

**Excellence  
Honoured at  
Awards Function**

**Casspir Eland Joins  
Denel's impressive  
vehicle stable**

**The Power  
of the Rooivalk  
on Show**

**Security Concerns  
and Smuggling  
Lead to Rising Demand  
for Canine Sleuths**



# DENEL GROUP VALUES



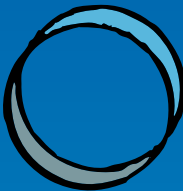
## PERFORMANCE

WE EMBRACE OPERATIONAL EXCELLENCE.



## INTEGRITY

WE ARE HONEST, TRUTHFUL AND ETHICAL.



## INNOVATION

WE CREATE SUSTAINABLE INVESTMENT SOLUTIONS.



## CARING

WE CARE FOR OUR PEOPLE, CUSTOMERS,  
COMMUNITIES, NATIONS AND THE ENVIRONMENT.



## ACCOUNTABILITY

WE TAKE RESPONSIBILITY FOR ALL OUR ACTIONS.

# Contents

## Issue highlights



- 2 Editor-in-Chief
- 3 Message from the Acting GCEO
- 4 Excellence Honoured at Awards Function
- 5 New Nose Concept Adds Quality to Umkhonto
- 5 Clever Robot Detects Landmines to Save Lives
- 6 Follow the Heat with Dynamics' New Seeker
- 6 Innovative Ball Offers Vital Strategic Information
- 7 Helicopter Missions now Planned from Laptops
- 7 New Move to Support Dynamic Business Growth
- 8 The Power of the Rooivalk on Show
- 10 Lumka Msibi Speaks at Global Conference
- 10 Support for Denel Demonstrated in Parliament
- 11 Nyala Adds to Crime Fighting in Tshwane
- 11 Bright Spark Leads to Improved Safety
- 12 Casspir Eland Joins Denel's impressive vehicle stable
- 13 Denel Asia will expand business into South East Asia
- 14 Trusted Casspir Adds Firepower to its Mine-protection qualities
- 15 Security Concerns and Smuggling Lead to Rising Demand for Canine Sleuths
- 16 New Body for the Local Defence Industry Launched

## Editor's Note

We would like to hear from you!

Denel Insights has been created as an external communications platform to keep you – our stakeholders informed about the projects and developments within our Group. We would love to hear your comments and suggestions about stories that you would like us to update you on.

Please email your letter to the editor to [pamm@denel.co.za](mailto:pamm@denel.co.za), and include your name and contact details.

We look forward to hearing from you.

**Pamela Malinda**



Vuyelwa Qinga

*“This edition of Denel Insights celebrates recent successes in the marketing of the company’s unique product range and tells you more about new innovations – and innovators – that can develop into the mainstay of the company’s future success.”*

## Editor-in-Chief

The recent establishment of the SA National Defence Industry Council was a watershed moment for Denel as the country’s premier manufacturer and leading innovator in defence systems.

The new Council, to be chaired by the Secretary of Defence, Dr Sam Gulube, is one of the first tangible manifestations in the implementation of the Defence Review. Speaking at the launch, the Minister of Defence and Military Veterans, Nosiviwe Mapisa-Nqakula emphasised the value of the local defence industry, but also made it clear that government will take the necessary steps to support its viability and competitiveness.

This has important implications for Denel as a state-owned company that is currently in an important growth phase. To sustain the business and build on its reputation for excellence Denel will continue to be an active partner of the SANDF and the local security sector.

At the same time it has to grow its profile in the international arena where it is already recognised as one of the top 100 global

companies in a very competitive environment. The establishment of a joint-venture company, Denel Asia and the high-profiled presence at the DefExpo in India signals Denel’s intention to pursue more opportunities in the expanding Asia-Pacific region.

This edition of Denel Insights celebrates recent successes in the marketing of the company’s unique product range and tells you more about new innovations – and innovators – that can develop into the mainstay of the company’s future success.

The value of Denel continues to be celebrated – by industry analysts at the recent demonstration of the Rooivalk, by the feedback from satisfied clients and by elected representatives across the aisles in Parliament.

Enjoy this edition of Denel Insights and, please, continue to give us your feedback.

**Vuyelwa Qinga**

Group Head: Corporate Communication & Public Affairs

*The value of Denel continues to be celebrated – by industry analysts at the recent demonstration of the Rooivalk, by the feedback from satisfied clients and by elected representatives across the aisles in Parliament.*





Mr Zwelakhe Ntshepe

*“Operational excellence remains the cornerstone of Denel’s business and continues to drive our ability to generate own cash and expand our activities.”*

## Message from the Acting GCEO

### Denel Strategy on Course to Move from ‘Good to Great’

Operational excellence remains the cornerstone of Denel’s business and continues to drive our ability to generate own cash and expand our activities.

The message we are bringing home to our employees, clients and stakeholders is that the Denel Group strategy has not changed – but it is undergoing some strategic improvements.

This strategy is based on four pillars – to grow revenue and improve customer relations; to increase productivity, efficiency and profitability; to enhance capabilities and foster innovation; and to create a dynamic and vibrant organisation.

These interconnected strategic drivers are still on track and are not changing because they have yielded results for the company. They will continue to be the focal point of execution – albeit with some minor adjustments. As Denel grows, certain elements within the business have to change to accommodate the expansion and enable the business to fund the growth.

This phase will focus on operational excellence that will drive our ability to generate our own cash. This will be done through doing the following:

- Paying special attention to an effective business model that looks at our maintenance, repair and overhaul (MRO) capability which has sustained Denel, as well as ‘New Build’ which positions us in new markets and assists in sustaining the business;
- Local markets, which give us certainty – as we are the sovereign hosts of the capabilities – as well as export markets which present uncertainty with growth opportunities.

To realise the sustained future for Denel we also have to streamline our business, hence the integration of Denel Land Systems and Denel Vehicle Systems. Further details on this integration will soon be communicated.

Our vision is to turn Denel into a valuable, sustainable national asset. I am extremely positive about the future of Denel in terms of financial performance, transformation and growing into a high-achieving advanced technology company aligned to the developmental, defence and security imperatives of the Government and country.

We are counting on your support as we move Denel from **“Good to Great”**.

**Zwelakhe Ntshepe**  
Acting Group CEO

# Excellence Honoured at Awards Function

Denel honoured its Top Young Achievers at an event addressed by the Deputy Minister of Public Enterprises, Mr Bulelani Magwanishe. At the function top performers in four categories were recognised – high school learners from our Schools Outreach Programme; bursary holders; interns and learnership beneficiaries; artisans and Denel Technical Academy students.

Matriculants who participated in our Maths and Science enrichment programmes in Gauteng, Mpumalanga and the North West, received a 100% pass rate in the 2015 year-end exams. The 230 Grade 12 learners raked in 117 distinctions and more than 60% of the class received exemptions for university studies.

One of the participants, Given Mkhwanazi, was recognised as the second best achiever in Mpumalanga while Abongile Booi emerged as one of the top learners in the North West. Ernest Molelle from Reiger Park High School achieved 8 distinctions and received a national award from the Minister of Basic Education.

Our contribution to the training of young engineers, scientists and artisans in South Africa is reflected in the achievements of students and high school learners who benefit from the company's bursary and educational programmes. Mr Magwanishe congratulated Denel for contributing to South Africa's economic development through education and training.

Some of our divisions have long-standing partnerships with schools such as Olievenhoutbosch and Steve Tshwete in Tshwane, Etwatwa Secondary School in Benoni and Vaal Reefs Technical High School in Orkney.

We also attract some of the best and brightest young minds in South Africa through our internship and bursary programmes. This demonstrates our commitment to remain a global leader in the defence, security and technology sectors.

During the 2015 academic year Denel provided bursaries to 83 students at various universities and they achieved a 100% pass rate. We take great pride in the achievements of the students who are graduating in engineering disciplines and are contributing to the country's skills base in the fields of technology, advanced manufacturing and design.

Apprentices who attend the Denel Technical Academy in Kempton Park were also honoured at the prize-giving function. The Academy offers tertiary training to 345 first year students who then continue to gain practical experience in industry before returning to Denel to qualify as apprentices.

Among the class of 2015 were 60 students from Cameroon who have studied in various aviation-related trades at the Denel Technical Academy.



# New Nose Concept Adds Quality to Umkhonto

The performance and reputation of the Umkhonto infrared missile have been further enhanced with the development of a new discardable nose system.

When integrated with the other features of the surface-to-air-missile it now enables the Umkhonto to intercept targets at greater distances than ever before. Because the nose is discardable the existing advanced capabilities of the missile remains unscathed.

With this development Denel Dynamics has become only the second company in the world to design a system of this nature. It is a breakthrough innovation for Denel and strengthens the global reputation of the company as an innovative and leading technology powerhouse.

The team at Denel Dynamics were given the task of designing a system that would reduce the drag of the Umkhonto IR missile and to extend its range, without affecting the performance of its infrared seeker. In practice, the target is acquired and tracked by surface-based radar systems.

After launch, the missile flies to a lock-on point, using on-board navigation. Once the missile is in close vicinity the infrared seeker locks on to enable the missile to intercept the target. It is at this point where the discardable nose adds a major advantage.



The system will be used to reduce the drag of the missile for its entire flight before infrared homing is initiated. The final design consists of three major subsystems. The first is the release mechanism which enables the system to detach from the missile. Then, the attachment mechanism enables the system to securely attach to the missile without altering its existing design. And, finally, the structure forms the aerodynamic shape required while withstanding the forces expected at supersonic speeds.

## Clever Robot Detects Landmines to Save Lives



Mr Selaelo Mojela and Mr Isak Sokuwe presenting their latest invention

An innovative robot that can help to detect landmines and minimise the risks on lives now forms part of the Denel Mechem 'toolbox.' Designed by electronic technicians,

Selaelo Mojela and Isak Sokuwe the robot confirms Denel's leadership role in innovation in the field of demining services.

The robot also ensures that a more cost-effective demining solution is offered to clients. In the choice of the components of the robot Mojela and Sokuwe focused on options that can improve the business impact and result in cost- saving methods in the design.

The device has a basic camera installed that ensures the area in which it is operating is visible and the person controlling the device is able to monitor the movements of the device. It also has a Wi-Fi router, for wireless communication, that sends information signals to a laptop or tablet.

With its robust components and well thought-out features the new device will add to Denel Mechem's capabilities and reduce the risks to the lives of both humans and the company's highly regarded sniffer dogs.



## Follow the Heat with Dynamics' New Seeker

A simpler, more cost-effective solution to display heat images from targets identified by Denel Dynamics's missiles has been designed and tested by the company.

This breakthrough technology demonstrates the innovative spirit and skills available at the company and will contribute to cost savings.

The missiles manufactured by Denel Dynamics require some form of guidance – something that shows the missile where its target is. This part of the missile – similar to a camera is known as the seeker. What the designers intended to do was to create

screen that can display a target scenario to a missile seeker. This can then simulate real world scenarios, simplify testing and saving money.

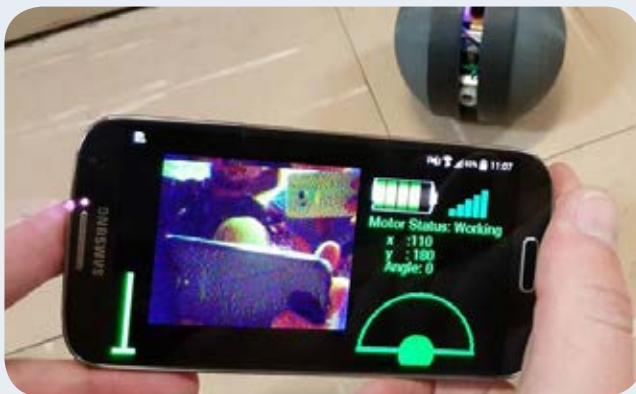
The images that are worked on are infrared. The missile seeker sees the heat its target creates and follows the heat. So, the aim was to make a screen that displays images in heat.

The designers developed and manufactured pixel arrays in collaboration with DETEK. The system is modular and can be easily expanded. All subsystems were successfully tested.

Multi-million dollar systems exist, but are too expensive. What Denel Dynamics did was to create a simpler, cheaper technology that is clearly beneficial.



## Innovative Ball Offers Vital Strategic Information



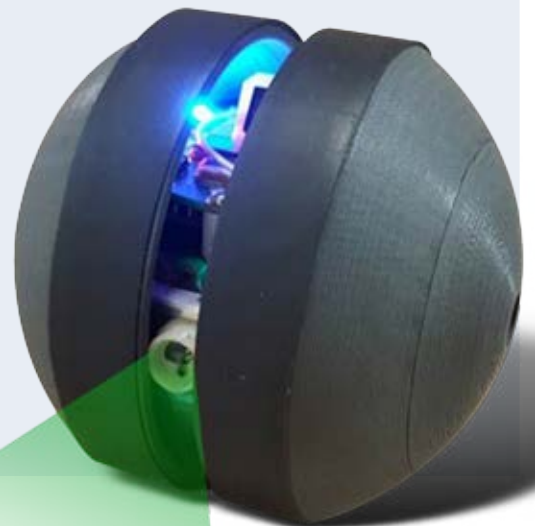
Only slightly bigger cricket ball and controlled by a smart phone – an innovative new device developed by interns at Denel Dynamics will now provide soldiers with unprecedented tactical information.

The Tactical Observation Ball System – TOBS – enables soldiers to see beyond the conventional barriers of the battlefield. It is a lightweight and compact ball that can be easily carried by soldiers until such time that they need to see what is happening inside a room or building.

It is then deployed through a window or opening and controlled through a smartphone. By moving the ball around within the area soldiers gain critical visual information without putting lives in danger.

TOBS has the capability to transform the strategic battlefield decision-making process, giving ground troops a massive advantage over their enemies.

The ball is able to move around and spot people by means of its on-board camera. It is designed and built to be incredibly robust – navigating over various terrains and surviving drops on concrete. The team of interns at Dynamics created three different balls with slightly different wheel shapes, all of which are stored in a protected case with a charger, cables and smartphone.





## Helicopter Missions now Planned from Laptops

Planning helicopter missions in great detail has just become easier through a software application for the Oryx helicopter developed by Denel Aviation.

The team of software engineers has created the Oryx Mission Planning System to be used in future by South African Air Force pilots flying the Denel-manufactured medium-sized utility helicopter. This development forms part of the Drummer II programme to upgrade avionics and navigation systems on the Oryx.

Oryx pilots and navigators based in South Africa or in the Democratic Republic of the Congo can now perform all planning tasks prior to the start of the mission from a laptop computer in the office or inside the aircraft utilising the helicopter's power.

The planned mission data is then downloaded onto a Data Transfer Device that is plugged into on-board computers during mission operations. The data gathered during the mission is then used for debriefing purposes. Data processed by the software include navigation, communication, aircraft configuration, maps, log cards and flight plans. The integrity of the data is ensured through the use of assigned roles and associated password protection.



Oryx helicopter

## New Move to Support Dynamic Business Growth

Denel Dynamics is establishing a shipping department to facilitate the movement of its products to its customers.

This important shift in focus from being a “job shop” to a “production approach” can be attributed to a healthy growth in demand for its products.

Increased demand has to be met within the same period of time, with the same amount of money and available people, leading to the risk of resource constraints.

The new centralised shipping department will be established with a computerised system, business policies and procedures that will better manage these resource constraints.

The team at Denel Dynamics looked at existing processes and considered areas of improvements that might lead to a “to be” process. This led to the drafting of an implementation plan.

The new department will contribute to Denel Dynamics’ success in the export and import processes and enable the company to remain competitive in global markets.





Rooivalk demonstration at Denel Overberg Test Range

## The Power of the Rooivalk on Show

The formidable combat capability of the Rooivalk Attack Helicopter, one of the most advanced weapon systems produced by the South African defence industry, was on display during a recent demonstration to a wider audience.

Members of various defence forces, defence analysts, the defence industry and the media attended a demonstration of the Denel Rooivalk equipped with the Denel Mokopa missile, ballistic rockets and cannons at the Denel Overberg Test Range in the Southern Cape.

"The Rooivalk has been praised by both international and local defence analysts since its first deployment in support of South African forces in the Democratic Republic of the Congo in 2013," says Zwelakhe Ntshepe, the Acting Chief Executive of Denel.

"Since then it has proven its value in combat situations on numerous occasions, providing our forces with unrivalled firepower, mobility and protection from the air," he says. "The introduction of the Rooivalk has been a game-changer in operations against rebel forces in the region and the helicopters are making invaluable contributions to the success of the United Nations Stabilisation Mission."

The precision-guided Mokopa missile will add to the strike capabilities of the Rooivalk and will enable it to play a more decisive role in combat operations. The air-to-ground missile, designed and developed by Denel Dynamics as an anti-tank weapon can reach and destroy targets at distances of up to 10km.

The Mokopa missile, first fired from the Rooivalk in 2011 demonstrated the effectiveness of the missile both in accuracy and terminal effect. The missile has since evolved with the development of a HE Fragmentation Warhead, increasing the capability of the missile to a wider range of targets.

Ntshepe says the Rooivalk fleet available to the SANDF have performed exceptionally well in "hot-and-high" environments and in difficult operational circumstances. "Its high cruise speed, exceptional climb rate and power to weight ratio offers confidence to our troops and create doubts among opposing rebel forces."

The world-class capabilities of systems such as the Rooivalk and the Mokopa have also strengthened the reputation of Denel which is now ranked among the world's top 100 defence technology companies.





*“The Rooivalk has been praised by both international and local defence analysts since its first deployment in support of South African forces in the Democratic Republic of the Congo in 2013”*



Ntshepe says the current version of the Rooivalk, the Mk1F baseline was released for operational deployment in 2011 by Denel to the SANDF and Denel remains responsible for continued airworthiness and operational effectiveness of the aircraft as the original equipment manufacturer. Discussions are at an advanced stage with the Department of Defence and the SAAF regarding an upgrade to the current baseline that will also enhance operational effectiveness of the aircraft. Denel remains confident that this will logically lead to a next generation Rooivalk – or the Mk2 baseline – that will also be available for the export market.

The three day demonstration at the Denel Overberg Test Range showcased the effectiveness of the Rooivalk when deployed in tandem with a world-class missile system. “It demonstrated the value that the Rooivalk development has brought to South Africa’s defence and manufacturing industries – and emphasised our capabilities to improve even further on the proudly local product,” says Ntshepe.

# Lumka Msibi Speaks at Global Conference



*"The day featured prominent speakers who focused on South Africa as a post-apartheid / post-Mandela country. Lumka Msibi, an aeronautical engineer recognized for her commitment to promoting South Africa as a place where youth can thrive and make the world a better place, highlighted the importance of education, and specifically expertise within STEM to move South Africa forward."*

Rising young achiever Lumka Msibi received another accolade in the field of science and technology when she was invited as a keynote speaker at the IWF World Cornerstone Conference.

The International Women's Forum event brought together 400 distinguished leaders from around the globe for the conference. The IWF advances leadership across careers, cultures and continents by connecting the world's most eminent women of significance and diverse achievements.

It has a membership of more than 6 000 women leaders in 33 countries across six continents with the objectives to exchange ideas, to learn, inspire, and to build better leadership for a changing world.

Other prominent South African speakers at the IWF included Dr Nkosazana Dlamini-Zuma, the Chairperson of the African Union, Ms Phumzile Mlambo-Ngcuka, the Under-Secretary-General of the United Nations, Adv. Thuli Madonsela, the Public Protector and the well-known business leader, Ms Bridgette Motsepe-Radebe.

South African members of the IWF global organisation include the Minister of Science and Technology, Ms Naledi Pandor, former First Lady Ms Zanele Mbeki and business leaders Maria Ramos, Wendy Appelbaum and Pam Golding.

Msibi, an aeronautical engineer at Denel Spaceteq, previously received South Africa's highest recognition for young ambassadors, the Ubuntu Youth Diplomacy Award.

## Support for Denel Demonstrated in Parliament



Denel's recent presentation to Parliament on its annual financial statements drew compliments from Members across the political spectrum.

The presentation, made to the Select Committee on Communications and Public Enterprises from the National Council of Provinces,

focused on Denel's annual financial results from 2014/5 and the expectations that it will continue on its current growth path.

The Members of the Board and executives who met with parliamentarians said the future of the company is positive with an order book of more than R30-billion – triple the value of secured orders a few years ago and a six-fold annual revenue cover.

Denel is also pursuing a number of significant opportunities in the global markets. There is confidence that more than half of these opportunities will be concluded in the short-to medium-term. The order book is the highest in the company's history and provides it with a stable platform for future growth, expansion and sustainability.

The existing order book is largely focused on Denel's traditional strengths within the missiles, artillery, military vehicles, ammunition and aerostructures capabilities. In recent years the company has adopted a deliberate strategy to strengthen its leadership position in landward defence systems and mobilised infantry.





Mr Ish Moeketsi, Business Development Executive; Mr Mxolisi Makhatini, Deputy CEO; Clr Kgositso Ramokgopa, Mayor, City of Tshwane and Mr KS Ngobeni, Chief of Tshwane Metro Police Department

## Nyala Adds to Crime Fighting in Tshwane

Safety and security in the Capital city has been strengthened with the delivery of three refurbished RG-12 Nyala vehicles by Denel Land Systems.

Speaking at the handover the Executive Mayor of Tshwane, Kgositso Ramokgopa, said the vehicle will be used to fight crime and will contribute to the strengthening of the Tshwane Metropolitan Police Department – TMPD.

The delivery took place at the headquarters of the TMPD in Pretoria West and the function was also attended by the Deputy CEO of Denel Land Systems, Mxolisi Makhatini and the Chief of the TMPD, K S Ngobeni.

The RG-12 has been designed as a police public order vehicle for both urban and rural operations and has been specifically re-

manufactured to meet the needs of the TMPD. A number of Metro Police officials underwent a train-the-trainer course to familiarise themselves with the vehicle and its unique features.

The successful completion of the transaction is a significant step forward in Denel's efforts to engage with the municipal security clusters in South Africa. Officials from the Johannesburg Metropolitan Police Department also attended the handover function.

Ish Moeketsi, the executive marketer at Denel Land Systems says the delivery of the vehicles marks the continuation of a good relationship between Denel and the crime fighting units within local governments.

## Bright Spark Leads to Improved Safety

Occupational Safety plays a major role in PMP's daily activities and innovative employees often come up with imaginative ideas to create an even safer environment.

Mike Meiring is the latest PMP official to receive a CEO Spot Award for Sparking Innovation through his clever proposal. As a foreman, Meiring found an answer for safety concerns at the Small Arms Loading Area.

He designed a safety guard to cover the capping machine and thus protect operators from being hit by dust particles and sparks that might cause injuries to their eyes or faces.

The CEO, Phaladi Petje, presented him with an award of appreciation for his innovative and inspiring intervention. His out-of-the-box thinking has improved working conditions for the operators in the



Mr Mike Meiring with Mr Phaladi Petje, CEO PMP

Small Arms Loading Area and significantly reduced the risks of occupational injuries.

This intervention again demonstrates PMP's commitment to live the Denel value of "Caring" and promote awareness about various safety hazards that will lead to increased safety and an avoidance of injuries in the work place.



## Casspir Eland Joins Denel's impressive vehicle stable

Denel has expanded the range of its recovery vehicles based on the well-known Casspir mine resistant system and is responding to keen interest shown by clients on the African continent.

The latest addition to the Mechem vehicle line-up is the Casspir Eland – a heavy duty recovery vehicle. The Eland is a 6X6 configuration based on the well-known Casspir NG2000 series – a vehicle that has gained a global reputation for protection, power, manoeuvrability and comfort for passengers and crew.

The Eland with its monocoque design is larger and heavier than the 4X4 wheel variant, the Casspir Gemsbok. Two of these recovery variants have recently been ordered by the Angolan Defence Force.

The General Manager of Mechem, Ashley Williams says there is considerable international interest in the Casspir series of vehicles and Denel recently concluded a long-term agreement to supply various mine-protected variants to an important international client.

Mechem is also busy with the production of the Casspir 6X6 Stallion – a recovery vehicle based on a truck chassis with a protected cab and the ability to perform heavy duty recovery duties. The Casspir Stallion is also available in 4X4 and 8X8 variants providing clients a range of recovery vehicles – from light to heavy duty – based on the same vehicle model.

Williams says a number of African countries are showing interest in the complete Casspir family of mine-protected vehicles. Mechem hosted delegations from three countries in December and demonstrated the full spectrum of Casspir variants.

The advantages of acquiring different variants of the same trusted vehicle are quite obvious. Prospective clients in Africa can use the Casspir variants in different conditions and applications and they are suitable for both military operations and peace support missions.

Denel is a trusted defence manufacturer with a long-standing reputation for quality, maintenance and after-sales service. The vehicles are designed in Africa keeping in mind the unique requirements of the continent in terms of geography and weather conditions.

The Casspir range is regarded as a force multiplier and Denel has stock in hand that can be sold and handed over to the client at very short notice.

Mechem also shipped a batch of 10 Casspir personnel carriers to a client in December 2015. Williams says these vehicles were equipped with special mine roller attachments to be used in the clearance of land mines and unexploded ordnance.

The long-term agreement with the client also includes the future supply of five Casspir Stallion recovery vehicles while a further order for five more vehicles is in the planning stage as well as orders for other special Casspir variants.



Denel Asia will be situated in Hong Kong

## Denel Asia will expand business into South East Asia

**D**enel is extending its footprint into the lucrative Asia-Pacific defence markets with the establishment of a joint-venture company in Hong Kong.

Denel Asia is a partnership between the South African defence and technology group, Denel SOC and VR Laser, a company with 20 years of experience in defence and technology in South Africa.

Zwelakhe Ntshepe, the Acting Group CEO of Denel says there are a number of opportunities opening up in Asian countries where defence budgets are increasing.

"This is a vitally important region for Denel to expand its business and find new markets for our world-class products, especially in the fields of artillery, armoured vehicles, missiles and unmanned aerial vehicles," says Ntshepe.

Research shows that by 2018 the Asia-Pacific nations will command more than half of global defence procurement outside of the United States and two-thirds of non-US defence research.

"We need a firm foothold in this region and the establishment of Denel Asia with its headquarters in Hong Kong will give us a strong presence and the ability to pursue opportunities that will soon arise," says Ntshepe.

Denel Asia will focus its marketing attention on countries such as India, Singapore, Cambodia, Indonesia, Pakistan, Vietnam and the Philippines who have all announced their intentions to embark on major new defence acquisitions and grow their research and development budgets in the next four years.

Ntshepe says it is prudent to form a joint venture with a company that has an established record in South Africa and a good understanding of those markets and opportunities.

Peter van der Merwe, the CEO of VR Laser says his company welcomes the opportunity to work with Denel and to make inroads into new regional markets. "Denel is a trusted name in the global defence industry, as one of the top 100 industry companies in the world. VR Laser has expertise in defence technology and understanding of the South East Asia defence markets," he says.

The partnership also gives Denel access to VR Laser's strong capabilities in fabrication, production and support of armoured vehicles which will now be combined with Denel's strengths in the areas of design and systems integration.

Stephan Burger, divisional CEO of Denel Land System says the Asia-Pacific market is a key region for Denel to market its products and grow its order book. At the end of the 2015 financial year the company showed a sustained annual growth in revenue of 28% and a projected order book of more than R35-billion.

Joint ventures with partners that have the ability to penetrate new markets are vital to the company's future success. A similar joint venture with the Tawazun Group in the United Arab Emirates led to the establishment of Tawazun Dynamics, a company that manufactures the Al Tariq strap-on bomb kits for international clients.

"Denel Asia is a bold step into the future for Denel. It will grow our reputation in the global defence industry and enable us to penetrate new markets in a rapidly growing region," says Ntshepe.





## Trusted Casspir Adds Firepower to its Mine-protection qualities

The versatility and range of Denel's Casspir mine-protected vehicles have been expanded to accommodate the firepower requirements of different clients. This will attract the interest of defence clients looking for a versatile and cost-effective family of mine-resistant vehicles.

The General Manager of Mechem, Ashley Williams, says the Casspir is one of the most-trusted global brands for defence and police forces who require mobility and superior protection against landmines, roadside bombs and automatic rifle fire.

In the latest development of the Casspir 2000 clients can now select the type and range of firepower required to be fitted onto the vehicle. The new variants can serve as platforms for 81mm mortar systems, anti-tank and anti-aircraft weapons. The Plofadder mine-clearing system, developed by Rheinmetall Denel Munitions can also be fitted onto the Casspir hull.

Williams says Mechem is responding to opportunities in defence markets where clients need a single platform with a number of variants to meet operational requirements. The versatility of the Casspir, its modular design and its long track record of success in many environments since it first came off the production line in 1979 are among its most important features.

Denel is now able to produce a tailor-made Casspir according to the requirements of the client. Different modules are fitted onto the standard platform system and then modified according to client specifications.

This significantly extends the range and versatility of the Casspir which can now be used as a reconnaissance vehicle, a troop

carrier or as a fire-support vehicle equipped with mortars, anti-aircraft or anti-tank weaponry.

Williams says this makes the Casspir the most cost-effective vehicle in its class in the world. "Our clients can now use the same family of vehicles that offer superior levels of protection and mobility, but in different roles"

This means substantial savings on maintenance costs, spare parts and logistics. All Mechem's sales are accompanied by training packages, maintenance agreements and comprehensive fleet support, including inside the client country.

The Casspir is the vehicle of choice for demining or peace-keeping operations and has been used from Afghanistan to Mozambique by the United Nations, the South African National Defence Force, police services and private security companies around the globe.

The hull and platform of the vehicle is manufactured in its entirety in South Africa by Mechem and its partners in the local defence industry. Existing Casspir 2000NG vehicles can also be upgraded and modified to fulfil different roles as required by the client.

The conventional Casspir can be adapted to serve as a command-and-control vehicle, a field ambulance or a recovery vehicle. All variants are fitted with run-flat tyres and are available in 6X6 or 4X4 format and with a choice of manual or automatic transmission.

Williams says the Casspir is designed to withstand the blast of 14kg of explosives under each wheel – which is more than can be delivered by two landmines. It has a cruising speed of up to 40kph per hours in most off-road conditions and a reach of up to 800km on a standard fuel tank.



# Security Concerns and Smuggling Lead to Rising Demand for Canine Sleuths

Escalating global concerns about aviation safety and border security are contributing to a rapid growth in demand for South African-trained sniffer dogs.

Mechem is one of the world's most trusted breeders and trainers of canine detectives and its four-legged sleuths have a well-earned reputation for sniffing out explosives, drugs, smuggled animal products and other contraband.

Ashley Williams, the General Manager of Mechem, says there is a global shortage of quality working dogs. Regional tensions and recent incidents of terrorism on passenger airlines have led to a comprehensive rethink about security measures at airports and border posts.

Many countries are now rediscovering the capacity of sniffer dogs to screen cargo at loading bays at busy airports and to perform spot checks on vehicles moving across international borders. When you combine the natural abilities of well-trained dogs with advances in modern scanning technology you are able to provide a comprehensive security solution.

Williams says the Mechem dogs and handlers are in great demand in many conflict regions. Through the years trained teams have proven their value in landmine detection operations in countries such as South Sudan, Afghanistan and the Democratic Republic of the Congo.

The reputation of the dogs was enhanced when they uncovered a major drug smuggling operation in the West African country of Benin. Efforts to hide heroin in aircraft parts, bolts and screws could not prevent the dogs from detecting the contraband. Mechem was contracted to provide sniffer dogs and training to the government of Benin.

Cross-border tensions in West Africa have led to other countries in the region turning to Mechem for the training of dogs and handlers to be deployed at strategic border posts.

The key to the success involves the training of dogs and handlers as a team, explains Dr Hannes Slabbert, the Senior Manager: Canine Business. Clients have the options of utilising the services of teams provided by Mechem, or sending handlers to South Africa for training.

It takes up to 12 weeks to train a novice handler and a further three months to become a fully-certified trainer. Detection teams trained

by Denel are used by governments, nature conservation bodies, police services and the private sector.

Slabbert says that the unique system which combines modern technology with the canines' capabilities to search for and uncover a wide range of substances, gives the teams their edge. The Mechem Explosives and Drug Detection System – MEDDS – involves collecting air samples from suspect containers or vehicles and taking them to the dogs in a controlled environment. When the dogs confirm the suspicions investigators take further steps to physically inspect a consignment.

"Drug smugglers and terrorists are using increasingly sophisticated methods to hide illicit substances," says Williams. "Our training of dogs and handlers are constantly updated to keep one step ahead of them."

Mechem has accumulated almost 35 years of experience in the training and operational deployment of working dogs. Some of the canines are bred at the Mechem kennels in Lyttelton and then taken through the socialisation and training processes.



Mechem dog with its handler

# New Body for the Local Defence Industry Launched

**D**enel will showcase the quality and range of its defence and technology products at the coming DefExpo in India, signalling its intention to expand its presence in South East Asian markets.

“India is a major potential client for South African defence products and we intend to build on the strong bilateral relations between our two countries and our mutual membership of the BRICS alliance,” says Zwelakhe Ntshepe, the Acting Group CEO of Denel SOC.

DefExpo is one the premier defence exhibitions in the world and will be hosted for the first time in the western province of Goa, one of the fastest growing regional economies on the subcontinent. As one of the top 100 defence manufacturers in the world Denel intends to occupy prime space at a major event expected to attract exhibitors from more than 30 countries.

“The recent establishment of Denel Asia with its headquarters in Hong Kong demonstrated our intention to grow our footprint in the lucrative Asia-Pacific defence markets,” says Ntshepe.

“This gives us a beachhead in the region and enables us to market our globally-competitive products and systems in countries such as India, Singapore, Indonesia, Vietnam and the Philippines. Through or presence at DefExpo we will be able to speak directly to key defence decision-makers and analysts in the region,” he says.

Denel Land Systems is a world leader in the development and manufacturing of long-range artillery gun systems that can hit targets with great accuracy at distances of over 50km. Its G6 is a South African-designed self-propelled artillery platform, mounted on a six-wheeled chassis and armed with a 155mm gun.

The Denel stand will also include exhibitions of other landward defence products such as the GA-1 rapid-fire cannon, the SS-77 machine gun, the NTW-20 anti-materiel rifle and the Casspir mine-protected vehicle.

Ntshepe says a changing defence environment is focusing increasing attention on the role and capabilities of unmanned aerial vehicles for reconnaissance and surveillance purposes. The Seeker 400 developed by Denel Dynamics can stay up in the air for 16 hour at altitudes of up to 18 000 feet and carry a payload of 100kg. The Hungwe is a smaller tactical UAV that offers clients a cost-effective alternative that can be used in a variety of missions including border patrol, wildlife protection and search and rescue operations.

Scale models of the two locally-designed helicopters the Rooivalk combat helicopter and the Oryx utility model will also be on display at the Denel stand. Both helicopters are in service with the SA Air Force and have been deployed with great success in operational circumstances.

Denel PMP will exhibit the Inkunzi Personal Area Weapon – PAW – as well as its range of small and medium calibre ammunition for the military, security and hunting markets.

Ntshepe says Denel’s presence in Goa will help to re-establish its brand in the Asia-Pacific region – but also prepare the company for the Africa Aerospace Defence Exhibition – AAD – to be hosted in Tshwane in September.



Mr Mike Thusi, Denel Land Systems; Ms Vuyelwa Qinga, Group Head: Corporate Communication and Public Affairs; Ms Noluthando Mayende-Sibiya, SA Ambassador-designate to Benin and Mr Tsepo Monaheng, CEO Denel Dynamics. The Ambassador-designate visited Denel to get a brief overview of Denel capability in order to assist the business identify opportunities in Benin when she assumes her position there.



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