



Sovereign Security Solutions







Your Trusted Sovereign
Security Technology Partner



SOVEREIGN



Air Defence



Electronic Warfare



Encryption



Cyber Systems



Sensors



Systems Integration



Command & Control

SAFETY & SECURITY



Cyber Security



Police



State Security



Border Control



Aviation Security



Disaster Management



Safe Cities



CONTENTS

Denel Group	6
Denel Group Values, Vision and Mission	8
Denel Sovereign Security Solutions Value Proposition	9
Defence Review 2015	10
Air Defence Systems	12
Military Image Interpretation	14
Cyber Security	16
Command and Control	17
Denel and CSIR	18
National Border Control Security	20
National Aviation Security	22
National Disaster Management	23
Police	24
Simulation and Training	25
Denel: Your Preferred Trusted Sovereign Technology Partner	26

A Respected South African Provider of Innovative Defence, Security and Related Technologies

Denel SOC Ltd is a state-owned commercially-driven company and strategic partner for innovative defence, security and related technology solutions. It groups together several defence and aerospace divisions and associated companies with the latest edition of maritime and security units.

Denel provides turn-key solutions of defence and security equipment to its clients by designing, developing, integrating and supporting artillery, munitions, missiles, aerostructures, aircraft maintenance, unmanned aerial vehicle systems and optical payloads based on high-end technology. Its defence capabilities date back more than 70 years when some of Denel's first manufacturing plants were established.

Between the Denel divisions there is a collective experience of over 200 years.

Over the years Denel has built a reputation as a reliable supplier to its many international clients. It supplies systems and consumables to end users as well as sub-systems and components to its industrial client base.

Denel also has a number of equity partnerships, joint ventures and cooperation agreements with renowned international players in the defence and security industry.





Through the design and deployment of some of the most robust and technologically advanced defence and security systems in the world, Denel has come to embody the experience of security and wellbeing. Denel's vision is to instill this sense of security at every touch point and in so doing cement its reputation as a full turn-key partner to the South African defence industry and security.

Within these circles, Denel is already a household name thanks to the development of flagship systems such as the highly celebrated Rooivalk Attack Helicopter, G6 Artillery and Umkhonto Missile – true legends of defence technology and a testimony to South Africa's growing reputation as a key player in this arena.

With the addition of Denel Integrated Systems & Maritime to the Denel Group, the company is able to focus on a new segment of the market and bring its world-renowned engineering and systems capabilities to the maritime and sovereign security domains.



DENEL GROUP VALUES



PERFORMANCE

We embrace operational excellence.



INTEGRITY

We are honest, truthful and ethical.



INNOVATION

We create sustainable innovative solutions.



CARING

We care for our people, customers, communities, nation and the environment.



ACCOUNTABILITY

We take responsibility for our actions.

Vision

To be the trusted sovereign technology partner and system integrator to the maritime and sovereign security sectors in the realisation and through life support of complex systems.

Mission

To contribute to the promotion of peace, safety and security in the defence, national and civil security markets by delivering and supporting complex, multidisciplinary systems in partnership with local and international defence, security, maritime players and stakeholders.

DENEL SOVEREIGN SECURITY SOLUTIONS VALUE PROPOSITION



Strategic partner



Programme Management



Systems Integration



Acquisition and Local Content



Life-Cycle Management



Integrated Logistics Support



Standardisation

DEFENCE REVIEW 2015

NATIONAL SECURITY, FOREIGN POLICY AND THE NATIONAL INTEREST

South Africa's national security is centred on the advancement of its sovereignty, democracy, national values and freedoms, and its political and economic independence. To this end it is clear that there is both a domestic and a regional dimension to national security.



DOMESTICALLY, South African national security focuses on its sovereignty and the related priorities of: territorial integrity; constitutional order; the security and continuance of national institutions; the well-being, prosperity and upliftment of the people; the growth of the economy; and demonstrable good governance. As a developmental state, South Africa faces the onerous task of addressing a number of pressing developmental challenges, including poverty, unemployment, inequality and criminality.

REGIONALLY, South African national security inextricably hinges on the stability, unity and prosperity of the Southern African region, and the African continent in general. Africa is at the centre of South African policy, and the growth and success of the South African economy is further intrinsically dependent on enduring peace, stability, economic development and deepened democracy on the continent. Significant growth of the economy requires accelerated inbound and outbound trade (in particular higher-value products) as well as attracting significant volumes of foreign direct investment. Sustained value and volume of exports to traditional markets must be achieved. Continental and other high growth emergent markets must be accessed.



Denel is a national security asset, with the primary purpose of designing, developing, manufacturing and supporting defence matériel.

In addition thereto, Denel is charged with:

- The custodianship of assigned sovereign or strategic defence capabilities, technologies and abilities, inclusive of those that may be at risk, and the loss thereof would threaten South Africa's required defence capability.
- The design, development, manufacture and support of important capabilities which may not be commercially viable.

Where capabilities that have been identified as requiring sovereign control are in fact controlled by foreign companies, government will either:

- Acquire those capabilities from their owners at a mutually agreed market value; and in accordance with the relevant legislation and regulations, or, failing that;
- Re-establish the necessary capabilities within DENEL and/or one or more South African-owned companies.



SOVEREIGN CAPABILITIES

Sovereign capability here means the ability to ensure, under full national control and without reliance on any direct foreign assistance, certain capabilities identified as vital to national security, including, but not limited to, command and control, secure communications, aspects of persuasion-guided munitions, elements of electronic warfare, relevant algorithms and relevant software.

This will require, as far as is practicable:

- The capability to integrate and support such systems and equipment;

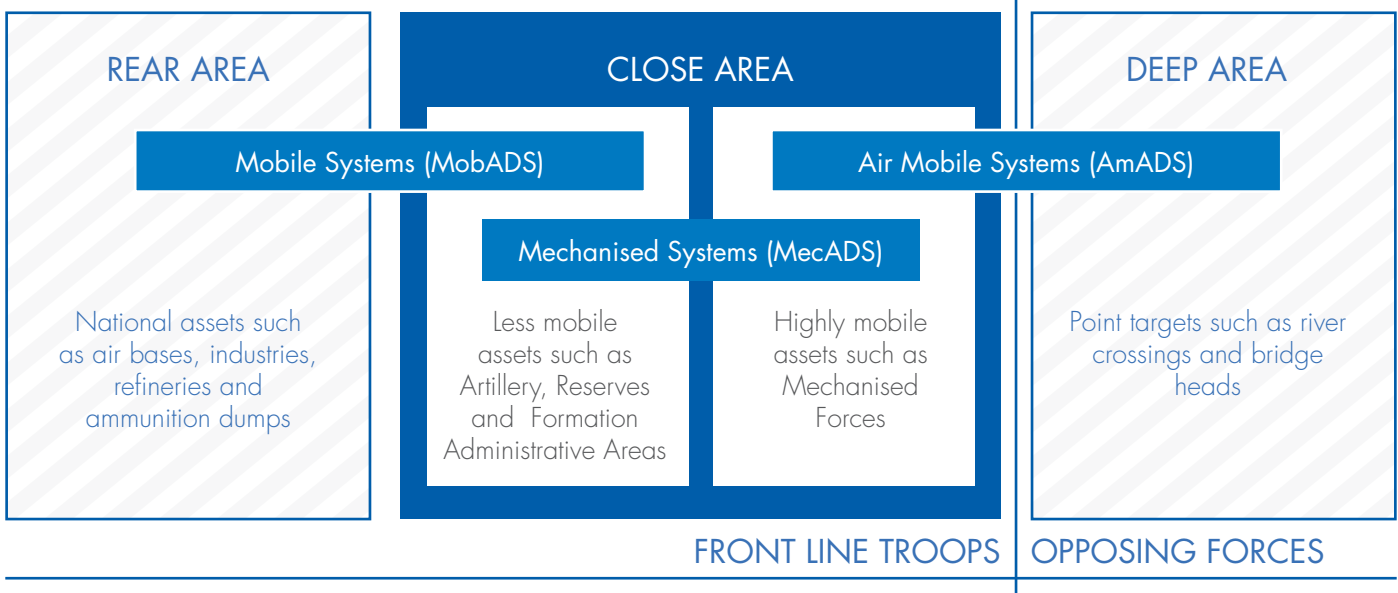
- The capability to design, develop and support relevant algorithms and software;
- The capability to design, develop and manufacture certain equipment locally, which does not exclude the use of imported component; and
- The control of those capabilities under custodianship by either a public or private South African - owned company.

AIR DEFENCE SYSTEMS

The word "sovereign" is defined as "something having supreme rank or power", and Denel ISM's undeniably powerful sovereign ground-based air defence system does this definition justice.

Through the Ground Based Air Defence System (GBADS) Project, Denel has a proud track record in the integration and support of the following systems:

- Hardware
- Software
- Weapons
- Sensors
- Communication Systems





GBADS: A testament to our proud track record

The primary role of the SANDF is to protect national assets against aggressors threatening the sovereignty of the RSA. The SANDF may also be called upon for collateral or secondary tasks such as protection of national borders, support to the Police Services for control of internal stability, and peace support operations in foreign countries. Air Defence (AD) is an integral part of the SANDF and its primary role is to protect national assets, including own forces, against aerial attacks by aggressors.

GBADS is a collective description for a range of surface-to-air weapon systems with the objective to counter air attacks.

GBADS is primarily employed in the point defence role, but can also be called upon to perform regional defence and collateral tasks. The aim of GBADS is "The prevention of opposing forces' air power from attacking national assets and/or interfering with the operational plans of the SANDF formations."

GBADS comprises three User System configurations, namely Mobile Systems (MobADS), Mechanised Systems (MecADS) and Air Mobile Systems (AmADS), optimised to operate in the rear, close and deep battle areas respectively as illustrated on the opposite page.



CYBER SECURITY

"South Africa has a National Cyber-Security Policy Framework whose purpose is to create a secure, dependable, reliable and trustworthy cyber environment that facilitates the protection of critical information infrastructure whilst strengthening shared human values and understanding of cyber-security in support of national security imperatives and the economy. **The National Cyber-Security Policy Framework sets out a number of tasks directly aligned to the Department of Defence:**

1. Address national security threats in cyber space.
2. Combat cyber-warefare, cyber crime and other cyber threats.
3. Develop, review and update substantive and procedural laws to ensure alignment.

4. Build confidence and trust in the secure use of information and communication technologies.

The National Cyber-Security Policy Framework aims to strengthen all processes related to preventing and addressing cyber-crime, cyber-terrorism and cyber-warfare. It puts in place the Justice, Crime Prevention and Security Cluster (JCPS) Cyber-Security Response Committee to coordinate all South African cyber-security activities. The establishment of the necessary structures as described in the National Cyber-Security Policy Framework will contribute significantly to achieving the objectives described in the policy. **It is also important that Defence is involved in all these structures to ensure that cyber-security is adequately addressed."**

~ SOUTH AFRICAN DEFENCE REVIEW 2015

Denel ISM together with industry partners provides Cyber Security Solutions and Services to clients. This includes but is not limited to vulnerability detection and cyber risk assessment. Our mission is to ensure the confidentiality, integrity and availability (C-I-A) of computer data and systems and to protect or prevent intentional and non-intentional incidents and attacks against critical information infrastructure.

Cyber Centre Offering

- Network Security
- Data Security
- Cloud security
- Social Engineering
- Deep Web
- Dark Web
- Cyber Attack Response
- Internet Simulation
- Vulnerability Assessment
- Product Evaluation
- Cyber Auditing



Counter Measures

- IP Sensors
- Machine Learning Technology
- Internet Traffic Monitoring
- Defensive Cyber Weapons

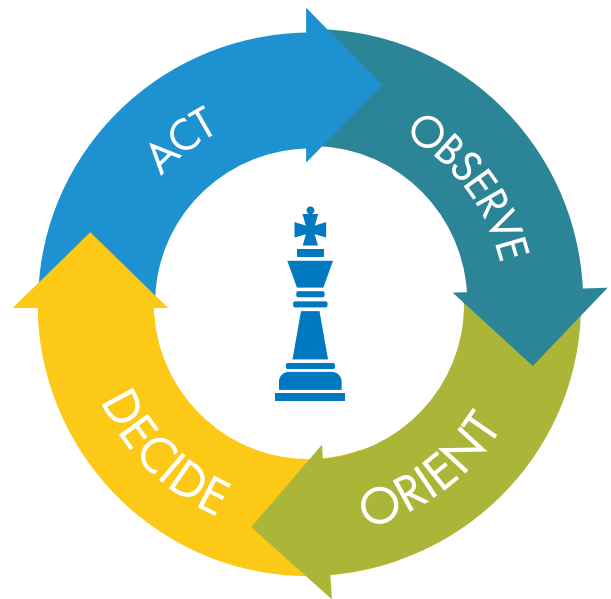


COMMAND AND CONTROL

Denel ISM together with industry partners provides extensive Command & Control capabilities to provide complete situational awareness and improved decision making when immediate actions are required in the air, land, sea and joint modalities.

Modern missions are more complex, dynamic and require collaboration of many entities in order to succeed. Advances in technology have created opportunity in being able to provide the force agility and effectiveness required for the fundamental requirement of shared awareness in 21st century C² systems.

Denel offers the best in modern day capability by leveraging long-standing relationships with both local and foreign partners for the provision of C² systems that are relevant not only to the defence environment but also within civil security domains where consultation, coordination, cooperation and collaboration are the functional pillars for providing effective and cost effective solutions.



C² Software application environments:

- Air
- Land
- Sea
- Joint

Software for:

- Lines of Operations
- Situational Awareness Display and Management
- Command Network
- War Diary
- Order of Battle
- Fire Control
- Target Designation



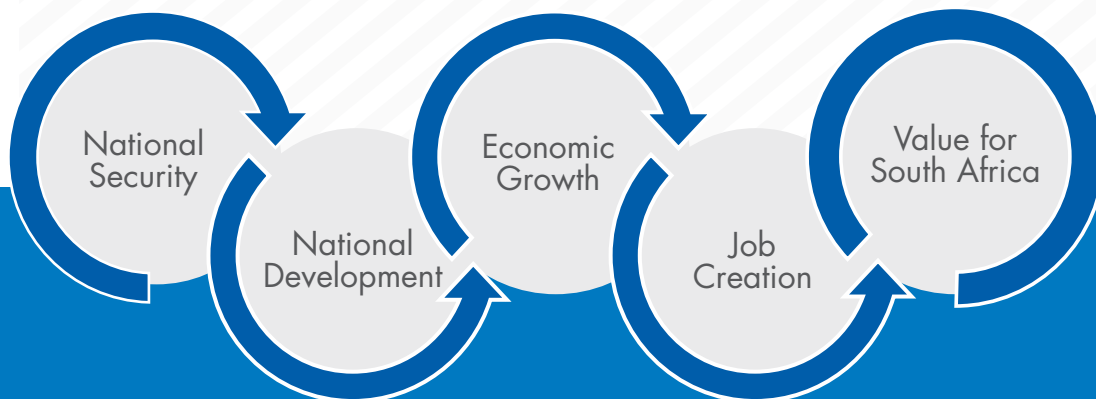
DENEL AND CSIR

Denel and CSIR have signed a Memorandum of Understanding to explore and develop possible areas of collaboration for the purposes of industrial development and socio-economic development.



Our Shared Vision

*“Working together, combining our diverse range of skills and resources, sharing our vast multidisciplinary expertise to **unlock value** for the greater benefit of South Africa by providing **comprehensive innovative solutions for national security**, promoting scientific development and **stimulating industrial growth**”*







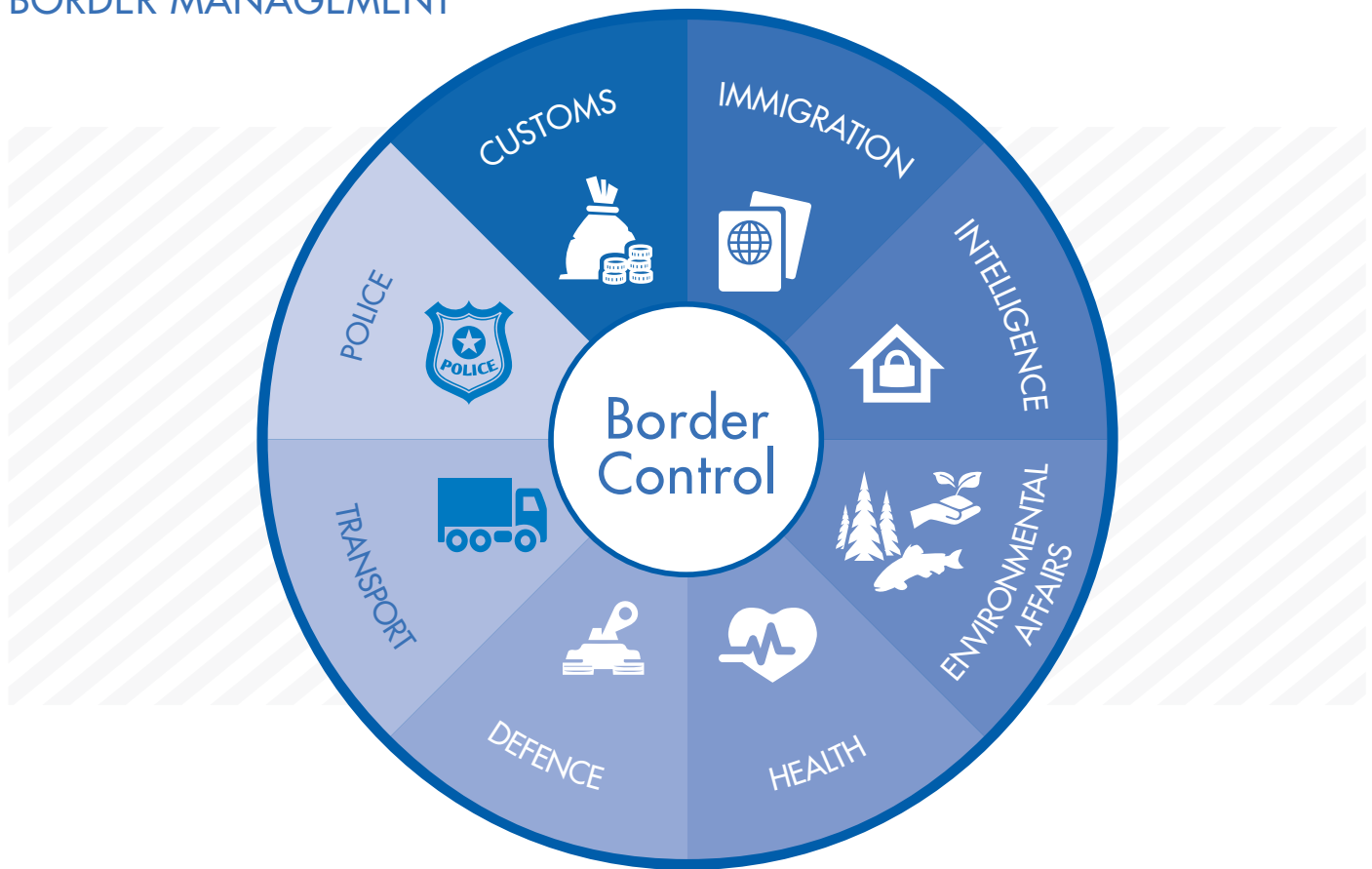
NATIONAL BORDER CONTROL SECURITY

Denel ISM is dedicated to working with Border Management Agencies in keeping our borders secure and outfitting the men and women who have made the pursuit of national security their life's work, with the necessary equipment and skills. To this end, Denel is a proud technology and training partner to numerous South African Government entities.

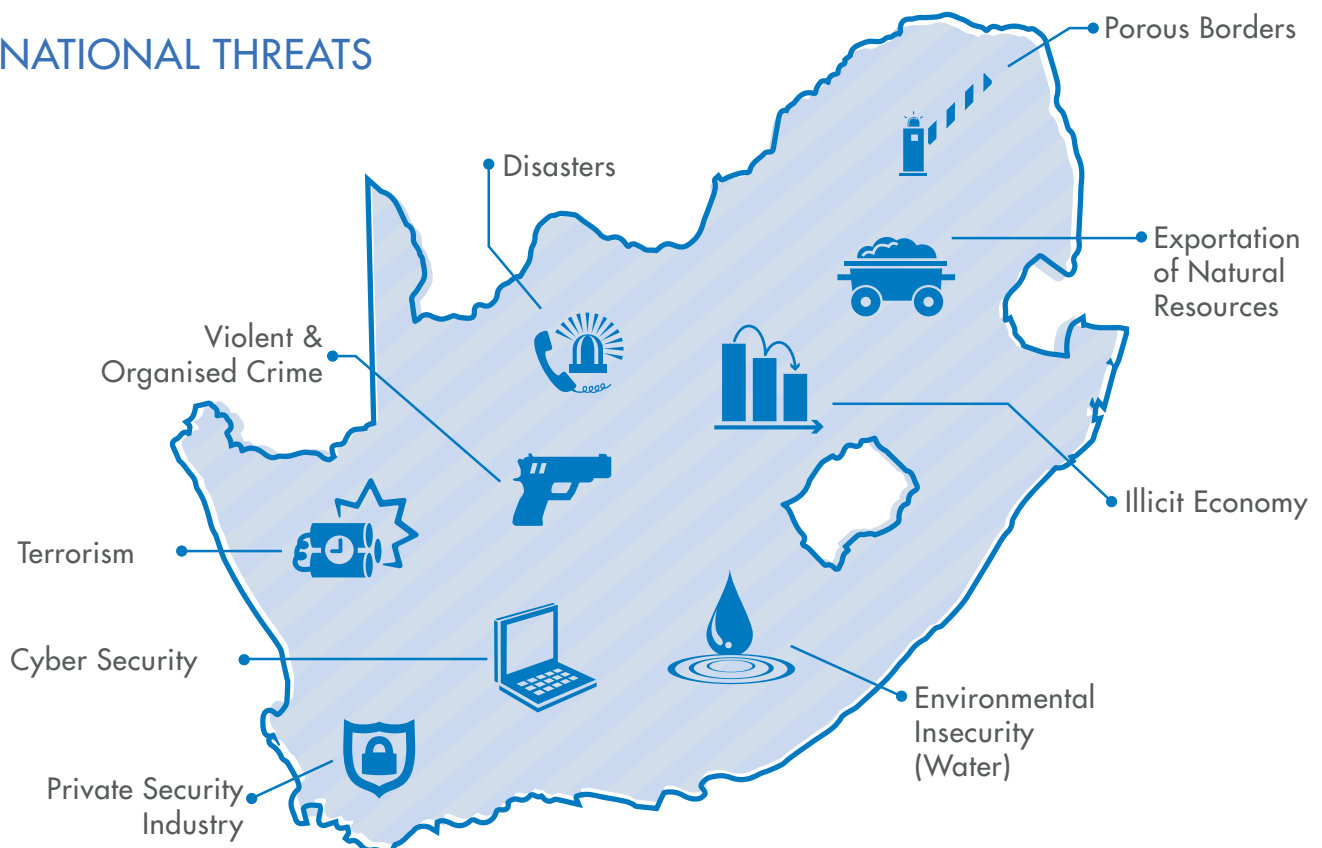
- Contribute to the prevention of smuggling and trafficking of human beings and goods
- Prevent illegal cross-border movement
- Contribute to the protection of the Republic's Environment and Natural Resources
- Contribute to the facilitation of legitimate trade and secure travel
- Ensure effective and efficient border law enforcement at ports of entry and on the borderline
- Contribute to the socio-economic development of the Republic of South Africa
- Protect the Republic from harmful and infectious diseases, pests and substances



BORDER MANAGEMENT



NATIONAL THREATS





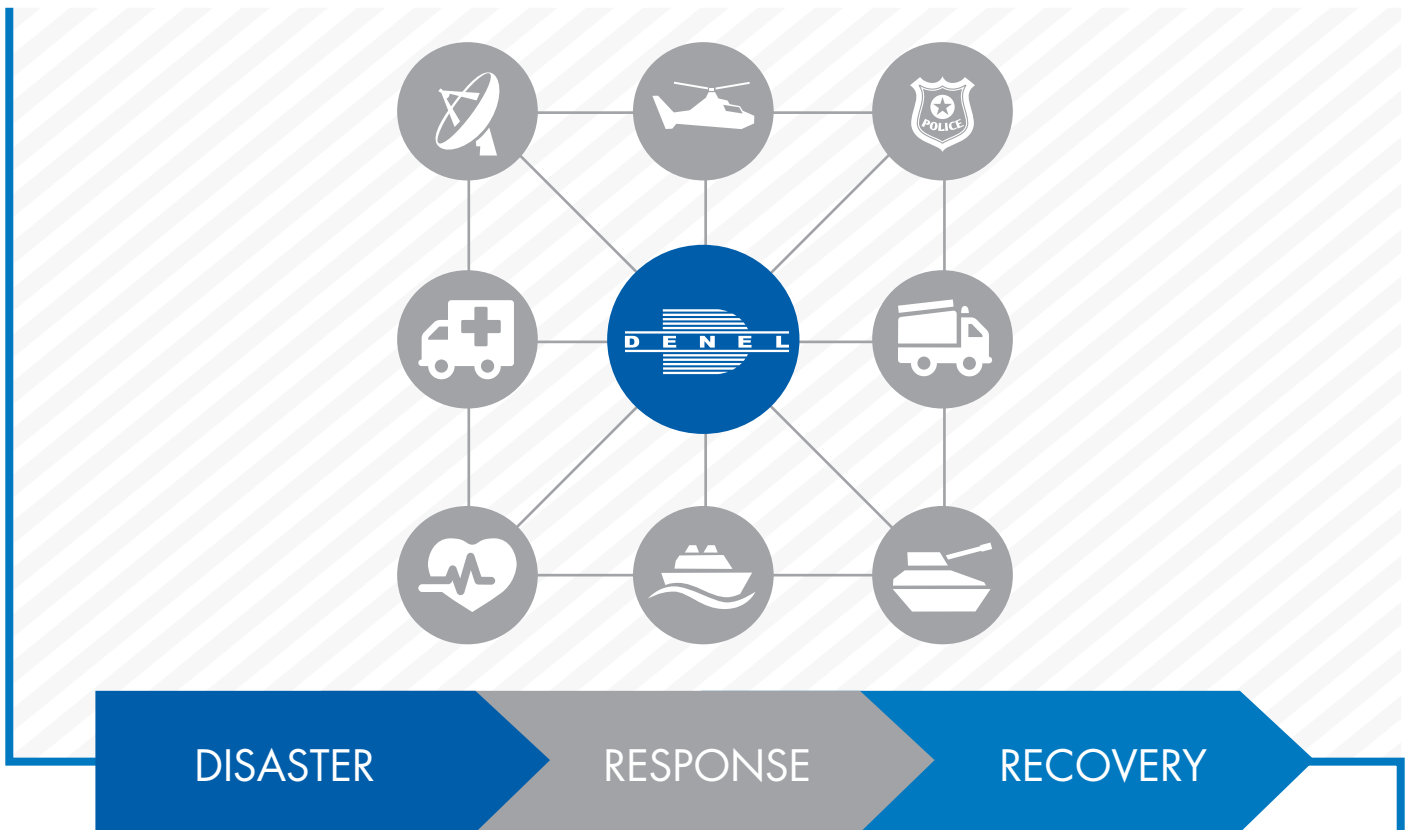
NATIONAL AVIATION SECURITY

Denel has expanded into the aviation security market and is able to offer state-of-the-art integrated security solutions for airports through smart strategic partnerships.

The technology includes:

- Baggage and parcel inspection
- Cargo and vehicle inspection
- Hold baggage screening
- People screening
- Radiation detection
- Explosives detection
- Risk assessment
- Training





NATIONAL DISASTER MANAGEMENT

Denel firmly believes that being prepared is half the battle won and, in conjunction with strategic industry partners Denel's clients are able to mitigate and manage the damage resulting from disasters of whatever nature. The system comprises of critical elements such as early warning, situational awareness, predictive analysis, simulation and training and research and development.



POLICE

Denel has a long standing relationship with the South African Police Services and is a proud supplier of technology products and solutions to the SAPS. Denel products and solutions assists the SAPS in their fight against crime through detection, identification and conviction of criminals

Denel supports law enforcement in areas such as:

- Command & Control
- Static & Mobile Solutions
- Surveillance
- Biometrics
- Simulation & Training
- Information integration
- Secure Communication



SIMULATION AND TRAINING

DENEL ISM together with industry partners provides complete simulation and training solutions according to user requirements and concept of operations.

Denel ISM offers the following training solutions:

- Classroom training
- On equipment training
- Standalone training
- Integrated system training
- Joint ops training
- Simulated/Emulated training







Denel: Your Preferred Trusted Sovereign Technology Partner

The name Denel inspires trust; it inspires confidence; it speaks of a rich heritage; it speaks of an evolution forged in the fires of this country's proud defence industry. Denel is, quite simply, the trusted name in defence technology:

- Brand Equity
- Trusted State-owned Technology Partner
- Leadership and Programme Management
- Extensive Systems Engineering Capability
- Integrated Solutions
- Military and Paramilitary Customers
- Knowledge/ Experience/ Cost-effective
- Own facilities declared National Key Point areas
- Vetted personnel and technologists
- Part of national security, technological and empowerment agenda

Denel: Now offering its Defence experience to the Sovereign Security Market



Denel SOC Ltd. t/a Denel Integrated Systems & Maritime Reg No 1992/001337/30

Nellmapius Drive, Irene, Centurion, 0157, South Africa. T: +27(0)12 671 2468 E: marketing@denelism.co.za

www.denelism.co.za