

SPECIAL REPORT

Innovative IoT solutions in Helsingborg



Many of the municipalities in Infracontrol Community make use of new, innovative IoT applications to surveill their infrastructure. Small, cheap, power-saving sensors and new communications networks make it possible to connect things that were previously expensive and complicated to monitor. Municipalities knows their own operations best, and when they let the needs decide where the new technology is used, IoT provides truly practical benefits. Specially when it's connected to Infracontrol.

Andreas Hall, who is the development engineer in the operations and maintenance department in the City of Helsingborg's town planning department, talks about some of the applications:

- *We equip lifesaving devices with IoT sensors that can detect whenever any part of the equipment is missing. We've installed shake sensors on a number of lampposts and crash barriers that are vulnerable to collisions. GPS trackers are on their way outdoors right now as we set out summer furniture. They'll probably be fitted to a number of benches, and also to barbecue grills that are expensive to procure. We already have a number of soil moisture sensors in place, and more will be put out shortly. They'll gather information about tree status in difficult-to-reach places that are expensive and hazardous to visit from an occupational safety standpoint. This will reduce the need for our contractors to be present in a motorway environment. We will install sensors to measure water consumption at two city fountains, and on an urban motorway on the outskirts of the city we will install a radar to detect standing water. Then we'll be working with information from waste bins; knowing how full they are will allow us to empty them at the right time.*

He tells us that the signals from the various IoT applications are sent to Infracontrol Online, which make sure the information reaches the right person for action.

Quick and easy implementation

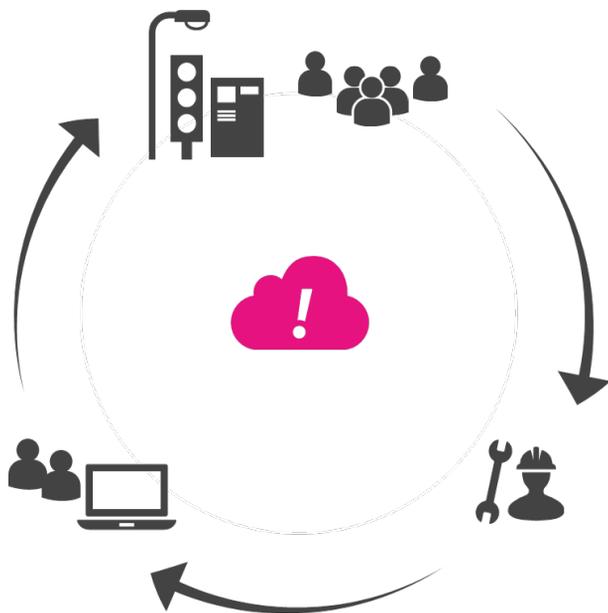
Get inspired by Helsingborg and other innovative IoT municipalities and begin benefiting from the new technology right away. Together with various collaborative partners, Infracontrol offers a number of ready-to-go IoT solutions to make getting started easy.

- *We aim to make it easy for people who want to use the new technology, says Jonas Bratt. There's a wide range of sensors on offer that provides many possibilities, but this also means it can be difficult to make the right choice. Connection to Infracontrol Online means they can quickly incorporate the benefit they want into their operation and enjoy a future-proofed platform for coming needs.*

In addition to sensors and the functions in Infracontrol Online, there is naturally also a need for access to an LPWAN network.

- *Such networks already exist in many municipalities, says Jonas Bratt. "And if not, it's easy to arrange e.g. through one of our collaborative partners.*

He reminds us not to get too hung up on technology, but to do what Helsingborg did and first look at what you need and then find suitable solutions.



Infracontrol Online provides full control over society's infrastructure by collecting information not only from technical installations but also from residents.

20 useful examples of IoT applications

- Alarms from all types of technical equipment such as lighting controllers, pump installations, ventilation installations, heating cables, escalators etc.
- Pushbuttons to draw attention to e.g. littering
- Open cabinet doors or covers for fuse boxes or similar
- Leaning, bent or twisted objects
- Waste levels in bins and recycling containers
- Stolen objects – via sensors or GPS
- Humidity and air temperature in equipment rooms, ops rooms and technology structures
- Moisture / temperature in walls, floors and foundations
- Moisture / temperature in soil, ground or pavings
- Moisture or water on the ground or floors
- Blocked drains
- Voltage drops to important equipment such as lighting, HVAC installations or dehumidifiers
- Water levels and flows in watercourses and lakes
- Flows through hoses and pipes
- Groundwater level
- Air quality (multiple parameters)
- Lights level – direct or indirect
- Noise
- Broken glass
- Rain or snow

Make sure the information is put to good use!

IoT provides new monitoring and control abilities. Developments are proceeding apace, according to Johan Höglund, Infracontrol CEO, but so are the challenges:

- *IoT units and communication solutions are provided by many different suppliers and comprise different technologies with a variety of functions and architectures. Also, practical responsibility for society's infrastructure is spread across many different players.*

Thus there is a great need for an all-embracing platform to which all kinds of technical systems can be connected and where every type of communication can be used.

- *It's important that this kind of platform be adapted for practical use in real situations, with sensible, beneficial applications designed around the user's needs and circumstances. We truly succeeded in this regard when we developed Infracontrol Online, says Johan Höglund.*

Want to know more?

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