

# tango

Reduce water losses  
with smart decisions and tools

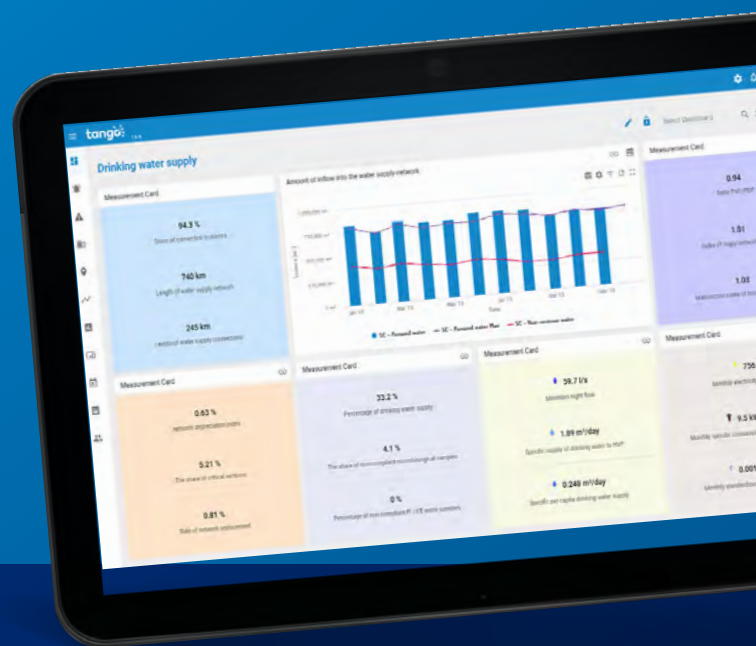
Is your city facing water losses in the water supply network?

Do you want to have a management control centre with a modern information system with near real-time control, while also improving the quality of drinking water for your users?

**Tango is the solution**  
you're looking for.

Tango is a **modern information solution** to ensure cost-effective planning, and efficient control and management of systems in **smart cities**.

**It solves the challenges of modern business**, as it constantly monitors the situation and changes in the physical system, and helps you respond to the current situation with **quick and smart decisions**.



# Modern challenges in the management of water distribution systems

**CONTROL OF UNSOLD AMOUNTS OF WATER**

**CONTROL OF ELECTRICITY CONSUMPTION**

**OPTIMISATION OF INVESTMENT ASSETS**

Tango addresses the challenges of **managing water distribution systems** by using data intelligence. It assists managers of public companies in managing their data and, **using knowledge and machine learning, changes data into verifiable and trustworthy information** that companies can rely on, since it **represents the basis for effective decision-making**.

In the city municipality of Kranj (Slovenia), the management of water losses has been approached with data intelligence.

In the case of the municipality of Kranj (720 km of pipeline, 90,000 inhabitants), **we set up measuring areas and a control system for the operation of the water distribution network (Aquis and Tango) in near real-time**. With this, we have achieved:



## REDUCTION OF WATER LOSSES

At the beginning of the project, the amount of water loss in the city municipality of Kranj was about 42%, but with our help, it has reduced to 34%.

## REDUCTION OF THE QUANTITIES OF WATER PUMPED AND THE COST OF ENERGY CONSUMED

In the first three years of service provision, approximately 1.8 million cubic metres of lost water was identified annually, equal to the volume of 800 Olympic swimming pools.

## SHORTENING THE RESPONSE TIME

to detect water losses, to speed up the location of the defect, and repair or remedy it.

## KEY ADVANTAGES OF TANGO

- It has a system in place to **control the unsold amount of water**, with a significant focus on water losses, integration with GIS, and the reporting system
- It **optimises the operation of pumps** in the water system ('Pump optimisation')
- In addition to reducing the cost of electricity consumption, it **ensures the smooth operation of the drinking water supply**
- **The suite of algorithms called DataInsights (DI) enables the completion of missing data**, which can be checked retrospectively
- Tango **facilitates connection with other systems**
- **It identifies critical sections**, and thus optimises the planning of investment assets (CapEx), and displays relevant data on dashboards and in GIS viewer
- **It establishes a system for predicting the water consumption** of end-users, and thus enables the identification of the responses of the water system in near real-time
- **It checks and visualises data**, this tool applies to various areas

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*We are established in order to carry out mandatory utilities, which clearly identifies the core framework of our mission. Among other things, we are responsible for supplying the area with drinking water. We are committed to sustainable resource management, and are focused on developing comprehensive and high-quality solutions for our users. We want to exceed the expectations of users, and offer them the most modern utilities in Slovenia. We have been the first ones to introduce comprehensive control over the supply of drinking water in the region, from the water source to the end user. The complex process is updated on a daily basis by using the most modern tools, and thus, we are responsible towards both the environment and our users. With the support of Petrol's experts, we continue with the successful initial measures to reduce water losses.*

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**Marko Kocjančič,**  
Director of the public company Komunalna Kranj (2018)