EYDAP IN THE WATER DIGITAL WORLD

EYDAP in numbers - Water Supply

- 4,400,000 people served
- 4 reservoirs
- 495 km external Aqueducts
- 4 WTPs (Water Treatment Plants)
- 14,000 km water supply network
- 2,160,000 water connections
- 1,050,310 m^2 Daily avg drinking water distribution
- 77 pumping stations
- 1,246 recording and transmitting data (SMS/SCADA)
- 100 SCADA tracking
- 110 flowmeters

EYDAP in numbers - Water Quality

24/7, 365 days a year quality controls

1000 quality control spots of drinking water

10,000 analysis of drinking water samples and

2,000 of raw water

On-line monitoring of water quality

Certified laboratories

EYDAP in numbers - Sewerage

- 3,975,000 people served
- 9,500km sewerage system network
- 3 Wastewater Treatment Plants
- Certified laboratories (12,000 samples – 66,000 analyses per year)
- 755,500 m^3 of effluents treated
- 1,065,000 m3 sewage/day
- 44 pumping stations
- Pumping stations monitoring through SCADA

Digital Innovations sectors of EYDAP

1. Water supply resources
2. External raw water supply network (plus Fiware4Water)
3. Drinking water supply
4. Sewerage sector
5. Integrated information system for the enhancement of operation management
6. Data Governance
7. Digitalization of EYDAP historical archive

1. Water supply resources

Main water sources: Mornos, Evinos.

Auxiliary water sources: Marathonas (for the supply of Galatsi WTP) and Yliki (in case of emergency).

Backup water source: underground water resources – boreholes (approximately 100)

The quality of the water resources is monitored conventionally according to the Directive 75/440/EEC for surface water quality standards and national healthcare provision A5/2280/1983 by random checks of the water quality in the reservoirs**.**

However, new tools have been tested such as autonomous and radio-controlled boats equipped with innovative quality and quantity sensors in the context of the INTCATCH EU project.

2. External raw water supply network

The transfer of raw water to the Water Treatment Plants, is done via a network of aqueducts with a total length of 495 km.

Constant monitoring of the aqueduct enables EYDAP to monitor and control water losses and be immediately alerted in case of an accident such as a landslide that could result in increased water turbidity or even damage to the network.

The monitoring is performed via multiple installed sensors, controlled by SCADA: 13 water quality stations, 73 water level meters, 20 flowmeters, 38 water sluice gates, 34 pumping station

Until now, only one accident has happened that led to the damage of the external water supply network. In 2011, the main water pipeline from Athens to Mornos suffered some damage in the Sarantis region of Viotia.

2. External raw water supply network – Fiware4Water

EYDAP participates in the EU project Fiware4Water in which EYDAP is responsible for the demonstration of the FIWARE integration with operational sensors (existing, as well as flow- and level-meters that will be bought within the project) and other (novel) surveillance methods into a common operational picture (in real time) in a suitable part of the water supply system.

The goal is the upgrade of the supervisory system and digital water strategy of the Company

FIWARE 4 WATER

3. Drinking water supply network

The water network is comprised of all the primary transfer and distribution pipelines conveying treated water from the WTPs to the consumers' water meters and has a total length of 9,500 km.

It is monitored 24/7 by SCADA in terms of WTP functioning, network, storage tanks, water pumping stations and major nodal points in the network. This system includes 100 posts (SCADA) and 1246 data recording and remote transmission points (SMS) for continuous monitoring and recording of the operation of the water supply network.

Since 2019, EYDAP has initiated a large project replacing 300,000 old water meters with new water meters (smart meters) in various areas, implementing its investment program and the transition to smart water network and to modern technologies.

4. Sewerage Sector

The sewerage sector of EYDAP uses information systems aiming at facilitating everyday work but also at the development of operations, led the company to the installation of new systems and to the improvement of existing sewerage applications:

- Information System for the Management of a Fleet of Emergency Intervention Team (e-TRACK)
- Introduction and processing of data resulting from the interventions of the repair workshops, in the Sewerage Portal application
- Pilot application of on-line update of sewerage portal faults application with field data
- Two-way interconnection of e-TRACK systems and sewerage Portal
- Introduction, processing and analysis of spatial data network in GIS environment
- Compilation and study of statistical analyses based on the data and the data from the Complaint Center 1022
- Monitoring of the operation of pumping stations with remote control-telemetry (SCADA) systems.

5. Integrated information system for operation management

EYDAP in 2018 designed and implemented a comprehensive information system, monitoring the progress of the implementation of the operational objectives of all organizational units of the company, creating a new, fully automated and more functional environment

Results:

A fully automated process was created with the use of modern technology, which facilitates

both the work of the Target Implementation Department and the users

Response times and required man-hours were significantly reduced.

Possibilities for further development of the system were created

The correctness of the data was ensured

A new digital environment was formed in EYDAP utilizing new technologies

6. Data Governance

In recognition of the need for the provision of valid and timely information, necessary for decision making,

interventions and actions, EYDAP created a Digital Governance hub and direct access to EYDAP's database was achieved, leading to an integrated management of this information.

The target was the use of Information and Communication Technologies (ICT), for the upgrade of services and internal operations so as to secure high-quality customer service.

Applications:

- Simplification of e-EYDAP user registration process, simplified customer data correction procedure
- E-notification to customers who choose to get informed via sms/e-mail
- Click to call service
- Addition of the e-pos DIAS Payment System option to our online bill account payment options

7. Digitalization of historical archive

EYDAP preserves, records and documents all kinds of documents such as administrative, technical, legal documentation, photographs, other visual material and various objects dating from the early 20th century, following the international standard «Dublin Core”.

In addition, EYDAP aims to create the appropriate conditions for the preservation of the original physical form, to digitize on the basis of international standards, thus seeking the greatest possible salvaging and preservation of the digitized material of historical importance.

CONCLUSION

EYDAP, is committed to providing high quality services to its customers and citizens in general, is focused to the continuous improvement of digital services and to ongoing research for the development of new, innovative and secure solutions, following and exploiting modern technology solutions.

EYDAP