



**City of Calgary, Alberta**  
An ENCOM “Then and Now” Success Story

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## THE CHALLENGE

### Boomtown needed innovative solution

Calgary is known worldwide as the Stampede City, thanks to its annual 10-day rodeo and Western fair billed as the Greatest Outdoor Show on Earth.

But the Calgary Stampede might also be a fitting description for the city's extraordinary population boom of the past 30 years. Since 1980, the oil and gas hub at the foot of the Rocky Mountains has attracted so many new residents that it has nearly doubled in size—from about 560,000 to nearly 1,050,000.

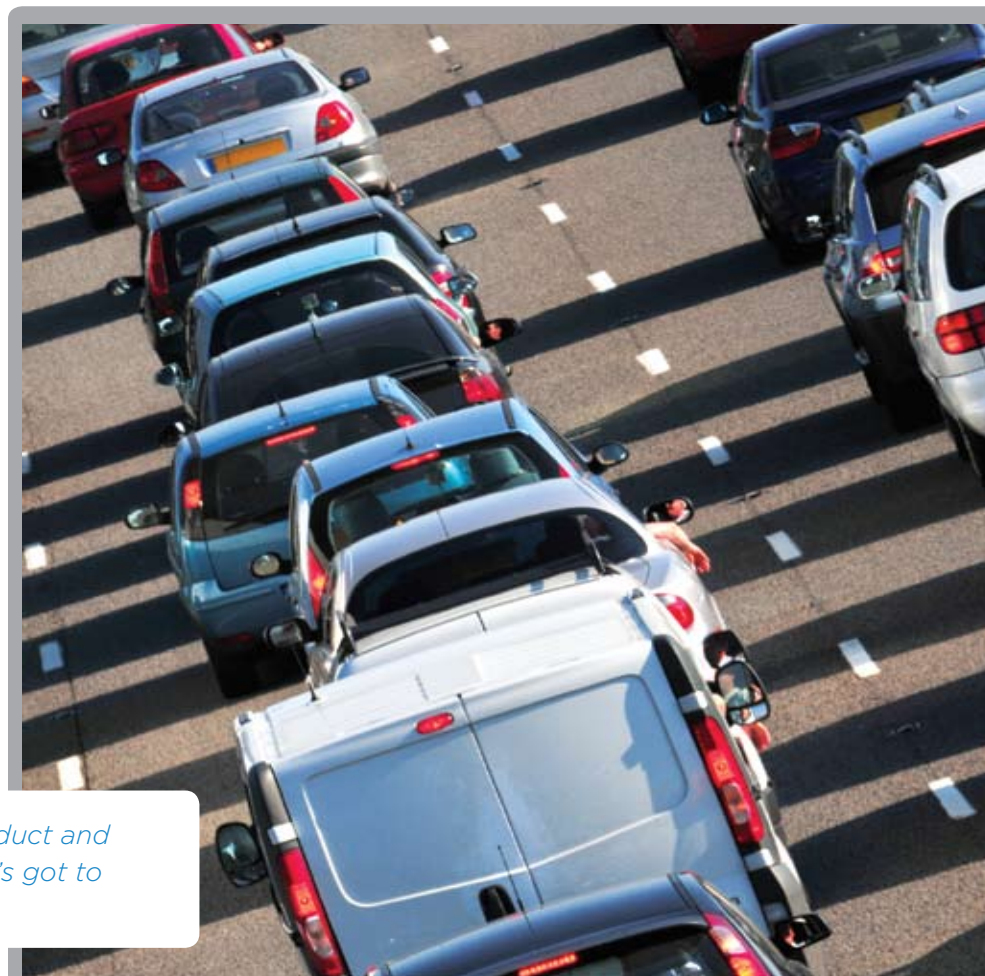
This rapid growth forced Calgary's transportation officials to envision an Intelligent Transportation System (ITS) back in 1990—long before most of their North American counterparts were even considering the wireless world.

### A wired city goes wireless

Even though the city was fortunate enough to own its own copper-wired traffic signal network, the system was limited geographically.

"We don't go to every nook and cranny of the city, and that is one of the major reasons, if not THE reason, we got interested in wireless," says Dr. Ahmad Radmanesh, a senior traffic management centre engineer for the City of Calgary.

*"If we want to expand our own network, we have to dig up the road, put duct and cable in. An extremely expensive business. That's why we thought: 'There's got to be a better way.'" —Dr. Ahmad Radmanesh, City of Calgary*



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## THE SOLUTION

### Meeting of the minds

A 1990 meeting between Radmanesh and ENCOM president Ken Szgatti, whose Calgary-based company was then focusing on oilpatch telemetry, would prove to be transformative for both parties.

*“We first approached ENCOM, and said: ‘We have this traffic computer... and we want to see if we can use wireless communication to talk to some of our traffic signals,’”* —Dr. Ahmad Radmanesh, City of Calgary

The pilot project was a success for Stampede City. From the early 1990s, Calgary has deployed ENCOM serial radios for traffic signal management, CCTV-enabled broadband units, and variable message signage within the city. Its rock-solid partnership with ENCOM has grown steadily, along with Calgary’s booming population.

For ENCOM, the project was a catalyst that transformed the company into a North American leader in industrial wireless ITS systems—not only witnessing the evolution of wireless technology, but also driving it forward through innovative solutions.

### Success with secure communications, reliability, and options

Since 1990, ENCOM has installed approximately 40 model 5200 serial radios in traffic cabinets across the city, keeping traffic within the bustling berg flowing smoothly. These rugged units use the latest in frequency-hopping spread spectrum technology while remaining protocol agnostic—providing secure, reliable communications in the harshest environments and fulfilling a wide range of applications.

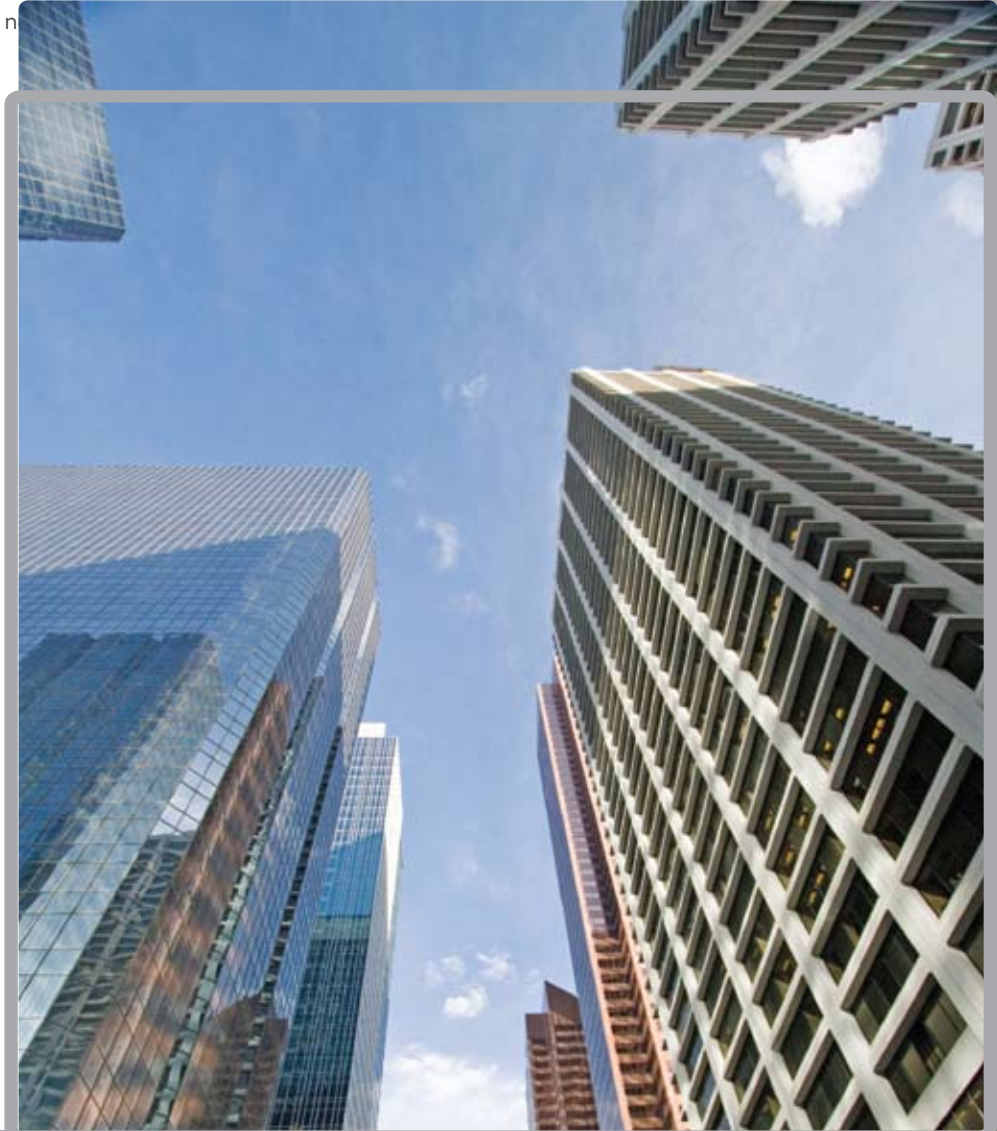
### Crystal-clear view of major intersections

Calgary has also installed 12 of ENCOM’s CommPAK BB 58 broadband units, which are optimized for Closed Circuit TV (CCTV), to provide video images from cameras with PTZ (pan tilt zoom) control installed at traffic intersections.

These radios have a 54 Mbps data transfer rate in a point-to-multipoint scenario—and by employing specific packet routing and packet switching, and combining the latest in MPEG compression and state-of-the-art modem technology, these units provide the ultimate in smooth and crystal-clear video images.

### Keeping everyone informed

To communicate with motorists and traffic detection systems, the City of Calgary uses ENCOM contact closure products for Variable Message Sign (VMS). ENCOM’s CommPAK IO 8 radios are employed at various VMS locations warning motorists of a blocked railway crossing, and are also used to count traffic on Deerfoot Trail, the city’s major



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## THE RESULTS

### Win-win scenario

This collaborative project enabled Calgary's traffic department to stay on top of its burgeoning population, and gave ENCOM a head start on becoming the innovative leader in industrial wireless ITS that it is today.

City traffic officials credit ENCOM's responsive customer service, easy deployment options and the affordability and reliability of their products as key reasons this long-term partnership has been so successful.

### Service key to success

"No. 1, they're responsive. They return calls, unlike some bigger companies," says Radmanesh. "They're reliable. They're good. Like all smaller companies, they're a little more nimble."

"If we ever have a problem, ENCOM has been more than willing to come out to our site, talk us through, give us on-site training," says Ian Ross, the foreman with the City of Calgary's traffic maintenance crew.

*"Their stuff has been pretty much trouble-free. We've been trying to go to the ENCOM wireless stuff, just for the fact that they're a little more professional."* —Ian Ross, City of Calgary

### Lasting quality goes the distance

ENCOM has also impressed its oldest ITS customer with its commitment to quality.

That original pilot project is still operating, with a new generation of ENCOM serial radios having replaced the old legacy equipment.

As for ENCOM's broadband technology, Radmanesh is sold there, too.

*"In some of these intersections where we never had a camera, we went with ENCOM, because their product was good, in terms of capacity, and the price was reasonable,"* —Dr. Ahmad Radmanesh, City of Calgary

"Subsequent to that, whenever we needed to replace equipment, we went with ENCOM as opposed to the incumbent, which was Verint (a big name in video transmission). We just thought ENCOM was a better product."

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### About ENCOM Wireless:

ENCOM, based in Calgary, Canada, provides field-proven, cost-effective wireless data solutions for municipal and industrial clients, with applications in the areas of:

- Intelligent transportation systems
- Public safety communications
- Municipal corporate security and IT networks
- Waste and water management
- Electrical utilities
- Oil and gas

### FUTURE PLANS

#### Agile expansion, intelligent solutions

The City of Calgary's next project with ENCOM shows just how much faith it has in its longtime ITS partner.

The city plans to install ENCOM serial products along two wireless corridors that form diversion routes from Deerfoot Trail, in case of emergency situations or major accidents on the freeway.

Calgary's traffic management centre wants bulletproof equipment that can handle a major traffic-signal timing plan change with no margin for error, and trusts ENCOM to fit the bill.

*"ENCOM is the company we're going to go with, we have no wired network there, and we have no (trenching) plans in that part of the world. Wireless is the only way to go."* —Dr. Ahmad Radmanesh, City of Calgary

### HOW ENCOM BENEFITED THE CITY OF CALGARY

- Deployed CommPAK 58 broadband radios, model 5200 serial radios, and ComPAK IO 8 radios to create a visionary system that anticipated the needs of a growing city;
- A reliable, field-proven dedicated wireless network with a fraction of the cost of wired alternatives, such as copper or fiber optics;
- Extended coverage of an existing hard-wired, closed-loop system with absolutely no system reconfiguration;
- Created network agility through easy, plug-and-play deployment and expansion;
- Enabled cutting-edge CCTV capabilities;
- Protected its client's investment with one of the best warranties in the business;
- Provided a trusted, lasting partnership and the security of knowing that ENCOM's investment will pay for itself many times over.



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