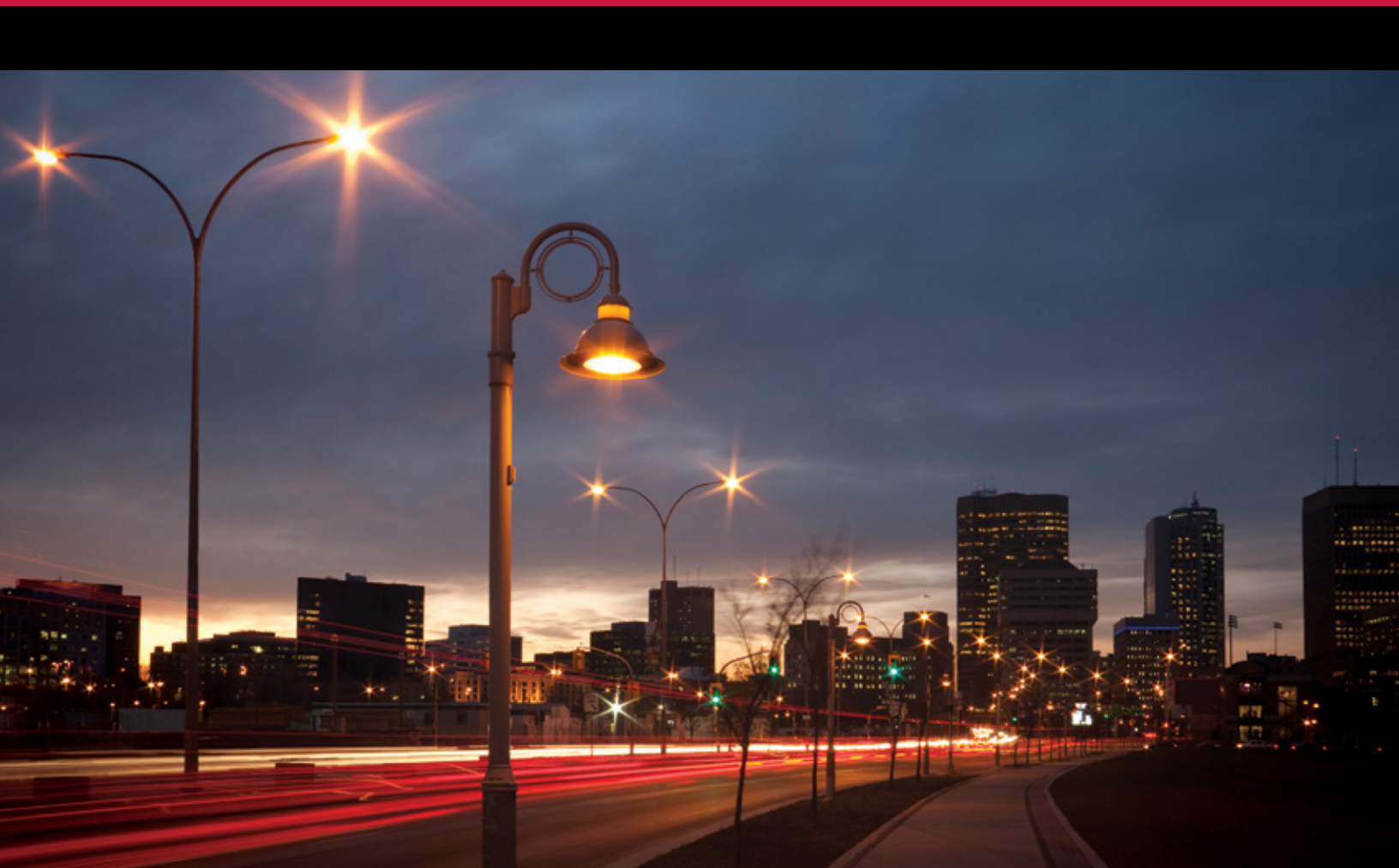**TALQ**

Uniting Smart Outdoor Lighting

- Standardized Lighting Management Interfaces
- Improved Monitoring and Maintenance
- Answers to Ecological Challenges
- Smart Lighting for Smart Cities

The TALQ Consortium, founded by leading lighting industry players, will set a globally accepted standard for management software interfaces to control and monitor heterogeneous outdoor lighting networks.

TALQ is an open consortium for industry members. We also operate a Partner Program for stakeholder partners like cities, municipalities, utilities, consultants, and others to actively build the future of smart outdoor lighting.

To learn more about us, our members and partners, please visit **www.talq-consortium.org**

Smart Outdoor Lighting for Smart Cities

Streetlights are strategic assets for cities and road authorities. The way outdoor lighting systems are operated and managed has changed greatly over time. Previously light levels could not be changed; the lighting remained at full power throughout the whole night. The energy consumption of the lighting installation could only be estimated.

The large number of streetlights and their wide geographic distribution in the cities made them difficult and expensive to operate. More recently concerns about global warming and rising cost of energy have incentivized cities to deploy new solutions addressing these issues.

Intelligent outdoor lighting helps to drastically **reduce energy consumption** and at the same time to **increase safety** and **reduce maintenance costs** for cities and road authorities. Outdoor Lighting Networks (OLN), together with the deployment of more efficient luminaires, are proven solutions that support municipalities and utilities to increase the performance of their lighting management and decrease cost.

By using Luminaire Controllers, Sensors, Streetlight Cabinet Controllers and a Central Management Software, cities turn their systems into a **Smart Outdoor Lighting System,** that allows dimming schedules, automatic identification and report of lamp failures, real time control, automatic measurement of energy consumption, and much more.

Setting a standard for Outdoor Lighting Management

Today's challenge is the complexity associated with multiple proprietary systems and interfaces. The lack of standards makes integration of different systems more difficult, and deployment of different systems in one region or city makes management and maintenance inefficient.

Lack of standard interfaces prevents interoperability between different lighting networks
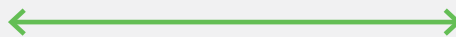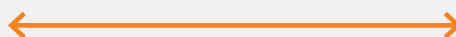
CMS A ⟷ OLN A

CMS B ⟷ OLN B

CMS
Central Management System
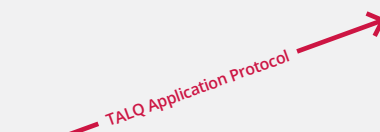
CMS C ⟷ OLN C

OLN
Outdoor Lighting Network

Intelligent Control through the TALQ Specification

The TALQ Specification defines a management interface for outdoor lighting networks, wherein a single Central Management System (CMS) can control different OLNs in different parts of a city or region. It will support adaptive lighting, system monitoring, joint data collection as well as a simplified configuration and upgrades.

Using the TALQ protocol a single CMS will be able to manage and control diverse lighting networks
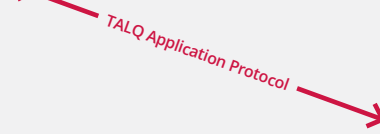
TALQ CMS

TALQ Application Protocol → TALQ Bridge A → OLN A

TALQ Application Protocol → TALQ Bridge B → OLN B

TALQ Application Protocol → TALQ Bridge C → OLN C

TALQ CMS
TALQ compliant CMS

OLN
Outdoor Lighting Network

Through adoption of the TALQ specification municipalities, cities and other users investing in smart outdoor lighting can benefit from a broad interoperable product choice. The TALQ approach fosters competition and helps to achieve benefits for users and the environment.

Certified TALQ compliant products will be identified by the TALQ symbol and will be listed in a product registry on the TALQ website.
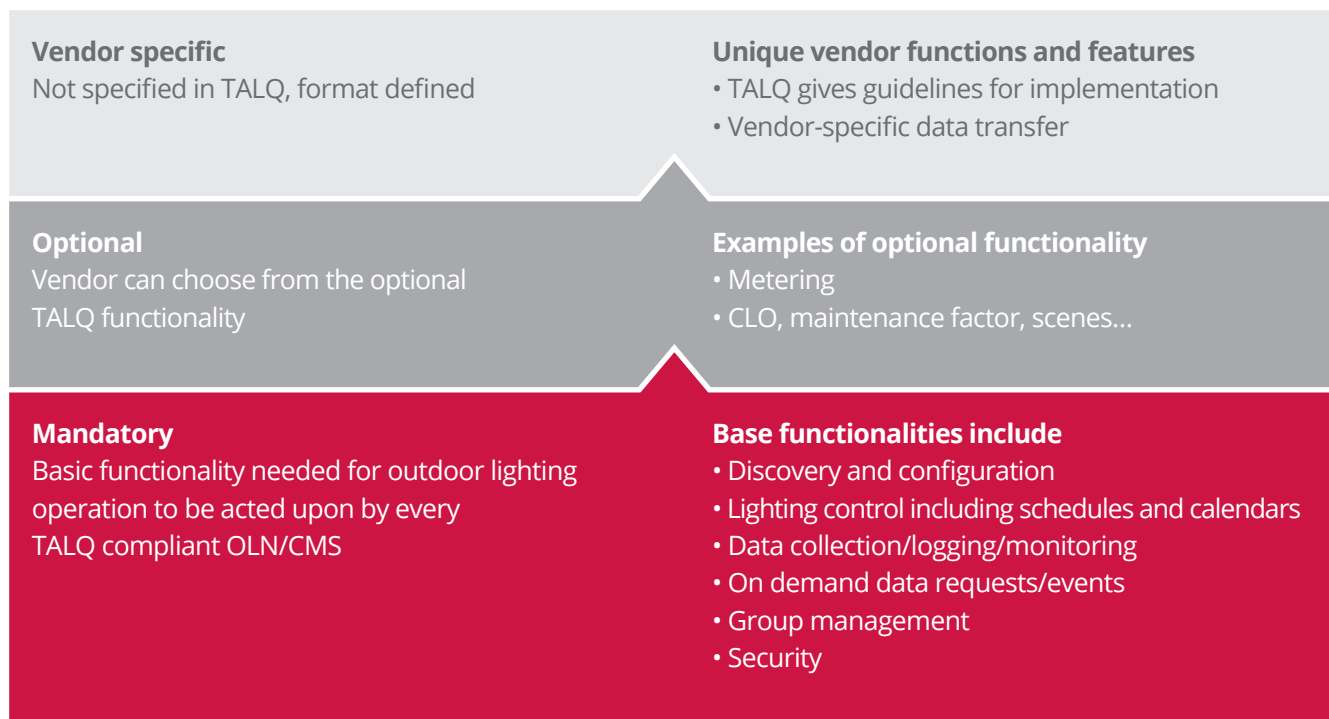
A flexible solution

In order to enable integration across OLN implementations the TALQ Specification defines mandatory interoperable functionality and allows optional interoperable features. Additionally TALQ also enables differentiation through vendor specific features.

The most commonly used operations are covered by the mandatory functionalities. The optional definitions address frequently requested additional features.

CMS and TALQ Bridge implementations accept optional attributes and supplier specific attributes/events without problems, but they are not required to implement corresponding functionality.

Vendor specific Not specified in TALQ, format defined	**Unique vendor functions and features** • TALQ gives guidelines for implementation • Vendor-specific data transfer
Optional Vendor can choose from the optional TALQ functionality	**Examples of optional functionality** • Metering • CLO, maintenance factor, scenes...
Mandatory Basic functionality needed for outdoor lighting operation to be acted upon by every TALQ compliant OLN/CMS	**Base functionalities include** • Discovery and configuration • Lighting control including schedules and calendars • Data collection/logging/monitoring • On demand data requests/events • Group management • Security

Help to define the future of smart outdoor lighting

Join as a Member
Regular and Associate Membership is available for companies who intend to provide TALQ compliant products.

Join the Partner Program
The TALQ Partner Program seeks the involvement of municipalities, utilities, consultants and others who plan, operate or control outdoor lighting networks.

For more information please visit **www.talq-consortium.org**

TALQ

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United Nations
Educational, Scientific and
Cultural Organization

In support of

International
Year of Light
2015