TSEBO

TSEBO DONATES MULTIPLE THERMOGRAPHIC FEVER-SCREENING SOLUTION TO PROTECT PATIENTS AND HEALTHCARE WORKERS DURING COVID-19

INTRODUCTION

With the winter flu season coinciding with the global COVID-19 pandemic, the National Institute for Communicable Diseases (NICD) warned that the co-circulation of influenza and the coronavirus would significantly increase pressure on the healthcare system. As such, it recommended that everyone receive the flu vaccine to help ease the strain on health services.

As part of the South African government's response to the COVID-19 pandemic, all government hospitals were tasked with building an on-site flu clinic. This included the world-class Inkosi Albert Luthuli Central Hospital (IALCH) in KwaZulu-Natal where Tsebo Facility Solutions (formerly Drake & Skull) and its joint venture partner Umongi have been contracted to provide integrated workplace management solutions since 2002.

Tsebo forms part of KZN Department of Health's Impilo Consortium comprising three principle sub-contractors namely, AME Africa Healthcare (information management and technology), Consulens (central medical technical department) and Tsebo in the largest, most-extensive outsourcing integrated workplace management contract on the continent.

The Impilo Consortium funded the flu clinic, which was designed and executed by Tsebo following the advice of clinicians.

CHALLENGE

The sheer scale of the 846-bed hospital (which by its nature involves a large daily influx and movement of patients, visitors, medical, catering, cleaning and other support staff) posed the question of how to provide continuous screening and detection to ensure prevention and transmission of the coronavirus among healthcare workers and vulnerable patients, many of whom already had compromised immunity due to illness.

With technology playing a progressively important role in early detection for health and safety risks, a highly effective screening product was needed to **screen groups of people** entering the flu clinic for early indications of potential coronavirus carriers.

Thorburn Security Solutions, a division of the Tsebo Solutions Group, donated and installed a Multiple Thermographic Fever-Screening Solution to the value of R162 156 at the 846-bed Inkosi Albert Luthuli Central Hospital's newly built flu clinic, to support the Group's longstanding healthcare client in reducing cross-contamination risks associated with pandemics.

WE **DEVELOP** PEOPLE, TO **SERVE** PEOPLE, TO **UPLIFT** SOCIETY

SOLUTION

After being issued with a donation of thermographic fever-screening equipment from a key supplier, Thorburn Security Solutions, a division of Tsebo Solutions Group, identified Inkosi Albert Luthuli Central Hospital, an existing partner, as being the site where the equipment would have the most impact in the fight against the COVID-19 outbreak.

The **Multiple Thermographic Fever-Screening System** offers a highly advanced and accurate early detection response, identifying and isolating suspected carriers of the virus.

The system features extremely high accuracy by combining the latest technology with Artificial Intelligence (AI) and software-based algorithms to ensure the body part with the highest temperature (the head) is measured and that no surrounding factors affect this reading.

THORBURN
SECURITY SOLUTIONS

The complete system donated to the IALCH includes:

- 1 x Hikvision 16-channel deep-in-mind Artificial Intelligence NVR
- 1 x 6TB hard-drive disc
- 1 x Hikvision DS-2TD2637-10/P high-resolution thermal camera
- 1 x Network equipment rack
- 1 x Monitor
- All installation and consumable costs

What makes this system so unique, is the fact that it is a **multiple thermographic fever-screening solution** that can screen an accurately detect the temperature conditions of **groups of up to 40 to 60 people per minute* in real-time, avoiding people having to queue to enter a premises and subsequently reducing the risk of cross-contamination and the spread of diseases.**

a TSEBO solution

DEMONSTRATION INTEGRATED SYSTEM VIDEO

This solution integrates the information from a number of systems into a central control point. Its effectiveness as a screening tool lies in its ability to correlate the temperature of the **external skin surface with the core body temperature**, thereby allowing **fast, accurate and efficient** identification of fever symptoms of **individuals in a group**. The thermal images of suspected fever carriers can be **automatically stored** and an **alarm sounds** to alert security staff when an individual's skin temperature is higher than a predefined level – allowing that person to be isolated and tested.
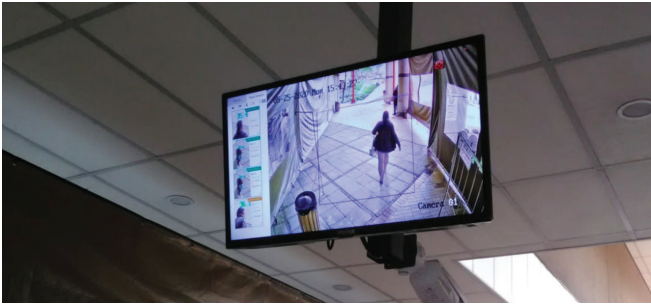
MULTIPLE FEVER-SCREENING

The advanced detectors and algorithms of the system allow non-contact screening and **remote monitoring** of up to **40 to 60 people* at the same** time and raise an alert for higher than average body temperatures (**above 37.5 °C**) of individuals at the point of entry.

FACIAL FEVER-SCREENING UNIT

The unit **accurately and quickly detects the real-time temperature** of people passing through the entrance and displays this temperature on a screen. It can be **integrated with access-control** systems to prevent entry of suspected fever carriers.

BENEFITS

The benefits to IALCH and its flu clinic are manifold. By allowing **faster flow-through** of people at the entrance points and queues, **the waiting times are significantly reduced**. The implementation of the system allows a **holistic view of current fever conditions** associated with the COVID-19 pandemic, while the **accuracy of remote readings** helps to **reduce risks** to staff and patients alike.

In addition, the IALCH also benefits from:

- Pro-active and automated monitoring of patients entering the facility
- Accurate readings of temperature to within 0.5 °C
- Artificial Intelligence capabilities - can be used for trend analysis
- Automatic alerts for exceptions (higher than threshold temperatures)
- Compliance with government regulations
- Reduction in manpower needed - staff can be used where they are needed most and not dedicated to monitoring
- Storage of data on site for review purposes
- Peace of mind
- Scalable, upgradable system - up to 16 cameras
- Automatic early-warning alerts
- Controlled escalation process (alerts can automatically set off a siren/strobe)
- 3-year warranty on products
- Year warranty on installation

OUTCOME

By employing the **Multiple Thermographic Fever-Screening Solution** staff at the IALCH can effectively **DETECT** and **IDENTIFY** suspected carriers of the virus, leading to proactive steps to **ISOLATE** and **TREAT** the affected person, thereby protecting healthcare workers, staff and other patients against the coronavirus as well as potential future risks and pandemics.

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> We are grateful to Tsebo and Thorburn Security Solutions for the generous donation of the Multiple Thermographic Fever-Screening Solution. Not only does it allow us to quickly and easily identify and isolate potential carriers of the coronavirus, but the AI and trend analyses capabilities allow us to collate data that can be used in the broader fight against COVID-19 and future pandemics.
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> *IALCH Management.*
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