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City of Johannesburg
Johannesburg Roads Agency

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MEDIA RELEASE

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TECHNOLOGY HELPS JRA RESPOND RAPIDLY TO BLINKING TRAFFIC LIGHTS

Johannesburg has by far the largest City road network (13 428km) in the country with a proportionate 2135 number of traffic light intersections to keep the City's 1.669 million licensed vehicle owners and other road users mobile. The **Johannesburg Roads Agency (JRA)** is combining modern technology with rapid responses to vandalism and innovative solutions to reduce the number of traffic lights that go on the blink in Johannesburg and so diminish the frustration of road users while minimising the economic impact caused by congestion.

Mr Mpho Kau, the Acting Managing Director of the JRA explains "The JRA is keenly aware of the impact of faulty traffic lights on the flow of traffic and the resultant impact on competitiveness and productivity, especially during peak hours. In addition, the current construction on the M1 freeway is pushing more vehicles onto Joburg's suburban and inner city roads and the need for working traffic lights continues to grow."

"Transport plays a pivotal role in the economy as the enabler of trade and growth, and roads infrastructure provides the mobility platform essential for growing Joburg, the country's economic hub. Therefore, our aim is to reduce congestion and stimulate economic growth by picking up traffic signal faults earlier and improving our response and repair times," says Mr Kau. "To this end, remote monitoring systems are being installed at intersections to detect faults and alert the JRA's Traffic Operations Centre for repairs. A team of skilled technicians work day and night to fix defective signals and get the traffic flowing normally at intersections."

Directors:
Chairman: J Manche, Managing Director: Vacant, CFO: G Mbatha
Non-Executive Directors: M Ramasia, J Maina, A Torres, N Msezane, E Ngomane,
L Mashamaite, L Nxumalo, H Mashele, Company Secretary: K Mills

Registration No. 2000/028993/07

The heavy rains in the City, often accompanied by lightning, have caused temporary power outages and faulty traffic lights, but the JRA is increasingly turning to modern technology and innovation for early detection and repairs.

Mr Kau says the JRA has recently completed two projects aimed at protecting the 3,6 million electronic traffic signal components installed on the streets under harsh weather and traffic accident conditions, from flashing in the rain. “Over the past three years, R28 million has been spent replacing aging controller equipment and R40 million replacing old lead encased cables, making Joburg’s traffic signals less prone to faults in wet weather. Deployment of innovative earthing mats is also underway to protect traffic signals in areas most susceptible to lightning.”

However wet weather is no longer the primary cause for traffic signals going on the blink. Vandalism and power outages are the JRA’s biggest concerns particularly as these are both beyond the entity’s control.

The JRA strives to repair 90% of faulty traffic signals within 24 hours but faults due to power outages take longer to fix (on average 171 hours) because they require the involvement of the relevant power entities to restore power. While extended power failures continue to present JRA with its greatest challenge, the use of Uninterrupted Power Supply (UPS) units at traffic signals is proving an effective hedge against short power outages. In 2013, all 200 traffic signal UPS units were stolen, however these are now being replaced and protected by relatively impenetrable innovative casings, known affectionately as the "Titanic".

In combatting the scourge of vandalism and theft which on traffic signals alone has amounted to R12.7 million over three years, Mr Mpho Kau says the JRA is increasingly turning to stronger counter-measures to apprehend criminals. CCTV cameras and remote sensors, that can detect tampering with poles or equipment, have been installed and alarms are sent to alert armed security to apprehend the thieves. An Infrastructure Protection Unit has been set up within the JRA to escalate responses, says Mr Kau.

In conjunction with this initiative, aluminium alloy cables with less street value (due to less copper content) are being used at traffic signals to make them less attractive to thieves. The combination of these measures is having a positive effect but the reduced quality of these cables has introduced random flashing signal faults. JRA's traffic signal technicians are in the process of modifying the jointing process where cab tyres are being installed.

“JRA is committed to rendering visible service delivery across the City and ensuring road user mobility with working traffic signals is a priority. The community can assist us by reporting vandalism and theft of roads infrastructure as well as any traffic signal outages via our numerous reporting platforms”.

Members of the public can also download the JRA's Find&Fix mobile app for easy reporting of faulty traffic signals. Such reports are logged directly with the technical teams and road users can also follow progress reports on when the signals have been fixed.

Johannesburg Traffic Signals by the Numbers:

- 2 135 – the number of signalled traffic intersections in the City;
 - 3.6-million – the number of electrical components connected to traffic lights within the network that can cause faults;
 - 32 (R 380,000) – the average number (cost) of traffic lights vandalised each month;
 - 81 (R 500,000) – the average number (cost) of traffic lights damaged by vehicle accidents each month;
 - R2,500 – the average monthly maintenance budget allocated by the JRA.(per traffic signal).
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About the Johannesburg Roads Agency (JRA)

The JRA is a City-owned agency responsible for the maintenance, repair and development of Johannesburg's road network and storm water infrastructure, including bridges and culverts, traffic lights and signage. The organisation is committed to providing quality roads that are accessible, safe and liveable for our communities.

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