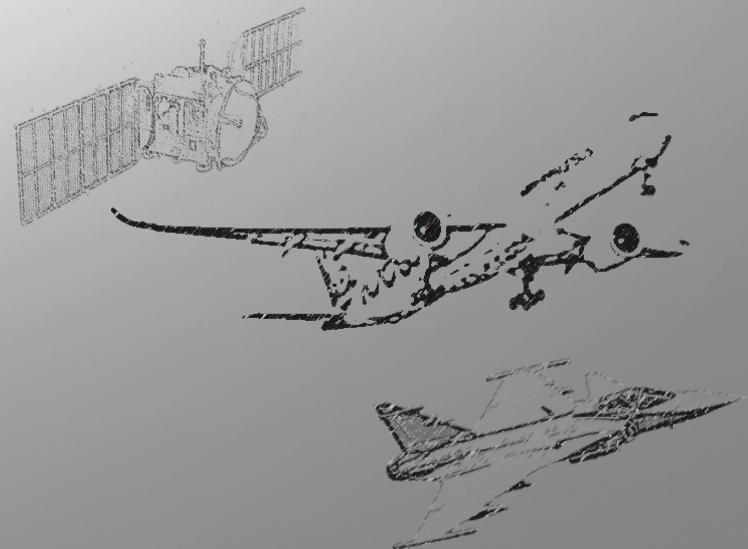
# THE SOUTH AFRICAN AEROSPACE & SPACE INDUSTRY PERSPECTIVE

JA Aerospace International Exhibition

14-18 Oct 2024

N Majaja: Chief Director

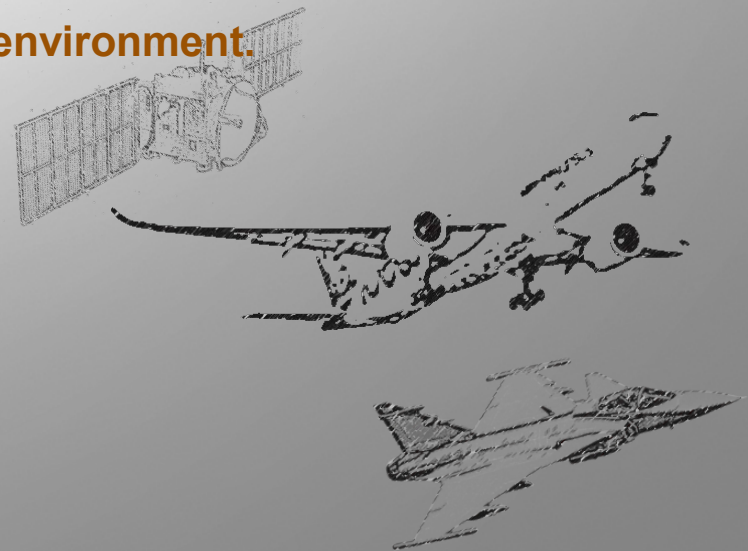
The Department Of Trade, Industry &  
Competition





The GNU Administration, (2024) finds its critical role in enhancing industrialization, job creation and transformation to tackle key challenges of the country.

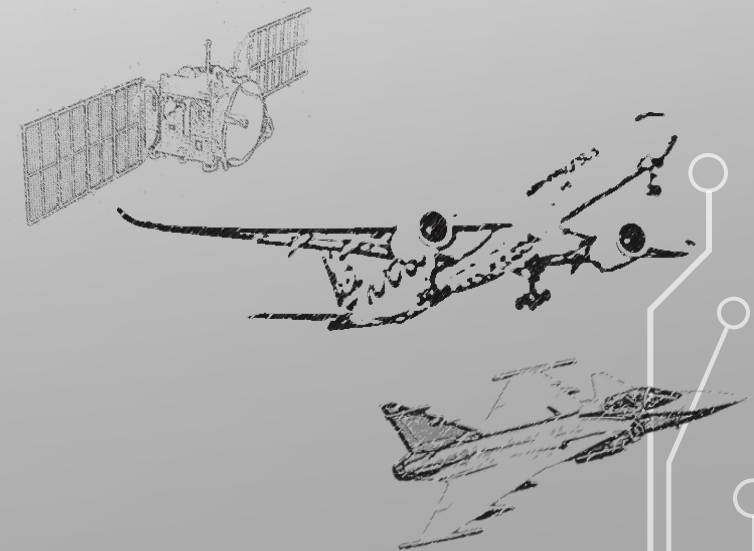
Department of Trade, Industry and Competition (the dtic) is charged with a mandate to promote structural transformation towards a dynamic industrial and globally competitive economy, provide a predictable competitive, equitable and enabling environment.





# VISION \* AEROSPACE INDUSTRY

To be a globally integrated and competitive aerospace and defence industry in support of national and African interests and the preferred choice of aerospace and other-related solutions in niche areas worldwide.



# A NEW INDUSTRY VISION- RATIONALE



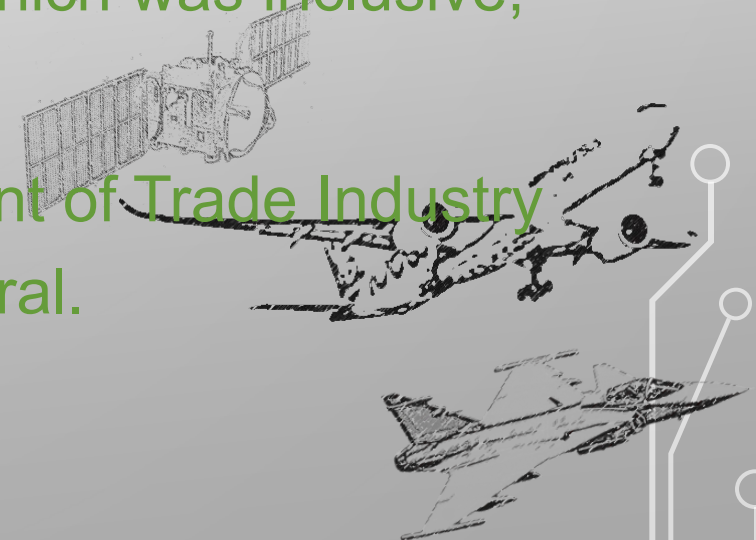
- Aerospace and Defence is the **Apex Ecosystem** to ensure a smooth and successful transition to the fourth economic wave (4IR).
- Digital tech (and ICT) is the means by which the apex ecosystem and all others are supported- like electricity in the 3<sup>rd</sup> Industrial wave, it is the means to transition, not the end.
- Without the technology developed by the industry, transition optimally through the interregnum between the 3<sup>rd</sup> and 4<sup>th</sup> waves will not be possible.
  - SA will become technology takers (and price takers)
  - SA will be vulnerable to sovereign pressure
  - SA will not diffuse competitive technology throughout South Africa industry;
  - Our citizens will not benefit as they must, from the Fourth Economy Wave – inequality and poverty will increase and;
  - SA will be less able to protect ourselves





# BACKGROUND

- PPT will include the Aerospace /Space and Defence Masterplan was finalised and approved in 2021
- This presentation summarises Key Properties of the Aerospace Industry , The Challenges experienced and the Opportunities
- the recommendations arising out of this process; which was inclusive, intense research and consultative
- The Broad Interventions provided by the Department of Trade Industry and Competition (the dtic) and government in general.



# OBJECTIVES



Transformation and Diversity



Localisation, Human Capital & Technology Development



Enhance a Competitive Environment



International Cooperation & Exports



# CHARACTERISTICS OF THE AEROSPACE INDUSTRY , INCL SPACE INDUSTRY



- ***Aeronautical industry***

- Small but significant element of the South African manufacturing sector comprised of at least 104 companies of varying sizes
- Highly skilled workforce
- One of the highest earning segments of the industry
- Large export income with value generation

- ***Space industry***

- Mainly an export industry supplying highly specialized niche products to international partners (upstream sector)
- As well as fully assembling cube & small satellites, including industry, academia and research institutions.
- Socio-economic benefits generated in the downstream sector (town planning, precision agriculture, water, natural disaster monitoring and management etc)



# AEROSPACE AND DEFENCE MAIN SEGMENTS (BROADLY)

## SEGMENT SUB-CATEGORIES



- **Commercial Aeronautics-** Manufacturing & services; Design & Manufacture; light and heavy flight testing and certification; heavy system engineering; concurrent engineering; light reconnaissance aircraft; unmanned and optimally manned, UAV .
- **Civil Aeronautics-** Manufacturing & services; Design & Manufacture; light flight testing and certification; etc.
- **Defence Aeronautics-** Manufacturing: fixed wing mission systems; rotary wing mission systems; ground support; surveillance aircraft; systems integration & testing,
- **The Aeronautics services (MRO)** Line and base maintenance; component maintenance; Avionics, maintenance & support; air frame heavy maintenance; engine maintenance; modifications;
- **Drones** :Small drones, UAV surveillance, Armed patrol, UAM, OPV .





# SPACE MAIN SEGMENTS (BROADLY)

## SEGMENT SUB-CATEGORIES



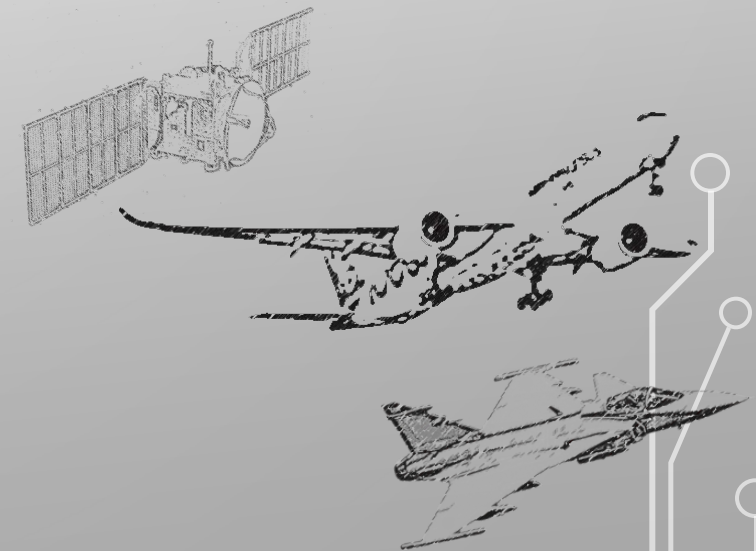
- **Space Crafts:** Design & Manufacture through its indigenous capability: *cubesats, Small satellites, range of componentry*, and integration of mechanical, electronic systems);
- **Space- upstream** :possible Sovereign telecommunications satellite; small satellite systems design and manufacture; small satellite launch systems;
- **Space- downstream** -Acquisition, analysis, and manipulation of big data (Earth Observation); App development;
- **Electronics/Avionics** - *Crosscutting* Radar (passive, air traffic management, Synthetic Aperture Radar); Information (Electronic, Network Command & Control, Information Infrastructure Warfare, Information Based); telecommunications, including cryptology; command and control;



# CHALLENGES



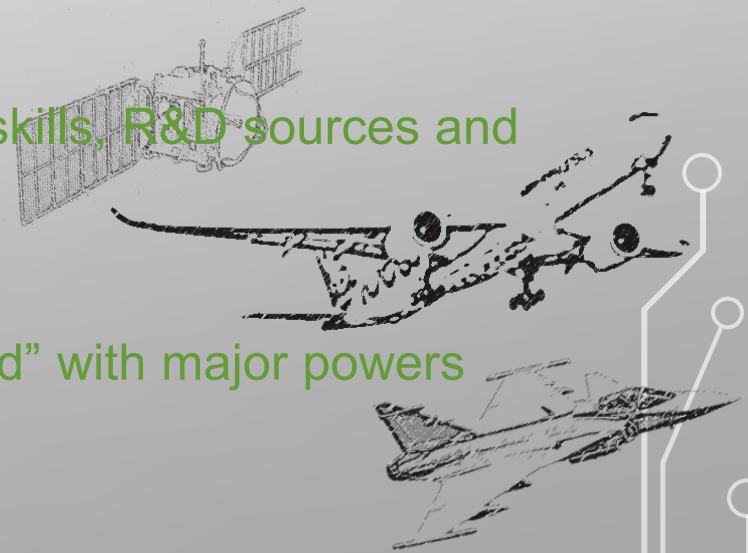
- Limited number of bilateral agreements. Absence of or outdated bilateral air service agreements with FAA and EASA are constraining the development of the aerospace industry
- Strategic sales by some countries create high barrier to export penetration -
- Current geo political issues pose disadvantages to Industry and global economy.
- Low R&D spend in combination with an eroding skills base also means the industry is falling behind the innovation curve that is driven by artificial intelligence (AI), novel power systems, autonomous platforms, virtual reality and synthetics and robotics.
- Lack of investments in the Industry .
- Slow effectiveness in implementation of existing partnerships





# KEY OPPORTUNITIES

- **Development and production of equipment** suited to national and regional geographical characteristics and state of affairs targeted for domestic use, African continent, and other similar markets
- **Positioning the local industry as a one stop shop** that provide aerospace and related solutions for the African continent and as preferred African partner. In the international markets, the appearance should be that of the desired Team South Africa Inc
- **Maintenance, Refurbishment and Overhaul(MRO)** of aerospace and defence products
- **Partnering with global OEMs** to access new the technologies, skills, R&D sources and markets
- Possible development of a sustainable National flagship project
- Leveraging on the South Africa's status being largely “non-aligned” with major powers





# POSSIBLE INTERVENTIONS

- **Optimise Offsets Program within the Industry:** NIPP National Industrial Participative Program- Offsets for any Investment of R10b and over
- **Industrial Incentives:** Targeted Aerospace Industry Initiative, Manufacturing Support
- **Export development and promotion programs :**
  - **Export Marketing Industrial Assistance**, Pavilions
  - Sector Specific Assistance Scheme- Targeted Exhibitions
  - Capital Projects Feasibility Programme (CPFP)
- **The Technology and Human Resources for Industry Programme (THRIP)** intended to leverage collaborative partnerships between government and industry (working with academia), for applied research and development for projects in science, engineering and technology on a cost-sharing basis, to produce highly skilled human resources and technology solutions, for improved industry and enterprise competitiveness.
- to develop new technologies for industry application and resultant industrialisation as well as commercialisation, through applied research and development to improve knowledge exchange and technology transfer.



# CURRENT AVAILABLE INTERVENTIONS, CONT



- **The Support Programme for Industrial Innovation (SPII)** is designed to promote technology development in South Africa's industry, through the provision of financial assistance for the development of innovative products and/or processes. Focussed specifically on the development phase, begins at the conclusion of basic research and ends at the pre-production prototype has been produced
- **The Manufacturing Investment : Manufacturing Competitive Enhancement Programme (MCEP) loan facility**
- **Infrastructure Support: leverages investments by providing infrastructure critical to industrial development & enterprise competitiveness** within an industrial cluster as well as Tax benefits for locating to geographically designated areas of the country.
- The Incentives in this area are
  - **Critical Infrastructure Program CIP)**
  - **Special Economic Zone(SEZ) Programme**
  - **Strategic Partnership Program Support** enterprise with linkages with Strategic supply chains



# POSSIBLE INTERVENTIONS / INVESTMENT OPPORTUNITIES



## Investment in AeroSpace infrastructure Upgrade and Development Programme-

Government support; through the **Aerospace & Defense testing facilities** : Space & aero grade, thermal, vacuum chamber etc

**Test Range: launching Capability** : through the Infrastructure Investment Programme & possible international investment) Possibility of SA as a preferred launching site for the Continent and broader world due to our comparative geographic advantage (southern tip of the Continent).

- **Funding Implementation models envisaged:** PPP Arrangements - international and domestic private sector as appropriate for each intervention
- **Coordination through Task Teams** aligned to the Recommendations and Pillars with relevant Departments, agencies and DFIs e.g the Dtic and government departments and entities dtic, DSI, DCBT, SAAF, CSIR, NEOSS, Space Agency and general Industry .





# KEY ACTIONS AND RESPONSIBILITIES ACROSS GOVT , ENTITIES & INDUSTRY

- Sector Specific Support – DTIC/DSI/CSIR/NT/DoD/Armcor/DoT/DoC
- Encouraging Foreign Direct Investment – DTIC/DIRCO/Pvt Industry
- Clustering – DTIC/Provincial and Local Government/Pvt Industry
- SMME Development – DTIC/DSBD/DoD/Pvt Industry
- Streamlining Regulation – DoD/DoT/DIRCO/Pvt Industry
- Localisation – DTIC/DoD/DSI/CSIR/Pvt Industry
- Transformation – DoD/DPE/DTIC/Pvt Industry





THANK YOU

*Space Crafts: Design & Manufacture cubesats, Small  
satellites, componentry, downstream*

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