



ACN: 630 783 774

Tuesday, 30 March 2021



Postal Address:  
PO Box 4196, Lucas, VIC 3350.

Queensland Government (Government)  
Minister for Police and Corrective Services and  
Minister for Fire and Emergency Services

Through the Committee Secretary  
Transport and Resources Committee  
Parliament House  
George Street  
Brisbane Qld 4000

Dear Madam and Sir,

**Parliamentary Inquiry Submission: Remote Vehicular Immobilisation [DuroVent]**

In the pursuit of contributing meaningfully to Australian Public Life and Community Safety, we herewith enclose this Submission and Proposal on reducing vehicular offending and recidivism for your consideration.

We are a company established by an African Australian seeking parity and elevated contributions to Australian Intellectual Economy and Australia at large.

We look forward to your favourable consideration.

Warm regards,

A handwritten signature in black ink, appearing to read 'Michael Akindeju'.

**Dr Michael Akindeju**

PhD, CEng, RPEQ, CChem, PgD (Banking & Fin), FIChemE, SMAIChe, MAusIMM, MRACI

**Founder and Director**

engineering

## The Challenges

Vehicular offending<sup>1</sup> has become a significant issue for Australia and the world in general. There is also an increasing focus by law enforcement agencies globally on how to manage offending drivers.

The Government, and police, are continuously devising means of intervening, apprehending or eliminating threats associated with dangerous driving before the associated risks manifest. The current volume of offending and how offenders perpetrate their crime pose a safety and security risk to the community and police.

Too frequently, aggravated vehicular offending has led to injuries and deaths for civilians and police. Police and civilian injuries and deaths due to high-risk police pursuits remains a wicked problem for legislators, police and courts. To date, attempted remedies have either been unsafe or tactically insufficient to resolve the offending, especially for the recidivist. We have designed a patented solution designed to achieve a tactical resolution.

## Problem Definition

Vehicular offending, including acts of terrorism involving vehicles, which often require dangerous pursuits, have claimed many lives across Australia – it is also a global problem.

## Overview

We herewith submit and propose that the Government through the Minister of Police and Corrective Services and Minister for Fire and Emergency Services, in line with Government's priority areas, consider acquiring several units of our DuroVent Product over a period in a phased implementation. We base this proposed acquisition on our '*Certified-Consortimmobiliser Innovation-Patent*<sup>2</sup>' for deployment on vehicles of identified offenders. Aggravated vehicle offending and recidivism can be significantly reduced using our patented products.

Our solution is in response to the growing number of incidences that require dangerous police pursuits as results of vehicular offending, including:

- acts of terrorism involving the use of a vehicle
- dangerous driving causing injuries/death
- vehicular thefts accompanied by dangerous driving

**The solution can be retrofitted into any vehicle**, and hence suitable for inspection regime for registered vehicles, pre-sale certification scheme and after-market vehicle modifications. However, the deployment require modification or amendments to ADR 80/00.

## Overall Objective

The Government, through the Minister of Police and Corrective Services and Minister for Fire and Emergency Services, consider placing an order several of our Remote Engine Immobilisation solution (DuroVent) over a period in a phased implementation at a projected \$975 unit cost. Additional 10,000

<sup>1</sup> <http://statements.qld.gov.au/Statement/2018/10/18/remote-engine-immobilisers-on-the-agenda>)  
<http://amp.abc.net.au/article/12174586>

<https://www.facebook.com/victoriapolice/videos/2694293317251646/>

<sup>2</sup> Certified Innovation Patent # 2018101847.

units ordered will attract a 1% economy of scale discount on the additional number of units. Units to be delivered in tranches over five years, with 18 month lead time for first delivery from the contract date.

## Solution Definition

VMI, a subsidiary of MKPro Engineering Pty Ltd, has developed and patented a viable solution to enable the Police to immobilise offending vehicles remotely but safely. This solution has been built and successfully field-tested and implemented in a test vehicle.

## Benefit of technology solution to Users

Purpose design and built to change the “High Reward Low Risk Profile” thefts of critical assets (e.g. Car, Truck, etc.); aid ending Police car pursuit and improving fleet productivity the benefits to you include

- **DuroVent** comprising of **DriveIntervent™** to safely stop an offending asset determined for apprehension, and **SpeedIntervent™** to safely bring a target over-speeding vehicle to objective speed limit.
- **Geofencing** to limit the travel of a target vehicle to within a prescribed radius from set origin.
- **DuroFleet**, a fleet Management tool, records and graphically displays vehicular drive pattern (hard braking), rest time and idle time for productivity improvement.
- Our technology keeps the log of locations and intervention commands issued to target vehicle on dedicated and secure servers.
- Records are available on demand, otherwise only records pertaining to **intervented** period is system-generated and sent securely to parties involved.
- Our technology is cased in high temperature proof casing to increase data log time even during vehicular-fire incidence.
- Target vehicles are positively identified and authenticated over a secure communication channel.



## Uniqueness of Our Solution

Unlike previous attempts at solutions to remotely immobilise vehicles, our patented technology<sup>3</sup> **DuroVent™**, **DuroFleet™**, **DuroChem™** **DriveIntervent™** and **SpeedIntervent™** does not disable the vehicle drive train.

With our solution-**DuroVent**, the vehicle braking and steering systems remain active – DuroVent targets the fuel pump (for fuel injector engines) or the Motor power circuit (for electric engines). This solution now enjoys Certified Innovation Patent status and is owned by MKPro Engineering Pty Ltd.

<sup>3</sup> DuroVent™, DuroFleet™, DriveIntervent™ and SpeedIntervent™ are registered Trademarks of VMI.

The Government has not previously considered this solution. However, we have consulted with some key agencies (please see the section on Stakeholder Consultations on page 6).

## Benefit Definition & Cost Benefits to Government

As opposed to purchasing high cost, high performing Police pursuit vehicles, the DuroVent solution will:

- have more comprehensive coverage at every point in time, and any sworn member can execute the immobilisation of a vehicle targetted for apprehension
- further, enhance social legitimacy and licence of the police within the Communities
- assure and improve the safety of frontline Police Officers by reducing the need to be on the road pursuing vehicular offenders (Those resources can be deployed elsewhere for workforce optimisation)
- eliminate unnecessary loss of innocent lives (police officers, drivers and civilians)
- enhance vehicular safety for individual users
- create local jobs, especially in regional Victoria and contribute to our economy
- make our roads safer by encouraging safer driving
- create export opportunities, nationally and internationally.

## Benefits to The Community

DuroVent will allow police to monitor identified offender-vehicles remotely and allow immobilising of a vehicle remotely and safely when determined for apprehension. Immobilisation can be executed by any officer that has access to the platform.

Further, DuroVent will enhance the police's social legitimacy and licence with communities as our solution reduces the unnecessary deaths associated with dangerous police pursuits and acts of terrorism involving the use of a vehicle when fully deployed.

Few of these ancillary benefits nor those articulated in **"Benefit Definition & Cost Benefits to Government"** are currently feasible with current approaches to road policing.

Further, it is a considered opinion that this technology might provide a more feasible option and agreeable solution for road policing when compared with the maximum force solutions some Governments recently adopted.

## Business Capacity to Produce and Support Mass Roll-Out

We have deployed our technology's computational component on Amazon's Expandable EC2 platform to have the capacity for 1.6million concurrent instances from operating units in production. This capacity is expandable to 1billion on demand and can be expanded further when required.

The manufacturing process has been streamlined to eliminate human errors that could be associated with the assembly line. With this, we have achieved and established installed capacity and capability to manufacture 1,000 units of this product per week, with a scheduled plan to increase throughput to 3,000 per week on-demand.



## Funding

Upon placing an order and without prejudice to the Government's payment structure, we anticipate that the Government shall provide 40% of the total order value. VMiT will source additional working capital from the bank to get manufacturing and assemblage going. We also anticipate that the Government will consider funding the order as follows:

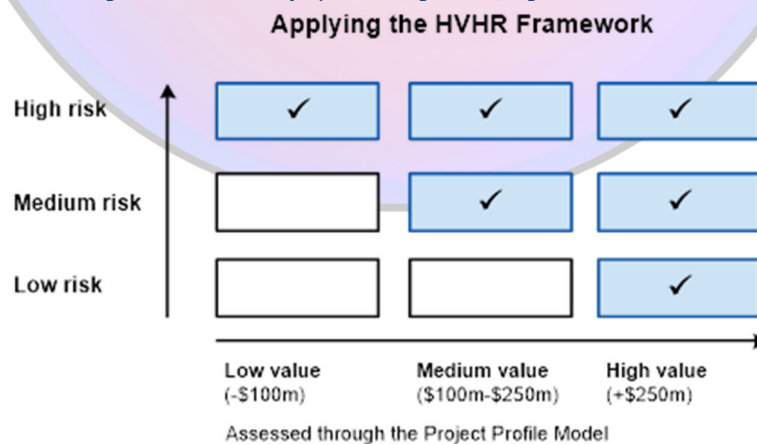
*Table 1: Timeline and Order Funding Payment (to be prorated per order quantity)*

| Date/Timeline      | Deliverable  | Value Paid | Balance Outstanding |
|--------------------|--|------------|---------------------|
| Upon Placing Order | Initiation of Manufacturing and Assemble, Placing an order for primary components. | 30%        | 70%                 |
| + Six months       | Samples Delivery for familiarisation   | 0%         | 70%                 |
| + Six months       | Training on Installation and Field Deployment                                      | 15%        | 55%                 |
| + Six months       | Partial Delivery   | 5%         | 50%                 |
| + Six months       | Partial Delivery   | 5%         | 45%                 |
| + Six months       | Partial Delivery   | 10%        | 35%                 |
| + Six months       | Partial Delivery   | 5%         | 30%                 |
| + Six months       | Partial Delivery   | 5%         | 25%                 |
| + Six months       | Partial Delivery   | 5%         | 20%                 |
| + Six months       | Partial Delivery   | 10%        | 10%                 |
| At Delivery        | Delivery   | 10%        | 0%                  |

## Risks and Risks Management

We recognise this procurement investment to be in the medium value range according to Government's Investment Lifecycle and High Value/High Risk Guidelines<sup>4</sup>

*Figure 1: Investment Lifecycle and High Value/High Risk Guidelines<sup>4</sup>*



<sup>4</sup> Department of Treasury and Finance, Victoria State Government. 2018. Investment Lifecycle and High Value/High Risk Guidelines

Hence, we have made developmental decisions to eliminate and/manage identified risks associated with the on-time and on-budget delivery of our proposal. Some of these risks include:

#### **Availability of Critical Components**

The DuroVent require the use of a small chip-enabled microprocessor which we source from retailers. There is a risk that there will not be enough of this element to commence fulfilling the order in the 18-months' time frame and full delivery over five years.

In managing this risk, we have had initial discussions with the primary manufacturers of the relevant component. We have obtained assurance that adequate provision shall be made to support our manufacturing process in the time frame to enable us to meet our obligations.

We have also deployed our solution on two distinct microprocessor platforms to ensure we can source enough units as required.

#### **Availability of Labour**

The DuroVent require assemblage and processing of each unit to ensure conformity and uniqueness. The risk existed that there might be insufficiently qualified employees to manage the process.

In managing this risk, we have simplified and time-trialled our manufacturing and assemblage sequencing to ensure we guarantee both the quality and performance of our product. With this guaranteed sequence, we have identified local businesses and potential employees who shall compete to be involved in the manufacturing and assemblage process.

### **Stakeholder Consultations**

During our idea and product socialisation, we made contacts with the following

- Hon Mark Ryan MP, Queensland Minister for Police and Corrective Services and Minister for Fire and Emergency Services
- Hon Lisa Neville MP, Victoria Minister for Police
- Former Assistant Commissioner Mike Keating, and former Chair Australia (and New Zealand) Road Policing Network
- Former Chief Commissioner Graham Ashton AM, Victoria Police

### **Conclusion**

This solution, when deployed, will significantly reduce dangerous Police Pursuits by acquiring several units of our solution over a period in a phased implementation at a projected \$975 unit cost. We urge you to give attention to this unique Australian Solution for solving what has become a global epidemic.

We look forward to the opportunity to take this further.



## VMiT- One Page Profile

VMiT is an Australian (Limited by Shares) proprietary company led by MKPro Engineering Pty Ltd ('MKPro'). As an Australian company, our clients are assured of a quality solution—DuroVent, backed by Australian Standards.

### About the Product

DuroVent is a comprehensive immobiliser solution that provides a multi-user interface. The interface is for local and remote immobilisation, tracking, and geo-fencing of uniquely identified and authenticated vehicle over a secure communication channel.

For an individual user, the system acquires and authenticates Vehicle digital ID and sends a signal to the Vehicle Programmable Logic Controller/EFI (or power electronics/controller in terms of electric/hybrid vehicles). This prevents the supply of fuel/power to engine/motor and prevents engine/motor start. While the vehicle is in motion except with master-code override, the FOB/APP cannot immobilise the vehicle when in defined proximity to the vehicle. However, vehicle self-arms to activate immobilisation if FOB/APP location is determined to be at a distance greater than defined proximity to the vehicle. Summary of actions include

- Ramp down power to EFI/Fuel pump or power supply to motor generator in electric/hybrid vehicle. Ramp time =  $\Delta t$ .
- Activate all emergency/hazard lights signalling at  $t = 0$ .
- Activate hazard alarm/buzzer at  $t = 0.5\Delta t$ .

Authorised 3<sup>rd</sup> Party (Law Enforcement Agency or Super Administrator) can, directly through a master-controlled code, activate immobilisation of a uniquely identified and authenticated vehicle of interest through interface. Once the master-code is deployed, the individual access to the system is blocked until master-code activation is reversed. The solution can be retrofitted into any vehicle, and hence suitable for inspection regime for registered vehicles, pre-sale certification scheme and after-market vehicle modifications.

All transmissions are secure and hack-proof. Actions and progressive steps are programmable to suit business requirements.

### Development Phase

The deployment require modification or amendments to ADR 80/00. The technical solution has been developed, built, implemented and tested. Currently, the mechanism for mass production is being contemplated. With adequate resourcing, products will be available to the market within eight months of funding availability.

### The Market

As of October 2018, there were over 14 million cars in Australia and about 5 million cars in New Zealand that, if legislated, will require a solution like ours. The technology and product are patented and associated with two trademarks.

### The VMiT Team

Led by Dr Michael Akindeju, the team comprise of eminent professionals with backgrounds cutting across Engineering, Business, Product Development, Administration, Banking and Finance, Government and Public Sector that together bring many years of expertise to bear on product development and management.

## Advisory Board

MKPro and VMiT are committed to good governance and sound decision making. Guiding the management of VMiT is a dedicated Advisory Board comprising of:

1. Mr Larry Proud
2. Snr Ps Shaun Hunter
3. Mr Robert Olney
4. Ms Deruka Dekuek
5. Mr Aubrey Nyaguse

## Brief Profile of Some Members of the Advisory Board

### Larry Proud

Larry has a 50-year history working within public safety, law enforcement and justice. As well as being a former commissioned officer with Victoria Police, Larry's professional background includes various senior leadership roles in Australia and overseas.

For 20 years Larry directed, managed and advised on complex and extensive international law and justice projects in Africa, Asia and the Pacific. He worked with diverse agencies, including police, prisons, courts, social welfare, law reform, attorneys general, legal aid, ombudsmen and others.

Upon returning to Australia, Larry was engaged by the Australia New Zealand Policing Advisory Agency (ANZPAA) as a Senior Technical Specialist, where he successfully led the development of a unified professional development strategy for police in Australia and New Zealand.

He later moved to the position of Director, Strategic Services at ANZPAA in 2011. He led a group of policy advisors and professionalisation specialists who ensured the effective delivery of cross-jurisdictional policing initiatives for the Police Commissioners of Australia and New Zealand.

More recently, Larry was the Chairman of the Public Safety Industry Committee and the COAG Public Safety Industry Reference Committee for police, fire, defence, emergency services, emergency management and lifesaving.

Among his qualifications, he holds a bachelor's degree in Policing and a master's degree in Police Leadership and Management.



### Snr Ps Shaun Hunter

Shaun Hunter is the senior pastor of Destiny Church Caboolture. He is passionate about building community and developing a healthy culture. Shaun is a gifted communicator, specialising in leadership development and growing dynamic and enthusiastic teams.

Prior to entering the ministry, he ran a successful landscaping business for over 10 years, he has found that much of this business acumen has translated easily into this different sphere, and vice-versa. This is evidenced in the strong and consistent growth of the church and in the success and loyalty of those he has mentored.





Known for his 'out of the box' thinking and creative approach to project development, Shaun has garnered for himself a reputation built upon integrity and solid proven strategy.

When he's not behind the pulpit you will likely find him shooting hoops or competing to win in whatever he sets his mind to.

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#### **Robert Olney**

Robert Olney is a Non-executive Director and the Principal Consultant of Growth Catalyst Consulting, a management consulting firm based in Melbourne whose mantra is enabling client growth objectives into outcomes embracing social impact.



A holder of senior leadership roles across diverse portfolios have required a highly tuned capability of delivering on complex strategic leadership, focussed on successfully executing new business and significant growth strategies whilst monitoring and managing risk exposures resulting in Robert delivering sustainable profits and revenue for stakeholders. Working with clients throughout his 30+ year professional career he has developed the practical skills required in identifying what are the key issues that any organisation is facing and provided solutions that were specific to each client's requirements. This has been applied irrespective of the type or size of the organisations engaged with, from SMEs and Community based not-for-profit organisations through to ASX top 200 clients.

Robert has formal qualifications in economics, banking and finance, financial planning, risk management and governance and is a Graduate of the Australian Institute of Company Directors. Married with 2 adult daughters he is heavily involved in community sport.

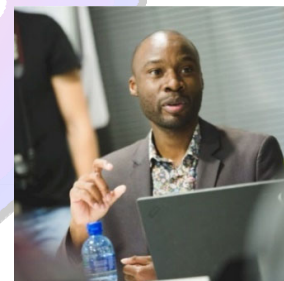
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#### **Aubrey Nyaguse**

Through the application of critical thinking, Aubrey help find the right questions for correctly identifying the heart of the real problem for collaborative solutioning within a discipline delivery framework.

Aubrey contributes resilience, adaptability and abundant life experiences in technology solution services aimed at process improvement client-centric solution development, profitability and growth. He is currently Technology Business Analyst and Business Architect with the National Australia Bank.

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#### **Deruka Dekuek**

Deruka is a Change Maker and Agent. She is a living exponent and example of life transformation who despite not having any educational framework at 13 has grown and developed to become a life coach, public speaker and Settlement Coordinator. She holds a bachelor's degree in arts and a master's degree in international development. Her Expertise in Social and Community development are of great asset to VMI.

