



# The Smart City Protocol

TALQ Specification



- Common Language for Smart City Verticals
- Open Platform for Innovation
- Multi-vendor Choice
- Proven Global Standard

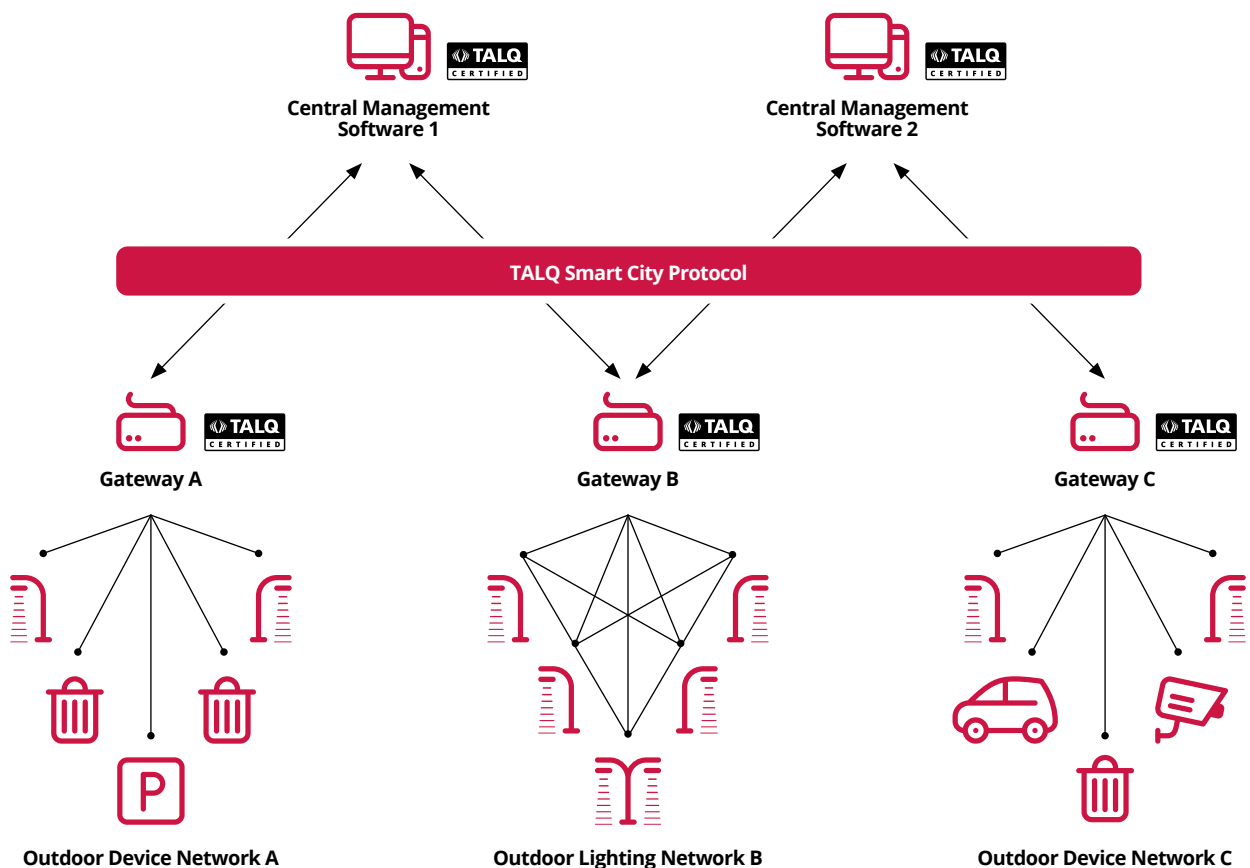
Flagship projects around the world are proving conclusively that Smart Cities will be delivered through effective collaboration between providers, enabled in part by the adoption of global standards, which enable interoperability and accelerate innovation.

The TALQ Consortium, founded by leading lighting industry players in 2012, has developed the global standard enabling interoperability between communication networks in the field and the software platforms managing applications via these networks. Achieving this required close cooperation between various vendors to offer real benefits to cities and municipalities.



## Intelligent control through the Smart City Protocol

The TALQ Specification defines a management interface for outdoor device networks, where one or more Central Management Software (CMS) solutions can control different device networks for various verticals in different parts of a city or region. It supports system monitoring and joint data collection, as well as simplified configuration and upgrades.



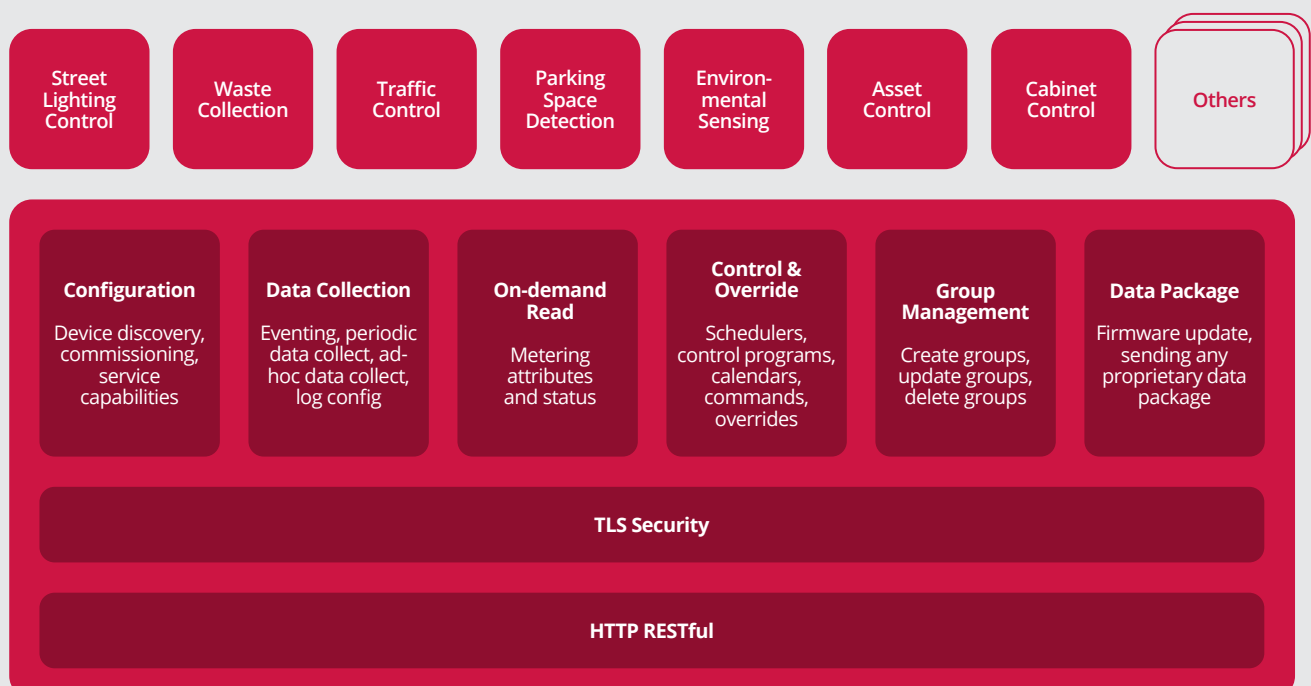
# Key benefits & features of the TALQ Smart City Protocol

- **One location for all**, allows management of multiple verticals on a single CMS (vendor agnostic).
- A **flexible data model** that is applicable to a wide range of sectors and use cases, such as outdoor lighting control, waste collection, parking space detection, environmental data collection, energy management and more. With the Smart City Protocol, vendors are free to describe their devices using TALQ functions.
- A **broad set of services**, not only data collection but also configuration services, dynamic control programs and manual overrides, an on-demand data read service, group management and firmware updates.
- **Easy to integrate** into both CMS and Gateway thanks to the use of standardized technology. Communication protocol is defined with OpenAPI and based on HTTPS, RESTful and JSON.

## How TALQ is implemented

TALQ adopts its data model to the market needs by collaborating with smart city vertical experts. In most cases this simply requires new functions with associated attributes and events. The set of services available is comprehensive and designed in a flexible way to support many different use cases. New functions can be submitted for publication and wider use as the scope of use of the TALQ specification grows.

Thanks to its flexible device data model, TALQ can already be used to provide interoperability between Central Management Software and suppliers' Outdoor Device Networks in many smart city vertical markets, allowing them to cover multiple smart city applications within a single platform.

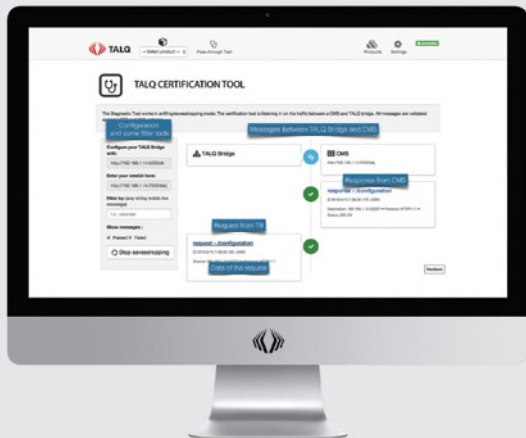


# A certified global standard

The TALQ Consortium has invested in a suite of intelligent testing tools to enable and underpin a robust Certification Program. The transparent procedures and automated testing ensure full interoperability between different certified systems, and make TALQ the lowest risk choice for cities.

Member companies can check their systems with the software-based test suite until they feel confident that their implementation of the TALQ Specification has been successful. Additional regular Plugfest sessions allow the members to test their solution in collaboration with systems of other vendors.

A TALQ certificate is awarded to a product (CMS or Gateway) after the submitted TALQ Testtool results and necessary documentation have been approved by the TALQ Consortium. Certified TALQ compliant products are identified by the TALQ-certified logo and listed on the TALQ website.



Through the implementation of the TALQ Smart City Protocol municipalities, cities and other operators investing in smart city applications can benefit from a broad interoperable product choice.



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TALQ is an open consortium for industry members. As a non-profit organisation, the TALQ Consortium supports and educates cities and solution providers by, for example, publicising the use of the TALQ technical specifications, how to implement them and the benefits of their adoption.

All member companies can be found on our website.



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