The concept of smart cities will redefine how we live in the cities of the future. It is estimated that by 2050, around 70 percent of the population across the globe is going to live in urban areas. Designing and implementing smart cities will be important to tackle the economic, environmental, financial and technical constraints that will accompany this growing population in urban environments.

Today’s smart city solutions—built and implemented by IT solutions providers—are enhancing the entire concept at a micro level. However, it has to be done in a bigger and broader scale to facilitate smart cities with smart infrastructure. IoT and cloud will be key enablers in this. These solutions will help tackle multiple challenges, such as reducing air, water and noise pollution, energy conservation, operational savings, public safety, appropriate resource management, improved health and enhanced security. The rapid growth of technology will make the dream of fully integrated smart cities real in the near future.

In order to assist CIOs and other stakeholders in identifying the right smart city solutions providers, CIO Review presents “20 Most Promising Smart City Solutions Providers 2016.”

A distinguished panel comprising CEOs, CIOs, VCs, analysts, and the CIO Review editorial board has selected the top Smart City Solution Providers. In our selection process, we looked at the vendor’s capability to fulfill the need for cost-effective and flexible solutions that add value to the smart city landscape.

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**Confidex Ltd.**

**Company:** Confidex

**Description:** Provides real-time data by RFID tags and labels for industrial asset tracking and contactless smart tickets for large scale ticketing applications in public transport, access control, and parking

**Key Person:** Timo Lindström, CEO

**Website:** confidex.com
Confidex
Enabling Real-time Data Collection and Smart City Efficiency

An ideal Smart City utilizes Information and Communication Technology (ICT) to enhance the quality of urban life. Sensing, authentication, and cloud computing have made smart city a buzz word today. With cutting-edge software and radio frequency authentication technology, the use of Radio Frequency Identification (RFID) and wireless sensor networks have made it possible to produce data concerning all aspects of urban life. The latest mega trend for digitalization of public sector with Internet of Things (IoT) has been estimated by McKinsey and Company. With this, Confidex—a Finnish company with sales offices in South Carolina, Zürich, Nice, Tampere, Guangzhou, Shanghai and Beijing provides user-friendly solutions to address the development of smarter city technology adaptation. “Confidex provides a predictive management of public assets with short range wireless solutions on traffic management, public transport, utility management and healthcare to enable the optimized use of data from sensors connected to objects,” begins Timo Lindström, CEO.

"The value of IoT as the way to make cities Smart is not about hardware, connectivity nor software alone. It is about having reliable data available exactly when needed"

The firm collaborates with software and connectivity providers to deliver full RFID technology solutions as one of the first movers in smart city projects. “Confidex full-service personalized fare media offering includes a wide range of smart ticketing formats to serve the public transport ticketing infrastructure,” says Lindström. For Smart Cities, the use of Smart Ticketing increases not only passenger satisfaction, but security against fraud–reducing revenue loss and enabling creation of new service models at the same time. The use of RFID tagging in rail assets tracking, on the other hand, increases the revenue by lowering maintenance costs, and providing improved service planning. Therefore, the increase in demand for smart technology and contactless ticketing solutions led Confidex to provide a wide range of capabilities that includes special printable on-metal RFID and NFC labels, contactless toll collection and parking tickets and tourist cards. “Our team is able to develop a product, that fits the constraints of most equipment available in the market,” adds Lindström. “We enable a better customer experience with new payment options, multi-services, reliability and durability of fare media, fast transactions, and less queuing at gates,” says Lindström.

With such Smart Ticketing solutions, Confidex has been selected as the Smart Ticketing supplier for more than 70 major cities worldwide, including Strathclyde Partnership for Transport (SPT) who owns and operates the Glasgow Subway. “We supplied a large volume of contactless ITSO (Integrated Transport Smartcard Organization) smart tickets to replace the old magnetic stripe tickets,” opines Lindström. Confidex was selected after holding a competitive tender, based on price, quality and the ability to achieve ITSO inter-operability certification. The smart tickets were encoded and issued from vending machines, parking machines, and ticket office to provide seamless journey experience for the users—a fully infrastructure compliant solution that was later on enhanced by Park & Ride tickets, also supplied by Confidex.

The company has combined high-volume in-house manufacturing with R&D team to create an edge over its competitors. Innovation is embedded in the core of Confidex values, and the need to understand customers’ needs and requirements is the company’s key competitive differentiator. “We have created a unique patent-pending RFID antenna technology that overcomes the limitations caused by the environment,” affirms Lindström.

For the future, Confidex plans to develop full solution ecosystem as a key contributor. “We continue to add value to our new products and services in the field of short range wireless IoT. The value of IoT as the way to make cities Smart is not about hardware, connectivity nor software alone. It is about having reliable data available exactly when needed,” concludes Lindström.