Remote Reading and Management System for water, gas and heat

Plovdiv
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Company Info

ADD Bulgaria has been established in 2006. The main area of business activities is development and implementation of technologies for data processing and data transfer based on the latest achievements in the communication over PL on LV/MV, RF, GSM/GPRS, ETHERNET

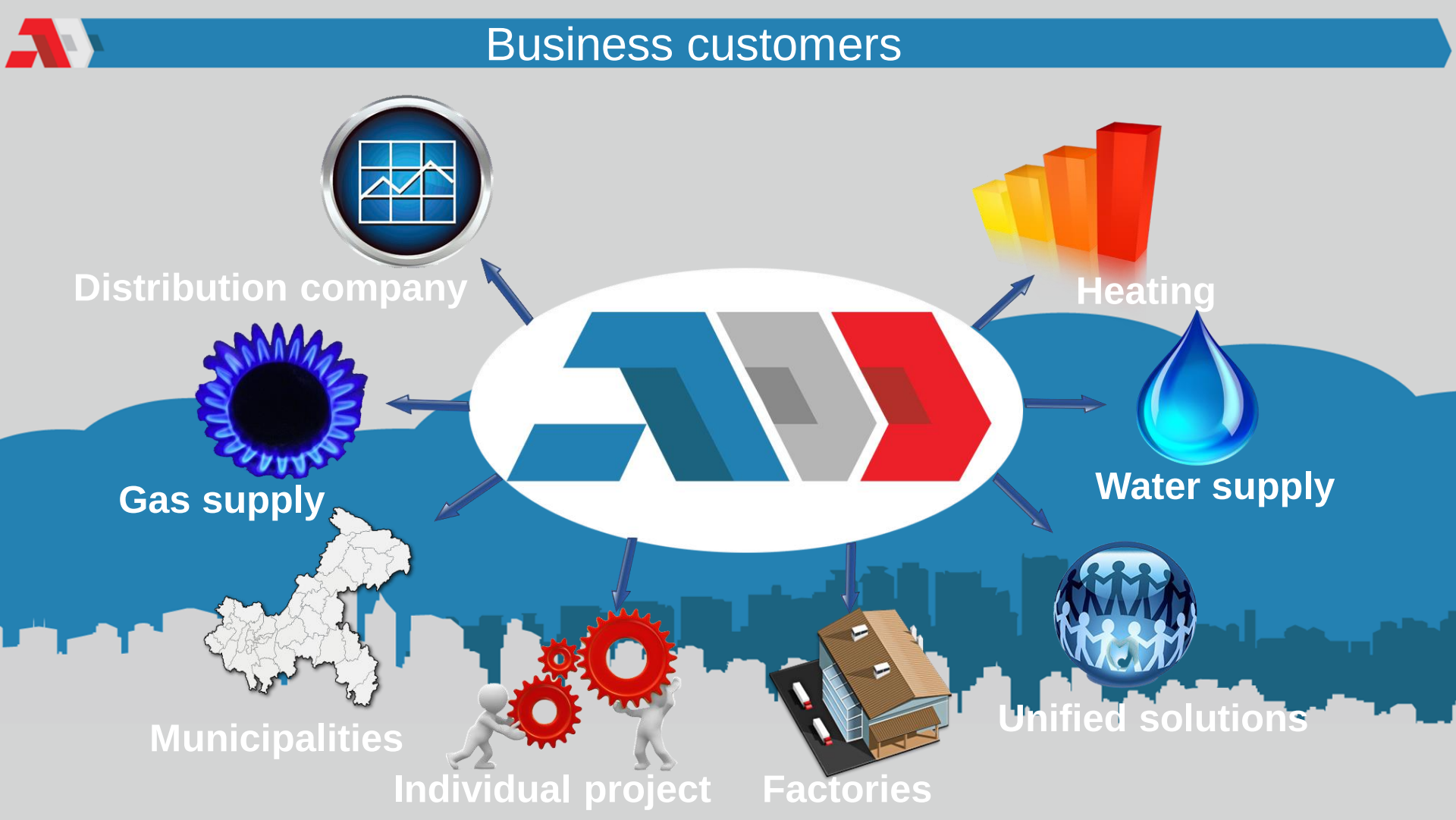
Mission

Development and implementation of high technological solutions for Smart Metering, Smart Home, Smart Grid

Vission

Internationally recognized as a leader with our products and services in Smart systems

Business customers



Strategy

High quality Research and Development process
Standard Technological solutions
Listen to Customer's needs and feedback
Strategy execution
HW &SW compatibility with products from different vendors
ERP and Billing systems integration
Integration in Smart Home
Complex solutions for Utility companies
Reading Monitoring Data transfer
Peak loads management and additional devices
Consumption management by the customers

Four capabilities drive the benefits of Smart Metering

Create
Devices and Sensors to capture the information

Collect
Equipment used to transmit the information to business applications

Manage
Software used to monitor devices and collect data

Utilize
Analytics and Applications Software that adds value to the Information

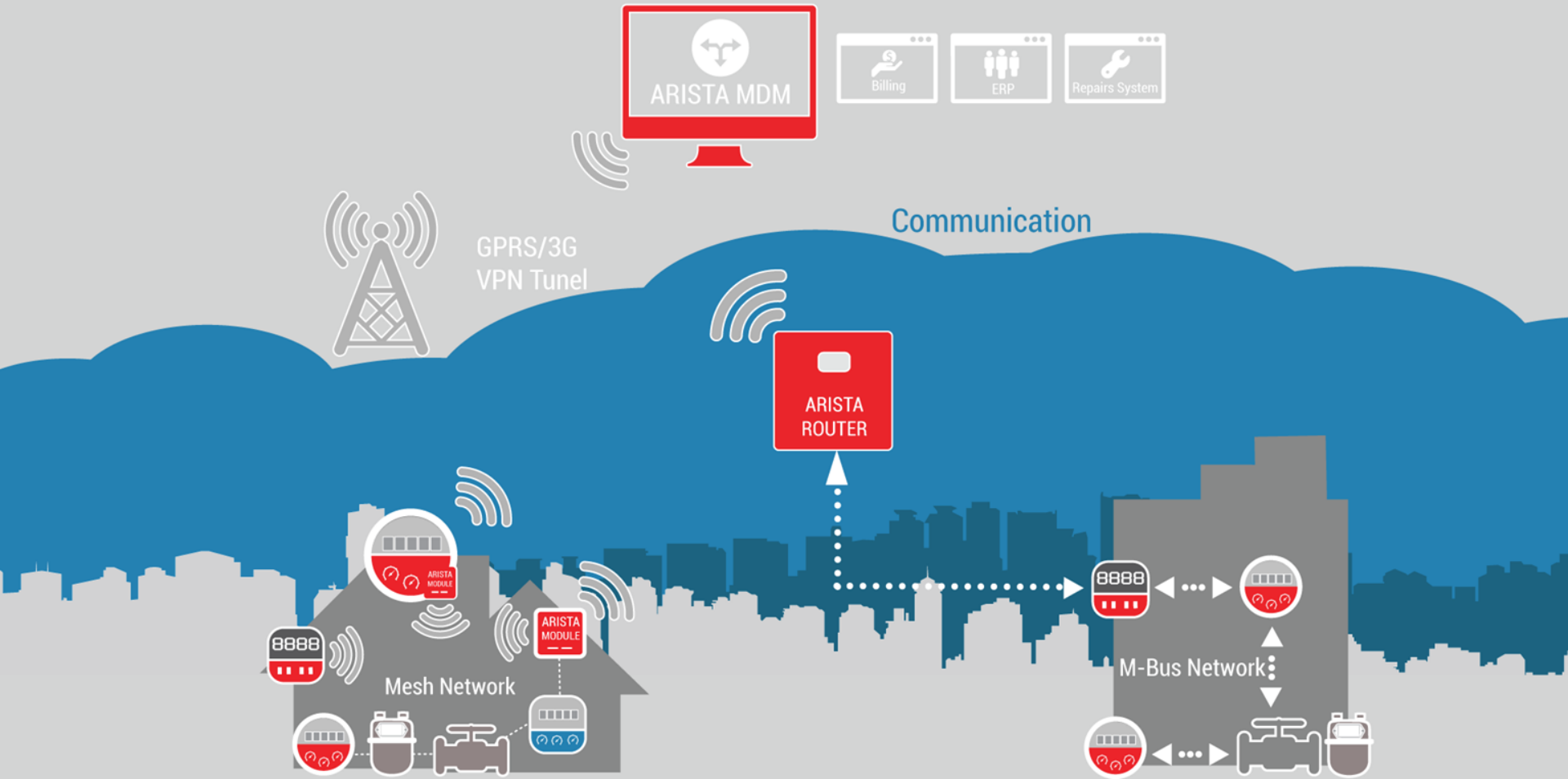
Devices and Sensors to capture the information

Communication equipment and infrastructure required to communicate with devices

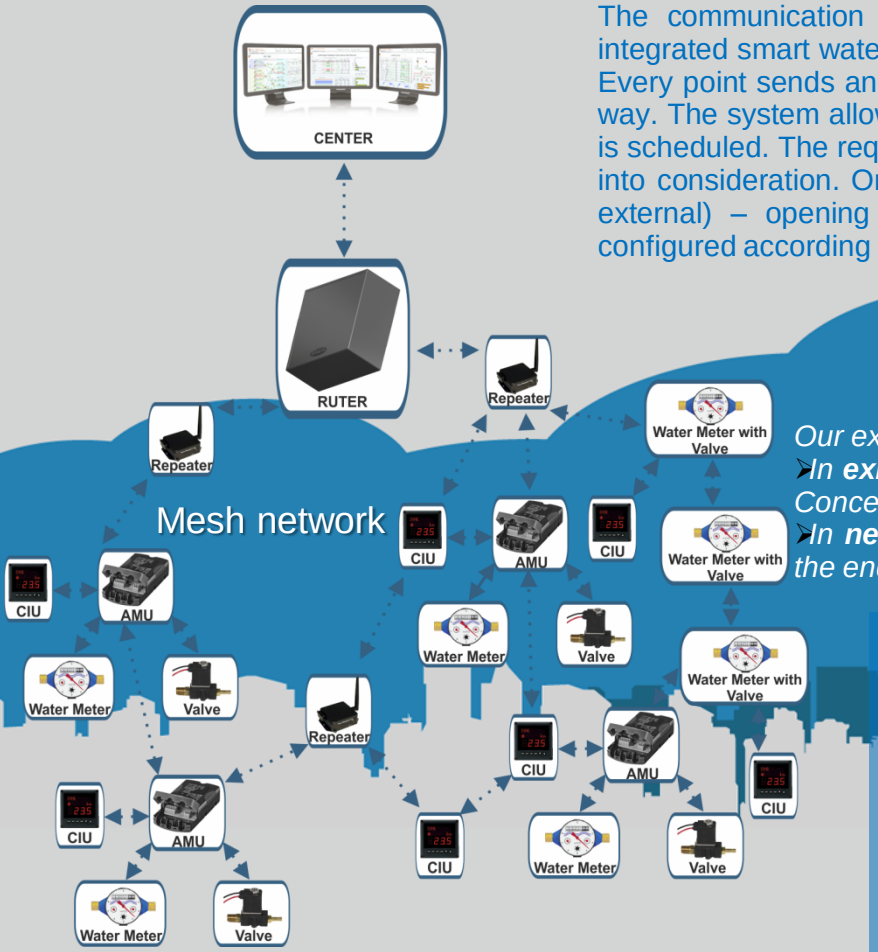
Software that enables customers to manage and connect to premises and devices

Applications that use the information generated by devices or business functions

ARISTA Technology



Arista Management System – for water and gas



The communication network between the end metering points (Arista Management Unit or integrated smart water meters) and the Data Concentrator is built independently for a short period. Every point sends and receives info to and from the points around it. The information flow is two-way. The system allows the reading of data to be done several times a day or as many times as it is scheduled. The requirements for low energy consumption for ensuring long battery life are taken into consideration. One of the main functions of the system is the control of a valve (internal or external) – opening and closing. The balance of the system (for water/gas distribution) is configured according to the requirements of the utility company and is calculated automatically.

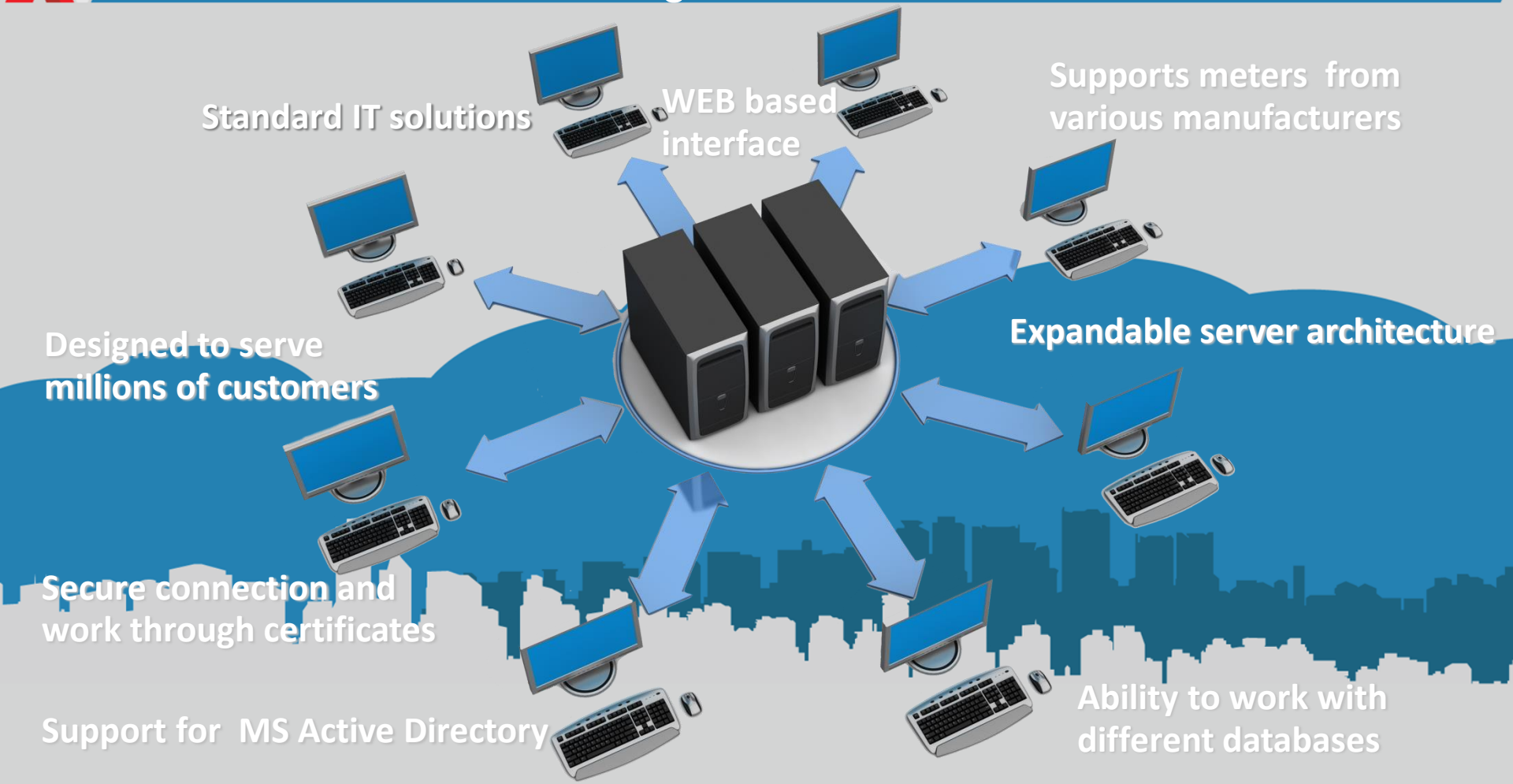
Our experience showed us two approaches for building smart systems for water/gas:

- *In **existing buildings** – set up a wireless ARISTA communication between the Data Concentrator and the end-point with a connected to it meter with pulse output.*
- *In **newly-built buildings** – setting up ARISTA with M-Bus communication between the end points (meters with M-Bus communication) and the M-Bus Data Concentrator.*

Main functions of the end metering devices/AMUs:

- **Distant status control**
- **Distant software update**
- **Alarms for unauthorized manipulation.**
- **Consumption profile**
- **Event log**
- **Valve control – open and close**
- **Integrated communication module – ARISTA radio or M-Bus**
- **Prepayment**
- **Consumption control/ limitation**

Management Center



Router/Data concentrator

Supports DLSM devices from different vendors

Wireless communication with Water meters

ROUTER DC

BASED ON RELIABLE AND SECURE LINUX PLATFORM

SMART TECHNOLOGY FOR MONITORING AND CONTROL THE SMART GRID

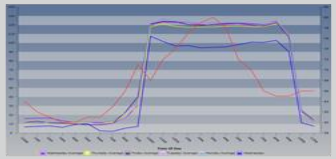
BI-DIRECTIONAL COMMUNICATION

TWO MODES ROUTER AND DATA CONCENTRATOR

CLIENT / SERVER ARCHITECTURE

MANAGEMENT CENTER CONNECTION OVER GSM/GPRS AND ETHERNET

Water/Gas meters



Load Profiles

Alarm for Unauthorized Manipulation

Event Log

Remote Status Control

Integrated Wireless Modem

Built-in Quartz Stabilized RTC

Built-in Valve

Remote Software Update

Prepayment

The center sends the prepaid limit to the customer's water/gas meter

Customers

$ $ $

Utility Company operators

Limit

Open Valve

Consumption

10m3
8m3
6m3
4m3
1m3

Closed Valve

The water/gas meter automatically closes it's valve when the limit is reached

Arista Management System

The system provides info about the consumption, the balance of the distribution grid, alarms, events. It controls and manages the process of water/gas supply and consumption.

Benefits of the system:

- ❑Decrease of the non-technical losses. Control and discovery of the losses within 24h.
- ❑Decrease of the costs on technical staff, meter reading, connection, disconnection and parameterization.
- ❑Optimization of the processes of: reading, connection, disconnection, control of the quality, parameterization – all done via distant control. Easy and quick billing and breakdown control.
- ❑Observation and supervision of the consumption and the parameters of the water consumed in real time, which allows the planning of the consumption.
- ❑Possibility to add a consumption limit for the end consumers, as well as to introduce prepayment regimes through the control of valves.
- ❑On-time and strictly regular billing.
- ❑Dynamic price formation.
- ❑Accurate database.
- ❑Avoiding subjective errors.
- ❑Cheap two-way communication.

The advantage of the ARISTA system is the possibility to make balance of the water which is supplied and consumed. The system is configured according to the needs and requirements of our customers. It gives them the opportunity to track losses, distribution problems, etc. This has a direct impact on the **financial results** of our customers and it allows taking quick and correct measures for solving the problems in a definite region.

Support

- Support in each country through domestic service provider
- Consultation during the first installation
- Connection to our customers over VPN
- Guarantee and after guarantee service
- Communication over phone, e-mail
- Trainings on our products
- Available web forum

Thank You

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