

Tech solution to rhino poaching

Dimension Data, a South African technology company, and technology company Cisco are collaborating in what is touted to be a first-of-its-kind pilot rhino protection plan – dubbed Connected Conservation – that harnesses the most advanced technology to stem the number of rhinos being poached in a game reserve in South Africa.

WHERE

An unnamed 600 sq km private game reserve next to the famed Kruger National Park.

WHY THE NEED

Staff, tourists, suppliers, contractors and security personnel enter and exit game reserves in remote places daily, making it hard to monitor and keep track of them due to limited IT infrastructure and heavy reliance on manual security checks.

WHAT THE PLAN WILL DO

Individuals entering the park will be tracked and monitored from the time they pass through the reserve gate until they exit.

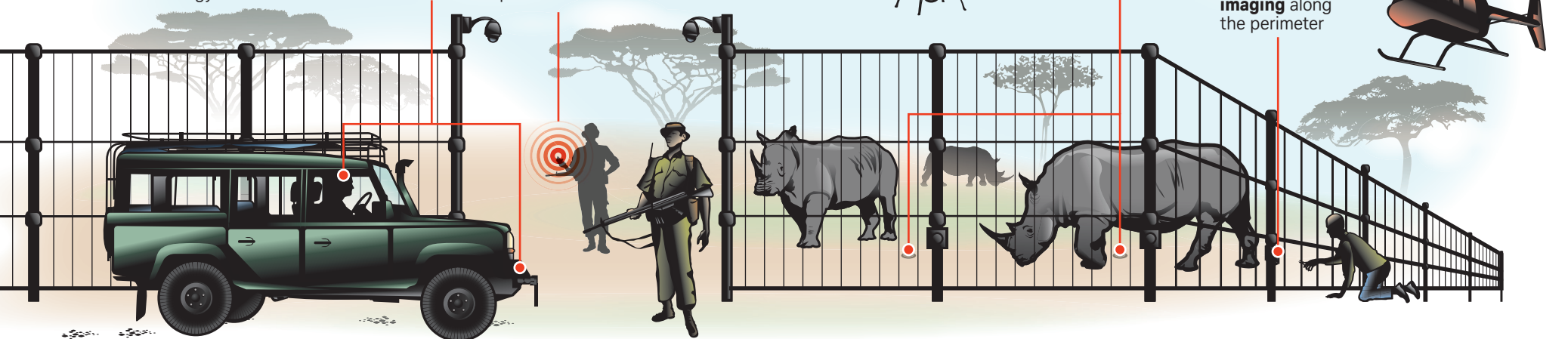
HOW IT WORKS

Data collection and analysis (Phase one: up and running)

- Data of visitors who enter and exit the reserve is collected via biometric scanning and closed-circuit television technology.
- Registration plates of vehicles are captured and uploaded to the database.
- The data, stored in the cloud and updated real-time, can be easily shared and retrieved by rangers on multiple devices. This allows for quick action if there are threat alerts.

Other monitoring tools (Phase two: slated to be fully operational by year-end)

- **Surveillance drones** fitted with infrared cameras
- **Seismic sensors** on the ground
- **Helicopters** dispatched with armed response
- **Thermal imaging** along the perimeter



A GREED-FUELLED SYNDICATE

Smuggled horns, more valuable than gold, can fetch astronomical prices as they transit from source country to black markets in buyer countries. See example below.



Rhino killed by local poacher and horn removed
Poacher/Local supplier charges

US\$300 to US\$400 per kg

Market in Assam, India
Carrier/Smugglers charge

US\$1,000 to US\$4,000 per kg

Transit markets such as Dimapur, Kolkata and Darjeeling in India
Smugglers charge

US\$4,000 to US\$18,000 per kg

Last market in South Asia such as Kathmandu in Nepal
Smugglers charge

US\$20,000 to US\$30,000 per kg

Ultimate market in Asia such as Vietnam and China
Smugglers charge

US\$32,000 to US\$38,000 per kg

PROS

RAPID RESPONSE
Proactive intervention when illegal entries or activities are detected.

NO TRACKING OR DISTURBING OF THE ANIMALS
Animals will be spared the trauma of:
• Being tranquillised to implant chip sensors into their horns or under the hide to track them, and attaching collars to them.
• Dehorning.

A USEFUL TESTBED
The system, if proven successful, can be replicated in other reserves to protect other vulnerable land and sea species such as lions, tigers, elephants, pangolins and sea rays.



CON

HEFTY COST
Less wealthy institutions will balk at the cost of US\$1.5 million (S\$2 million) per year for the system.

RHINO FACTS & FIGURES

At least 5,940 African rhinos have been killed by poachers since 2008.

In 2014, 1,215 rhinos were killed by poachers. This is equal to 1 rhino being killed every 8 hours.

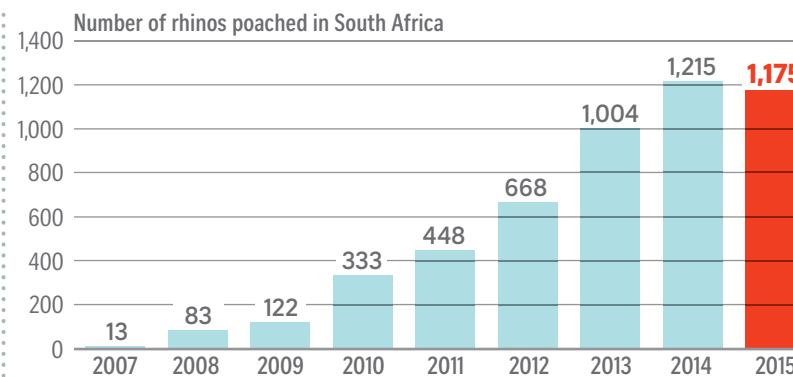
If this persists, rhinos will go extinct in South Africa by 2025.

South Africa is currently home to about 70% of the remaining rhinos in the world – most of which reside in the Kruger National Park.

NOTE: Many of the poachers who target rhinos in Kruger National Park come from neighbouring Mozambique.



The Australian Rhino Project charity plans to move 80 rhinos from South Africa to Australia in a bid to prevent them from being hunted to extinction. The whole exercise could cost around US\$60,000 per rhino.



NOTE: A total of 1,338 rhinos were killed in Africa last year.