

# Smart City solutions with zenon

## For energy, water, public transportation & smart buildings

According to the United Nations, two thirds of the world's population will live in urban areas by 2050. As the increase in urbanization results in new challenges, from modernizing aging infrastructure to meeting the demands for natural resources, there is an opportunity for cities to become more efficient, safer, healthier and more sustainable places to live and work.



Finding the balance between modernizing existing infrastructures and creating new systems will be no small challenge. zenon overcomes these challenges, especially in the areas of energy, water, public transportation and smart buildings. The results: lower consumption of valuable resources, decreasing costs and a highly scalable, future-proof and sustainable solution.

### THE ROUTE TO THE SMART CITY STARTS WITH DATA

zenon provides seamless networking and centralization of heterogeneous hardware landscapes and legacy systems for comprehensive data collection across a city. The Industrial Internet of Things (IIoT) offers a suitable framework for this: from the sensors to the cloud platform and onwards to mobile end devices. For this, zenon delivers complete horizontal and vertical integration options. More than 300 communication protocols and drivers ensure optimal flexibility and, therefore, future-proof investment.

### ELECTRICITY – THE ENERGY OF LIFE

Whether it is for smart grids, local plants, hydropower plants, wind farms, photovoltaic systems or substations, zenon provides an integrated environment for all applications. Furthermore, it supports protocols such as IEC 61850, IEC 60870, and DNP3 – perfect for seamless integration with existing control stations and systems. Paired with predictive analytics capabilities, it can also forecast bottlenecks in the energy supply and schedule necessary maintenance work.

### WATER – THE ORIGIN OF EVERYTHING

zenon helps to predict acute or otherwise unexpected peaks in consumption and introduce measures to avoid disruptions to the water supply. It also provides maintenance personnel with all the figures and information about the water or sewerage network on a mobile device, so leakage losses are quickly detected via incoming alarm notifications.

### PUBLIC TRANSPORT – CONVENIENTLY FROM A TO B

Used as a central process control system, zenon monitors and controls the components necessary for running the mobility services within a city, such as the digital displays on motorways, the ventilation in tunnel systems, the lights on airport runways, and more. As an energy data management system (EDMS), it also ensures a more sustainable use of energy resources throughout the traffic network.

### INTELLIGENT BUILDINGS – SUSTAINABILITY FOR WELL-BEING

Elevators, air-conditioning systems, heating, lighting systems, water, electricity – a building brings together numerous systems that need to interlink in an automated fashion. Public facilities such as universities, schools or hospitals represent a high energy-saving potential, because they often have older building infrastructures. As a building automation or EDMS, zenon helps the building managers to identify potential savings and achieve them in the best possible way.

### FAST FACTS

- ▶ Data acquisition, visualization and analysis
- ▶ Future-proof and sustainable IoT solutions
- ▶ Predictive analytics & machine learning
- ▶ Full flexibility and independence
- ▶ Security by design

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<b>Focus areas:</b>	<ul style="list-style-type: none"><li>▶ Energy</li><li>▶ Water &amp; Waste Water</li><li>▶ Public Transportation &amp; Traffic</li><li>▶ Smart Buildings</li></ul>
<b>Smart City solutions:</b>	<ul style="list-style-type: none"><li>▶ Remote monitoring &amp; control of distributed infrastructure</li><li>▶ Predictive analytics solutions (predictive maintenance, consumption, etc.)</li><li>▶ Reporting &amp; advanced analytics</li><li>▶ Energy data management system (EDMS)</li><li>▶ Mobile applications (zenon Everywhere)</li></ul>
<b>Horizontal and vertical integration with zenon:</b>	<ul style="list-style-type: none"><li>▶ Over 300 native communication protocols</li><li>▶ ERP interface (SAP ERP, Microsoft Dynamics)</li><li>▶ Web Server</li><li>▶ Everywhere Server (Smartphone Apps)</li><li>▶ Cloud integration</li></ul>
<b>Easy implementation:</b>	<ul style="list-style-type: none"><li>▶ Can be easily integrated into existing systems and infrastructures</li><li>▶ During live operation</li><li>▶ Out-of-the-box modules and high usability</li><li>▶ Additional devices, sensors, machines, reports or users can be added easily</li></ul>