

Utility Management Training: A Master Class for Holistic Management in the Water Service Sector

in cooperation with



GAIN practical experience on all aspects of utility management

LEARN from other practitioners in the sector

BE UP TO DATE on the latest trends in the sector

BENEFIT from regional and global experiences from other utilities

FINANCIAL AND ORGANIZATIONAL MANAGEMENT

FOM

Aim of the module: to familiarize with core management practices of utility finance, management accounting and organizational structuring. It serves as a gateway to follow-up modules on rather technical, operations and commercial aspects of utility management.

Specific topics:

- Utility finance, interpretation of sector-specific financial statements and ratios
- Management accounting practices such as structuring cost centers, developing budgets and cost control mechanisms etc.
- Organizational practices such as roles and jobs structuring, succession planning, retention and development of talent, performance-based remuneration and gender balance

ASSET MANAGEMENT AND INVESTMENT PLANNING

AMIP

Aim of the module: to provide a wide grasp of asset-management concepts and tools such as creating asset registers, assessing the condition of critical facilities, design of maintenance manuals, etc. The module is a prerequisite for investment planning activities that will be used in some of the follow-up modules.

Specific topics:

- Asset registers including structure and data requirements, field data-capture campaigns
- Asset management practices including asset condition assessment, elaboration of maintenance plans, utilization of software tools such as GIS, CAMMS, hydraulic modelling, etc.
- Investment planning including structuring of investment programs based on various investment drivers, financial, accounting and regulatory aspects

COMMERCIAL MANAGEMENT AND CUSTOMER SERVICE

CMCS

Aim of the module: to introduce the commercial cycle of water utilities as a chain of processes, from meter installation and reading to billing and collection. The module also reflects on customer service functions with focus on digitalization.

Specific topics:

- Meter management and meter reading including sector-specific issues such as meter under-registration, automated meter infrastructure (AMR), etc.
- Billing and collection with focus on management tools such as transaction reporting, aged-debt profiling, outsourced commercial activities and structuring customer information systems
- Customer service including call centers and online servicing of customers, the role of all utility functions in creating a service environment

NETWORK OPERATIONS

NO

Aim of the module: to highlight the various disciplines within the network operations function in water utilities, from purely technical and operations aspects to IT and financial-planning ones.

Specific topics:

- Fundamentals of water (and sewer) networks including capacity planning, hydraulics, key assets and nodes of networks
- Proactive network operations including zoning, monitoring and water balances, non-revenue water with focus on pressure management and dynamic leak detection
- Advanced tools for network operations including SCADA systems vs. monitoring (only) solutions, AMR and IoT introduction and the economics of network operations and budgeting

ENERGY MANAGEMENT AND ENERGY EFFICIENCY

EMEE

Aim of the module: to introduce both management-level and operations concepts for energy management with focus on planning for achieving energy efficiency at water utilities

Specific topics:

- The energy balance of a water utility by breaking down energy consumption by functions and specific facilities (e.g. pumping stations, WWTPs, etc.)
- Energy auditing and practical implementation of a field-measurement campaign at a pumping station, structuring a business case based on a set of energy efficiency measures
- Trends and technologies in energy management including liberalization of markets, load profiling and the potential of water utilities in balancing groups

WATER SAFETY PLANNING

WSP

Aim of the module: to provide a framework for utility wide safety planning by introducing both strategic organizational tools (business continuity plans, crisis response, etc.) and business processes with high impact on safety, e.g. water-quality laboratories, control rooms, etc.

Specific topics:

- Business continuity in the water sector: identifying, classifying and managing operations risk, emergency response plans and crisis management (including pandemics)
- Water quality aspects: EU regulations, water quality parameters, setting up and managing laboratory activities
- Other aspects of safety planning in water utilities, e.g. critical assets, health & safety

PLANT MANAGEMENT – PWTPs and WWTPs

PM

Aim of the module: to develop an overall view of how both potable water and wastewater treatment plants are managed including operations principles, financial and investment planning, evolution of regulations and new technologies.

Specific topics:

- Potable water treatment plants: types of facilities, operations principles, design criteria for small vs. large plants
- Wastewater treatment plants with specific focus on the evolution of UWWTD directive, tertiary treatment and sludge management
- CAPEX and OPEX planning for treatment plants

UTILITY ECONOMICS, REGULATION AND RISK

UERR

Aim of the module: to conclude the program by putting all previous modules as well as the experiences of the participants in the wider economic/public policy context and to introduce concepts on how the sector is regulated, where responsibilities of public actors overlap, etc.

Specific topics:

- Understanding specific economic features of the WSS sector: asset-heavy operations, long-term planning needs, cost-of-capital implications, etc.
- Utility regulations: roles of regulators, regulation vs. policy making vs. governance, linking service levels with business plans, tariff setting
- Policy developments in the WSS sector in Europe, risk management

Utility Management Training: A Master Class for Holistic Management in the Water Service Sector

Program description and covered topics

The need to support and enhance the management culture in the water service sector is undisputed. The State of the Sector reports and the opinions of various stakeholders in the industry repeatedly prove this necessity. Utilizing the already developed D-LeaP programs and in partnership with leading utilities in Central and Eastern Europe, the Utility Management Training aims to "equip" current and future water sector managers with tools and techniques to support their decision making. The academic partner, Sofia University, further brings academic structure and rigor to the program.

Set-up of Program

The program spans over eight topics that, collectively, cover most of the major processes and functions in a water utility. These are:

- Financial and Organizational Management
- Commercial Management and Customer Service
- Asset Management and Investment Planning
- Network Operations
- Energy Management and Energy Efficiency
- Plant Management - PWTs and WWTPs

- Water Safety Planning
- Utility Economics, Regulation and Risk

Spread over two years the modules combine theory and practice, classroom trainings and field demonstrations. Each module is organized within a three-month period with an introductory webinar, a one-week "residential" activity and some follow-up work typically based around cases that the UMT participants bring from their own work environments.

Learning goals

Finance: What is the logical structure of cost centers in a water operator? What are the elements of an OPEX budget? What about a CAPEX one?

Asset Management: Which assets can be defined as "critical"? What is the preferred data model for each asset class? How can we structure optimal maintenance based on condition assessment?

Network Operations: What is included in Network Operations? How can we move towards "proactive" maintenance as opposed to "reactive" one? The need of control rooms and gradual implementation of monitoring solutions.

Similar questions are being raised in all eight modules in order to bridge management and operations level which is the ultimate goal of the UMT program.

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