360|THREE

AWARD-WINNING ENVIRO LOO WATERLESS SANITATION SYSTEM USES 360THREE FOR REMOTE SERVICE TECHNICIANS AND FIELD ASSET MANAGEMENT
CASE STUDY

BACKGROUND

To overcome the prevailing challenges in waste management systems in South Africa, research into waterless and dry sanitation units to replace unsanitary options such as pit latrines or buckets began in 1985. Enviro Loo, a product of Enviro Options, is a 100%, South African patented product started in 1993 by Dr Brian La Trobe. Today, Enviro Options develops lifesaving yet cost-effective waterless sanitation systems for global use. To date, more than 125 000 Enviro Loos have been installed in 35 countries helping over 2 million people to contribute to the socio-economic development of their communities

The Enviro Loo system works through an innovative method that isolates human waste and renders it stable and odourless by drying and evaporating it using solar energy, wind power and enzymes. Enviro Loo has won many prestigious awards including the Laureate – United States Tech Award for Innovation in 2005, the Frost & Sullivan Southern African Dry Sanitation Company of the Year Award in 2017 and the Eco-Logic Gold Award for Water Conservation in 2019. As Enviro Loo's global footprint increased, so did their services. This made Enviro Loo realise that its current mobile workforce and asset management system was unable to meet certain criteria that their expansion required. Consequently, they started looking at the market and joined forces with 360Three by adopting their platform in 2020 which enabled them to accelerate business growth.

THE CHALLENGE

Enviro Loo often engages small, medium and micro enterprises (SMMEs) as third-party subcontractors to service their sanitation units. Historically various challenges were experienced including fieldworkers bypassing the system, backend reporting exceptions and incorrect data collected as a result of using manual paper-based reporting systems. Often, workers on site would claim that the device was not working properly and because data collection and reporting were done services were performed at the right location and at the correct time. They required a fool-proof system manually, it was extremely difficult and time-consuming to pinpoint issues and attempt to audit whether that could seamlessly track and monitor service teams and assets from installation through to year-on-year service, implement maintenance schedules to eliminate any grey areas and provide real-time evidence of services.

ONBOARDING 360THREE

At the start of 2020, 360Three's product stack was identified as a perfect fit for the ongoing and future equipment maintenance requirements of Enviro Loo's dry sanitation units.

The following key features and benefits of 360Three easily convinced Enviro Loo that it was the right solution for their business requirements:

- Smart Internet of Things (IoT) components to meet field asset maintenance requirements.
- Physical proof of presence and time spent per service.
- Real-time escalation of non-compliance exceptions and automated daily escalation reports.
- Real-time GPS location tracking of fieldworkers.
- NFC tagging on individual assets.
- Legislative and regulatory compliance.
- Proactive scheduling management.
- Real-time monitoring of service technicians and fieldworkers from a single cloud-based platform (Observer).

EFFORTLESSLY MANAGING 1000S OF SANITATION UNITS AND COLLABORATING WITH THIRD-PARTY SUBCONTRACTORS

At the time, Enviro Loo predominantly used GPS location which meant that the system could be bypassed by, for example, claiming the system or the device was not working as there was no proof of presence or proof of service requirements. 360Three's field asset management system was able to address this issue through its use of certain IoT technologies like Bluetooth Low Energy (BTLE) beacons and Near Field Communication (NFC) tagging.

360Three combines NFC and GPS information to identify Enviro Loo's field assets and mobile workforce in real time. As part of the onboarding process, NFC tags are installed on each Enviro Loo unit during the manufacturing process. Thereafter, the area where the Enviro Loo sanitation units will be installed, are geofenced and each tagged sanitation unit is grouped and added to a site, for example, a school or under-developed community.

"Enviro Loo is commitedto providing our clients with accurate and instant information on services. 360Three's end-to-end paperless management tool provides us with peace of mind that our sanitation units are serviced and maintained effectively while also meeting compliance levels at all times." - Mark La Trobe, Chief Operation Officer.

ELIMINATING GREY AREAS AND DISPUTES

When the service technician enters the specific client site to perform the required service, 360Three lists the Enviro Loo sanitation units in that site whereafter the service plan is activated by scanning or tagging the NFC tag.

"With the previous solution and GPS location tracking, fieldworkers would stand at one unit and service only one unit. With 360Three's geofencing feature, it automatically picks up all the units in that environment that have to be serviced. Service workers cannot manipulate how many units were serviced for example servicing only one unit but claiming they have serviced ten units. This also eliminates payment disputes as payments are now made for the correct number of serviced units", says Roland.

A recent survey completed by the SMMEs further confirms the value that 360Three adds to Enviro Loo's operations with 100% of participants finding the app easy to use; 90% enjoy working with 360Three and found it easy to learn while 90% also indicated that they felt confident using the app.

Enviro Loo Sanitation Units

Kagiso Mathibe
EnviroLoo Data
System Administrator

FROM REACTIVE REPORTING TO PROACTIVE EXCEPTION-BASED MANAGEMENT

Previously service reports and escalations were compiled manually. As a result, information was often unreliable and could not be validated. With 360Three, real-time "proof of presence" and "proof of service" holds fieldworkers accountable and ensures transparency and overall peace of mind of all parties. Since implementing 360Three, SMMEs' service levels have increased dramatically and access to accurate real-time data has enabled Enviro Loo to act and resolve any issues as a matter of priority.

"360Three's business intelligence report templates have become an integral part of our business processes, so much so that the real-time data collected by 360Three has become one of the top agenda items at management meetings. Overall, we have developed an excellent working relationship with the team at 360Three and they have maintained an exceptional level of support to date. 360Three's willingness to adapt and customise its system to satisfy our business requirements was simply phenomenal. We look forward to continue working with 360Three", says Roland.

Since introducing 360Three, this process is more effective, and services are rendered seamlessly. The collaboration between Enviro Loo and the SMMEs, which is a third-party government-mandated requirement, has been an absolute success.

SUPPORTING UNDER-DEVELOPED AREAS WITH WATER-SAVING SANITATION SOLUTIONS

Many areas in South Africa, especially under-developed areas, are severely affected by the scarcity of water which contributes to lacking sanitation. Enviro Loo created a water-saving sanitation solution that can save between 300 000 and 650 000 litres of water per year.

Due to the challenging nature of the remote areas where these sanitation units are often installed, only a robust and easy to use system like 360Three could fulfil all the requirements. One of the key features of the 360Three app is its ability to sync all workflows to the device that allow for full off-line functionality in areas with weak or no GSM connectivity.

THE FUTURE OF ENVIRO LOO AND 360THREE

360Three is currently collaborating with installation inspection teams to integrate Enviro Loo's current site inspection and installation system with their backend and working towards further developing the exception escalation dashboard to include resolved escalations as part of the real-time data collected and used for reporting purposes.

"360Three's solution has had a substantial impact on both our business efficiency and our growth strategy, in addition, 360Three provided us with the most efficient and accurate means of monitoring personnel and service levels" says Roland. "We will recommend 360Three without reservation," he concludes.