

Smart Light Control

The cities are facing problems due to the growing urbanization, and thus they need to accelerate the development of smart solutions to handle those problems of urbanization, climate goals and energy crisis. To provide an effective decision support tool to support decision makers, **CAPELON** provided a Connected Streetlights solution in combination with **Snap4City** horizontal smart city platform, thus providing the tools for efficiently overcoming the data silos problem.



For Stockholm, Helsingborg, Eskilstuna and many other cities, connected streetlights will be an important enabler for IoT solutions and smart city services. With connected streetlights it is possible to provide both power and the infrastructure to connect millions of sensors throughout the city. In order to make it possible to exploit cross data information horizontally across city department the **Snap4City** solution provides an important role. In Stockholm and Helsingborg, several trials have been performed, and the results have confirmed their conclusion to use city wide mesh network provided by the streetlights to connect standard sensors via the streetlights or via gateways allowing standard sensors to be connected to the city mesh network. Standard BLE sensors for humidity, temperature, movement, magnetic and presence detection were connected and carried by the streetlight mesh and processed for different purposes in the **Snap4City** platform.



CONNECTED STRETLIGHTS SOLUTION EXPLOITING SNAP4CITY PLATFORM

SMART APPLICATION TO MONITOR AND CONTROL STREETLIGHT NETWORKS

The Connected streetlights are not only for providing light, but also an important pillar for smart cities and IoT. With the right connectivity, such as Wirepas mesh, the streetlight network allows connecting millions of sensors throughout the city. However, to make effective use of sensor data, the vertical streetlight management system is often not enough, and there is where Snap4City is stepping in and providing a very important role to provide a horizontal smart city operational system and as well, very important, a collaboration platform. That in combination with standards like FIWARE and TALQ, CAPELON and Snap4City can provide an effective solution to help cities to accelerate their smart city development and thus have a chance to meet the Sustainable Development Goals, SDG, challenges arising with the quickly growing urbanization.

In Stockholm 1100 new streetlights cabinets have been installed by CAPELON and connected to Snap4City via Orion Broker FIWARE. The scenario implemented allows to have a global visualization of the cabinets' status in the whole city. By interacting with the map view, thanks to Snap4City it is possible to drill down in the data of each single cabinet in a very effective way, opening many possibilities for future smart applications.



https://www.snap4city.org/dashboardSmartCity/view/Gea.php?iddasboard=NDAxOA==

During the energy crisis this year a lot of cities are forced to switch off their lights. The cities that have invested in connected streetlight can instead dim down the lights, hence saving energy and maintaining traffic safety and allowing citizen to feel safe. Furthermore, with sensors and loT Apps of Snap4City the balance between energy saving and maintaining safety can be even further optimized by providing light according to the real demand based on location and situation.

The CAPELON solution provides all the benefits with a connected streetlights as well as providing the possibility to connect millions of sensors and the Snap4City providing the solution to really use this use these data for monitoring and control. Of course, Snap4City also providing the possibility to integrate other systems like AXIS cameras that can be used to further dynamically control the streetlights in CAPELON's solution, and any legacy solution the city has in place.

Extended version accessible from: <u>https://www.snap4city.org/816</u> Contact: <u>https://www.snap4city.org</u> Partners: CAPELON (<u>https://www.capelon.se/</u>)

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