

Utility Management Training

MODULE 4: Network Operations (NO)

Institutional Partners



NO Module Team

Module Development Partner:
Qubiqo

Trainers:
Dobromir Moldovanov, Qubiqo

Comptence Partners:
Siemens, s::can

Utility Partners:
Blagoevgrad water, Sofia water

Thematic Support and Materials:
D-LeaP NRW Program



NO Module Logistics

Format and Venue: One-week residential course, Sofia and Blagoevgrad, Bulgaria (if pandemic situation allows)

Module timeline: February – April 2022

Introductory webinar for the module:

1 March 2022

Core training week: 14-18 March 2022



NO Module Outline

The **Network Operations** module (NO) provides a holistic view on network management from various perspectives – asset planning and investments, design, water-loss reduction, cost control. However, the key focus of the module is on operations techniques and structuring of proactive network functions.

The module starts with an introductory section – **Types of Networks and Key Aspects of Network Design and Operations**, which provides a broad understanding of the logic and types of networks (transmission vs. distribution), design criteria and key planning considerations. Section 2 then delves into the types of **Water Supply Assets** – a topic that conceptually borrows a lot from the earlier module on Asset Management.

Once the types of networks and assets are well understood the module moves into process-related and control aspects – **Setting Up a Control Room** – features and functionalities, technology solutions but also links to other utility functions. Control rooms, effectively, manage operations events and this is the time in the module when a distinction is made between **Proactive and Reactive Activities** – another topic in the module which includes some practicalities of organizing in-house repair depots, etc.

Next, the NO module pays some attention to **Sewer Networks** – the sanitation aspect of water utilities

with all their elements, monitoring and maintenance processes. And once both water and sanitation networks are covered as topics, the module moves into **Budgeting and Control** (in the specific context of Network Management). The emphasis here is placed on how Network Operations is structured as a cost centre, the key cost drivers (energy, salaries, materials) and how they can be effectively controlled.

The second part of the NO module moves much more deeply into practical topics. First, an emphasis is placed on **Zoning, Monitoring and Water Balances** – a set of tools and technologies to properly understand flow, pressure and not only. The topic of monitoring naturally leads to **Non-Revenue Water** (NRW) – a problem that could deserve a whole module by itself. The focus here is on technical losses as commercial ones are covered in more details in the Commercial Management and Customer Service module.

Throughout the residential week various technologies are described – from leak-detection to water quality monitoring. Siemens, a competence partner of the program, will present its range of water-related applications (SIWA – Siemens Water Applications) related to network management and control. S::can, another competence partner, will share technologies and approaches for dynamic quality monitoring and analysis. Participants from various utilities share their experiences and technology providers demonstrate the latest trends and technologies.

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Danube Learning Partnership
Secretariat
c/o IAWD Technical Secretariat
office@d-leap.org
www.d-leap.org



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