



Actility

Telekom Srbija

# Success Story

- Smart Cities -



## TELEKOM SRBIJA

### Telekom Srbija implements manhole monitoring system using LoRaWAN

Successful Smart City use case with Actility's local partner and reseller Teri Engineering and end-user Telekom Srbija

Telekom Srbija a.d. is a leading regional telecommunications group headquartered in Belgrade, serving Serbia, Montenegro, Bosnia and Herzegovina, and Kosovo. For 20 years it has had a leading role in the fixed, mobile, Internet, multimedia and digital service spheres both in Serbia and in the region at large. By fostering the innovative spirit, Telekom Srbija continuously develops new technological solutions for the benefit of its customers and the environment. Their services are synonymous with trust, superior performance and innovative technologies.

Telekom Srbija had an issue with the theft of copper telecom cables that were installed underground in Serbia and accessible via manholes. These thefts resulted in disruption to their network, loss of client trust, loss of money and reputational damage. As a pioneer of new



over €1billion of annual revenue



Over 5.8 million mobile subscribers



930000 broadband subscribers



560000 TV subscribers

#### TELEKOM SRBIJA KEY FIGURES

technology, Telekom Srbija conducted research into various IoT opportunities and conducted several trials in order to find a robust long-term solution.

**“ We are proud to be the first in the region to launch the LoRaWAN IoT network, we have been able to solve a decennial problem and establish security control of our underground cable infrastructure, one of the key resources for undisturbed business ”**  
*Mr Milorad Bjelogrić, Telekom Srbija*

Solution

Telekom Srbija's key requirements for a manhole monitoring system included long distance coverage, high sensitivity and a long autonomous battery life. The only solution thorough enough for their requirements was LoRaWAN. Therefore, after a careful selection process Telekom Srbija selected Actility's ThingPark solution to power a national-scale commercial low power wide area (LPWA) network roll-out, becoming Actility's 50th commercial national operator customer.

Actility's regional partner and reseller, TERI Engineering, which has been a leading systems integrator and supplier for Telekom Srbija for many years, was also on hand to provide front-line project management, integration and maintenance support for the operation of this IoT network for Serbia.

To increase the security of the

Solution

company's infrastructure and to support maintenance crews, Telekom Srbija deployed over 300 gateways and 8000 sensors provided by Serbian company Bitgear along with the application and dashboard. Each time a manhole was opened the sensor would send an alert to the application and dashboard to notify of the movement of a manhole cover. If this movement was not planned, security agencies were then contacted to intercept the suspected thieves. Within just three months, three groups of thieves were arrested during the attempted theft of the cables.

Telekom Srbija successfully trialed and then implemented LoRaWAN to prevent the theft of their telecom cables by monitoring the opening and closing of manhole covers. The solution has now been implemented in the four largest cities in Serbia, including Belgrade, and full nationwide coverage is planned during 2019. Additional smart city and other IoT use cases are now enabled and planned by Telekom Srbija, leveraging on the built infrastructure and LoRaWAN coverage in Serbia provided by Actility and Teri Engineering.



TERI Engineering

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Benefits

## Benefits

The benefits for Telekom Srbija are quite clear: no more theft equates to a minimized threat to network outages, no further damage to reputation and no further loss of client loyalty or money.

- The success of the trial and subsequent project also revealed the potential for other underground or outdoor purposes
- Real-time movement tracking
- Fast reaction by security agencies
- A large amount of data is now available for future analysis
- Three groups of thieves were successfully arrested
- User friendly app and dashboard
- Collaboration with security forces might encourage wider acceptance/implementation

“Our unique position, being an experienced system integrator in both industrial automation and ICT sectors, proved to be important success factors in the trial and implementation phase of Telekom Srbija’s LoRaWAN project”

*Mr Dejan Bogosavljevic, CTO, TERI Engineering*

## Results - Lessons learned

### The basis for Smart City solutions

There are a lot of potential possibilities for other underground purposes as well as for other outdoor use

