



PRESS RELEASE

Smart dynamic LED street lights turn on in St. Gallen

**Paradox Engineering and Osram Lighting solutions allow the City
to save up to 65% of power and enable the intelligent development
of future urban applications**

Munich and Novazzano, 19 June 2018 – The City of St. Gallen, Switzerland, has kicked-off a Smart Lighting project which is expected to save up to 65% of power thanks to the implementation of energy-efficient LED luminaires and an advanced remote control system. Technology partners Paradox Engineering SA and Osram Lighting AG worked with St. Gallen Stadtwerke to design and develop the new infrastructure, now being piloted along Oberstrasse.

Nearly 60 SL20 LED luminaires by Osram were installed on the road and connected to Paradox Engineering's PE Smart Urban Network platform for remote monitoring and control. This solution allows St. Gallen Stadtwerke to manage the entire streetlight area from a web-based console, switching on/off single or grouped lamps, varying light intensity whenever needed and tracking lamps performance. Customized lighting patterns can also be defined to schedule streetlights operations according to daytime and weekdays.

Moreover, the lighting system also features an optical sensor that detects traffic intensity and triggers luminaires to automatically dim light up and down upon vehicle transit. Thank to this feature, light intensity is automatically adapted to traffic volumes, limiting waste of power and emissions when only a few cars and trucks pass by, as typically happens at night. The combination of Osram's LED luminaires and Paradox Engineering's network platform increases energy saving up to 65%, if compared with traditional streetlight architectures.

"Using energy and available resources responsibly is very important for an innovative City like St. Gallen. Street lighting has a direct impact on attractiveness of a city, so we were looking for the best possible balance between the need to save energy, emissions and money on one hand, and that to safeguard quality of life and public safety", said Urs Etter, Head of Public Lighting at St. Gallen Stadtwerke. "We have been investing in LED systems for some years, and we are proud to turn on this dynamic Smart Lighting solution which will further improve our sustainability performance. As we invest for the future of our City, this technology is open to any extension and development we might need – and that's a great benefit for us".

PE Smart Urban Network is a natively interoperable platform enabling both Wireless IoT and Wireless Highspeed IoT applications over the same network. It will support the extension of Smart Lighting to Smart City to the entire City of St. Gallen, but also the future integration of other urban services. Easy integration of third party systems is even granted, offering the City the maximum flexibility to evolve at its own pace and without any legacy constraint.

About THE CITY OF ST. GALLEN

St. Gallen is the eight biggest City of Switzerland and Capital of the same named Canton. About 80.000 people are living in the City of St. Gallen which offers approximately 70.000 working places.

About OSRAM

OSRAM, based in Munich, is a leading global high-tech company with a history dating back more than 110 years. Primarily focused on semiconductor-based technologies, our products are used in highly diverse applications ranging from virtual reality to autonomous driving and from smartphones to smart and connected lighting solutions in buildings and cities. OSRAM uses the endless possibilities of light to improve the quality of life for individuals and communities. OSRAM's innovations enable people all over the world not only to see better, but also to communicate, travel, work and live better. OSRAM has approximately 26,400 employees worldwide as of end of fiscal 2017 (September 30) and generated revenue of more than €4.1 billion. The company is listed on the stock exchanges in Frankfurt and Munich (ISIN: DE000LED4000; WKN: LED 400; trading symbol: OSR).

Additional information can be found at www.osram.com

About PARADOX ENGINEERING SA

Paradox Engineering is a technology company that designs and markets Internet of Things solutions for device and data management in smart urban and industrial environments. Unique competences in radio design, network design and management, low power consumption and data collection at the heart of Paradox Engineering's technological leadership.

Established in 2005 and headquartered in Switzerland, the Company is part of MinebeaMitsumi Group, leading global provider of Electro Mechanics Solutions™, which acquired full capital and assets of Paradox Engineering SA in July 2015. The Company controls Tinynode, Swiss company specialized in wireless vehicle detection systems and Smart Parking technologies.

For further information: www.pdxeng.ch

Media contact for Paradox Engineering SA:

Silvia Vergani, ph. +41 91 233 01 00, e-mail: svergani@pdxeng.ch