

interact



Case study

Building a better Belleville

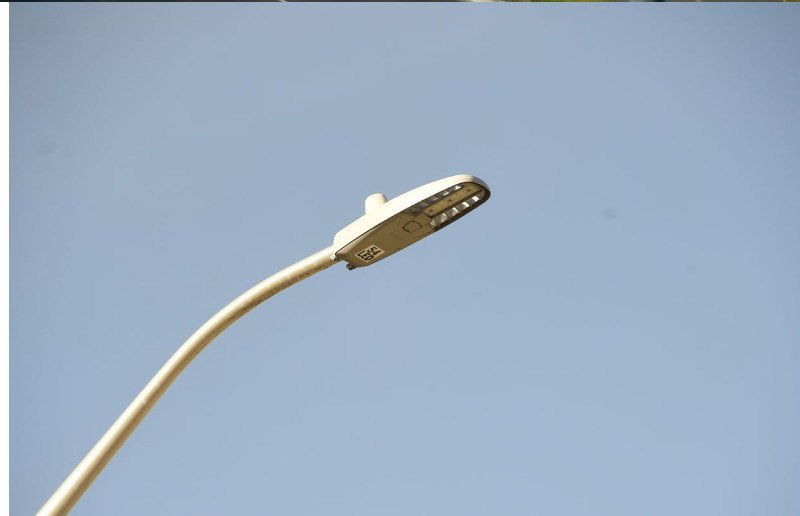
A city's vision for a smart infrastructure comes to light



Belleville lights the way to a sustainable new future

A great place to live

Situated within the picturesque Bay of Quinte Region, the City of Belleville in south central Ontario is home to 50,000 residents and boasts a rich history dating back to the early 1800s. Along with its numerous parks, gardens, harbours, and modern cultural attractions, Belleville has long been committed to the environment and sustainable practices designed to enhance quality of life for current and future generations. So, when the city's streetlighting system proved outdated and inefficient, Belleville administrators reached out to Signify for a cutting-edge new connected lighting system that delivers the benefits of high efficiency, long life, low maintenance, user-friendly control, and unprecedented simplicity.



Build Belleville represents the city's strategic vision to implement smart infrastructure projects that matter, and deliver better service to their citizens. Installing smart street lighting is a key component of this vision.

“

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Scott Whiteman,
Supervisor of Roads/Traffic - City of
Belleville

An outdated system

As an over 200 year-old city, “our streets weren’t always lit in a standard way, with some older streets underlit or poorly lit,” City of Belleville Supervisor of Roads/Traffic Scott Whiteman said of the outdated collection of 100, 150, 250, and 400-Watt high pressure sodium fixtures that previously lit the city’s nearly 5,000 streetlights and were costly and time-consuming to replace. “Overall, we wanted a lighting system that would deliver energy and maintenance savings, eco-friendliness, an attractive payback period that would pay for the new lights quickly, and the ability to improve management of our streetlight asset inventory,” Whiteman explained. “The time had come for the City of Belleville to upgrade.”

Joel Carr-Braint, Special Projects Manager for Belleville, couldn’t agree more. “As a member of our city’s ‘Green Team,’ I’d seen LED streetlights in action at a green show in Toronto and thought that this modern, energy-saving technology could be a win-win for our city,” he said. After researching systems with other local municipalities and learning that local utility Veridian Connections was offering sizable rebates on LED streetlighting products, Carr-Braint received overwhelming support from city leaders to proceed with an upgrade.

Following Belleville’s issuance of an RFP, Signify was unanimously selected as the team’s top choice based on its leading technology and thorough understanding of the city’s needs.

Interact City benefits



Plug-and-play installations

Automatic commissioning
Automatic location
Automatic data upload



Advanced Dimming



Future proof



Remote monitoring



Accurate lighting data



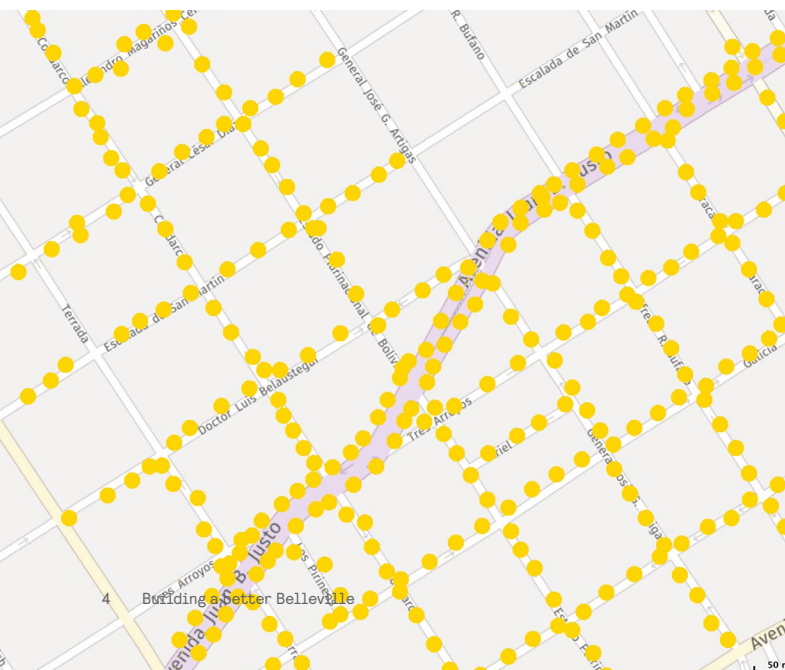
Automatic fault detection

From pioneering LED street lighting to leading in connected lighting

Utilizing cutting-edge cellular connectivity versus standard 'line of sight' or 'mesh network' technology, Interact City system avoids the need for additional nodes or segment boxes to boost signals around trees, high-rise buildings, and other common cityscape obstructions.

Making installation and commissioning a snap

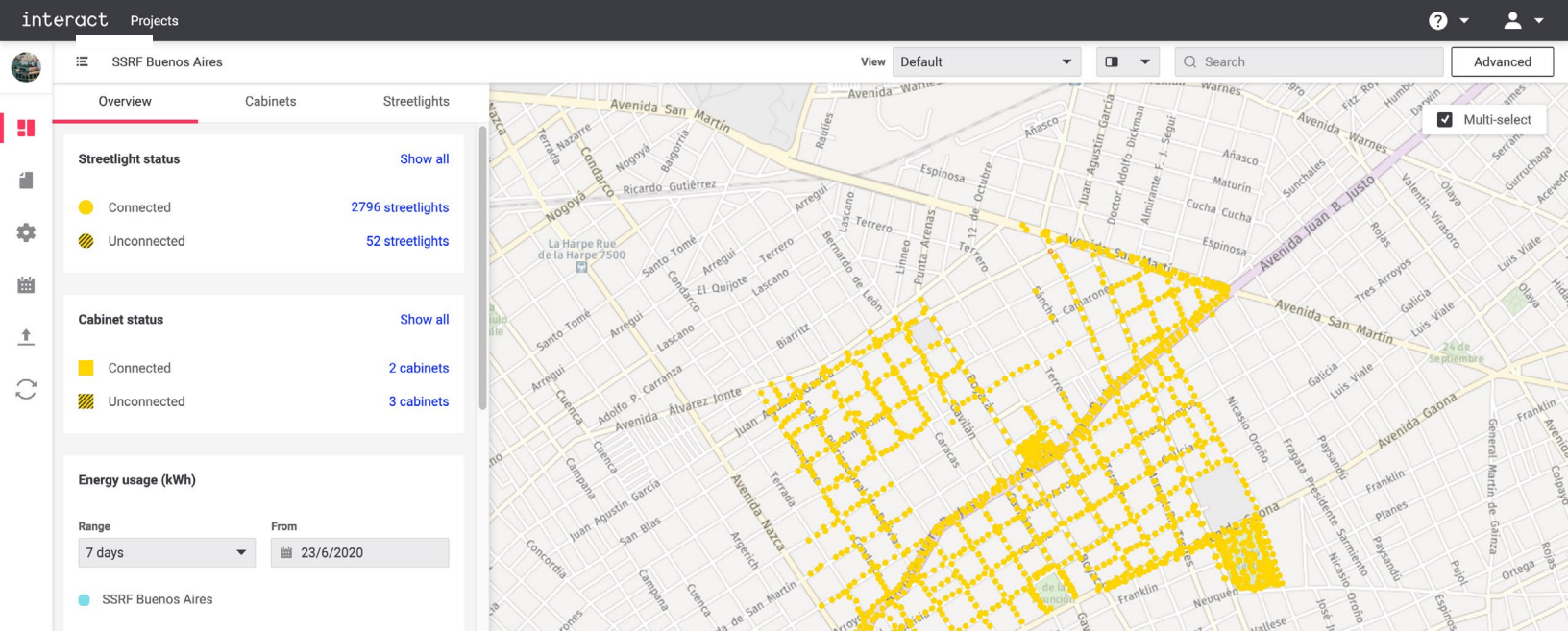
One important advantage of Interact City is ease of implementation. Installation consists of simply plugging a lightweight connector node into a standard NEMA socket on top of an existing streetlight. The connector node works with street lights from any manufacturer, both LED and legacy—a key consideration for any city with many different types of street lights. Commissioning is automatic. As soon as a connector node is installed, it starts transmitting location and operational information via the cellular network. Because implementation is so easy, a single work crew can retrofit as many as 500 street lights in a day.



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Interact City offers us the simple ability to get on the system and not worry about IT-related issues in the field.”

Scott Whiteman,
Supervisor of Roads/Traffic – City of
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A stellar solution

“Our analysis revealed that the city had no lighting standard in place – in other words, no way to control its assets or see if light levels were being met,” shared Marc Lussier, Signify Specification Sales Representative and seasoned streetlighting expert. Rather than simply replacing each HPS light with an equivalent LED, “Signify commissioned a third-party provider to conduct photometric measurements and pole spacing assessments on every asset to ensure that proper lighting was being installed in every location,” Lussier said. “With our unique Interact City connected LED lighting system and management software, each pole received a unique identifier, creating a robust asset management system for the city which provides information on every fixture and gives the city full visibility to all characteristics of that luminaire, from wattage to voltage fluctuations, timing malfunctions, cycling issues, and more.” Thanks to instant reporting of any faults, he said, “Interact City enables easy ordering of replacements right from the convenience of your office or mobile app.”

Utilizing cutting-edge cellular connectivity versus standard ‘line of sight’ or ‘mesh network’ technology, the Interact City system – which provides full visibility and control of city streetlighting from a centralized dashboard, enabling administrators to securely monitor light points, set schedules, and adjust light levels on demand -- avoids the need for additional nodes or segment boxes to boost signals around trees, high-rise buildings, and other common cityscape obstructions. “There are no boxes, trenching, or rental agreements with private property owners required, which saves money, improves reliability, and adds simplicity,” Lussier said. “It’s a plug-and-play system into a twist-lock receptacle which will enable simple asset management and user-friendly, mobile-supported control.”

It’s a feature that impressed the Belleville team. “A unique selling point for Interact City system is the fact that each light is individually reachable without nodes or communication software – e.g., there’s no extra infrastructure or complex IT communication issues involved in running or troubleshooting the system,” Whiteman said. “Given our team’s limited resources, Interact City offers us the simple ability to get on the system and not worry about IT-related issues in the field.”

Belleville by the numbers

4,400

streetlights converted
to RoadFocus
connected LED

40%

reduction in energy
consumption

\$125K

annual savings in energy costs

more than
5 years

project payback period

83 tons

reduction in CO2 emissions

Interact City: an open system



Connector node works with
street lights from any
manufacturer



Interact City communicates
via the mobile network: no
proprietary networks



With APIs, customers can
integrate Interact City into
their existing systems



“

This \$1.3 million project will reduce our energy consumption by over 40% and save us \$125,000 on energy costs alone each year for the system's 20-year rated life, not including annual maintenance savings.”

Joel Carr-Braint,
Special Projects Manager
City of Belleville



A ‘Game-Changing’ Effect

Since installing its new Interact City system and high-efficiency Lumec RoadFocus LED Cobra Head luminaires, the City of Belleville couldn't be more excited about its future.

Economically, “this \$1.3 million project will reduce our energy consumption by over 40% and save us \$125,000 on energy costs alone each year for the system's 20-year rated life, not including annual maintenance savings,” said Carr-Braint, who added that the nearly \$400,000 utility rebate the city secured will help drive a project payback of under five years. “We may also engage a dimming strategy in the future to save even more energy and cost,” he said.

In terms of quality, “it's been a wonderful upgrade from yellow to white lighting, which has had a game-changing effect on how our streets look

at night,” said Whiteman. “In addition, the system's real-time capabilities help us get out to a location quicker in the event of an outage or abnormality.”

“Everybody likes the new lights, which are cleaner, whiter, more uniform, and more directed on the roads and sidewalks than ever before, which makes residents feel comfortable and safe,” agreed Carr-Braint of the Philips Dark Sky-approved fixtures.

“Partnering with a world-class organization like Signify gave us confidence that the product would be outstanding and the team was extremely knowledgeable and responsive,” shared Whiteman. “From its energy efficiency, improved lighting quality, and ability to enhance safety and save our taxpayers money, this project reflects the City of Belleville's ongoing commitment to technology that improves the well-being of our citizens,” he said.



“

Representing one of the first turnkey projects in North America to involve LEDs and controls, “we’re excited to showcase the range of solutions we can offer municipalities to help enhance their communities,” Signify’s Lussier concluded. “We’re proud to have provided a solution that best complements the City of Belleville’s long-term vision.”

➤ **Find out how Interact can transform your business**
www.interact-lighting.com/City

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