

All aboard

by Anne Phillips

IT and procurement propel Ottawa's SmartBus project

PROVIDING ENVIRONMENTALLY friendly, accessible, affordable, efficient and cost effective transit services to residents and visitors in the City of Ottawa is no small feat. To do so requires the collaboration of several city departments – Transit Services Branch (OCTranspo), Information Technology Services (ITS), Fleet Services, and Supply Management (procurement), as well as the vision to utilize technology tools as they evolve.

Steve Lassey, program manager, Business Application Management from the city's IT services was tasked with building an intelligent transportation system (ITS) for the city. One of the questions he is often asked is how to get started. His answer: "Stay attuned to your clients' business requirements, and look for opportunities where ITS is a 'good fit'." He also says that, "You must be prepared to

become an "ITS evangelist" throughout the organization. [This] also helps to identify and include stakeholders in your ITS program [who] must understand that this is not a 'gee-whiz' toy, but a valuable business tool. You must be able to demonstrate the value of ITS to all areas of the business, and how the investments can be leveraged over time to improve business processes, and facilitate communications between similar transportation systems."

He says you need to develop a strategy to "demonstrate how much value an ITS has when deployed in a coordinated fashion both internally and externally to the organization. It is important to have ITS-aware staff, or retain external resources experienced with ITS. It is vital to have senior management support and a high-level sponsor within the organization." It is important that awareness of corporate ITS programs and information regarding specific requirements to meet those needs are shared with procurement staff.

For Lassey, it is about managing mobile assets better and creating smarter, more efficient transit service for the City of Ottawa. In 1998 he conducted a limited pilot project on 20 buses to see if GPS (global positioning system) was a useable and cost effective option. At that time it was not. A few short years later, things were different, and now the City of Ottawa is deploying a SmartBus system in all its fleet – more than 1,100 buses,

trains, cars and vans.

With the support of the city's supply management (procurement) group, in 2002 a request for information was released, followed by a request for proposals to a short listed group of suppliers. A locally-based Bell Canada consortium (which includes xwave and Mobile Knowledge) was the winning bidder. While being locally based is not high on the list of important items, according to Lassey it is "nice to have" as it provides an opportunity to reinvest in local businesses, and gains efficiencies in service calls.

The contract was originally for two years, however, once the transit staff became familiar with their new tool, new opportunities for use of the technology were discovered – naturally the supplier was happy to oblige. Consequently, as the new ideas took hold, the scope of the project began to increase. As project leader, Lassey now had to manage the expectations of both his internal client and the supplier, as well as sell city council – new ideas came with new costs. This meant revisiting the business case and cost/benefit analysis showing the return on investment to support the expanded use of GPS and future technologies. The refreshed business case also showed how the now established benchmarks of improved reliability and convenience for customers were being met, together with reduced operating costs and future capital investment through the more effective use of more precise information.

Lights burned late into the night and early morning at OCTranspo depots as contractors

Editor Note: Light rail is also a transit option in Ottawa with the OTrain providing service since the fall of 2001. The OTrain was to be just the beginning. The city spent considerable time researching and discussing – including public consultation – light rail options before launching its procurement process. The Siemens-PCL/Dufferin consortium won the bid and the contract for Ottawa's Light Rail Transit (LRT) was approved by city council in July 2006. However, the newly elected mayor and city council, keeping an election promise, cancelled the contract. The city is now being sued by members of the winning group. Siemens Canada and PCL Constructors are seeking \$31.7 million in compensation. St. Lawrence Cement Inc. will seek "\$40.5 million in damages for breach of contract, economic negligence, interference of economic interests and breach of duty of good faith," (CBC News, Sept 19, 2007).

The decision to cancel appears not to be a reflection on the conduct of the LRT procurement process itself. It does illustrate a major risk when contracting with government: a change in government often means a change in priorities resulting in a review of previously made commitments. This risk is particularly important when a contract extends over a long period of time, and it is a risk that can be expensive to insure. Plus taxpayers bear the brunt of the cancellation fees and possibly the awards from lawsuits. In November, a city council committee supported a new long-term transit plan that includes among other items, north-south light rail.



worked to install the new mobile data terminal provided by Mobile Knowledge. This was done in two phases: first, the wiring of the bus and second, the positioning and commissioning of the touch-screen terminal. It took a few tries to get the position just right so the drivers were comfortable with the location, and then they needed to be trained on the use of the equipment. There was some initial resistance to the idea that management would now know the exact location of each bus and by extension could “monitor” driver performance, but those issues have been resolved. To date, over 840 of the 975 OCTranspo buses have been outfitted.

Now each staff member assigned a bus route or region to manage can visually see where each bus is on its route and whether it is on time, early or late. They can see the route number, the driver number, and the return to depot schedule from data that appears on the real time screen. Staff can communicate directly with a driver through text messaging or radio. Information gathered over time can indicate when routes need to be redesigned, either for rider-ship or timing reasons. The vehicle location information also goes into the passenger information system so transit users can be made aware of the current status of their bus.

Scope creep on the project, the pace of technology change causing end of life issues with some of the earlier technology used, budget and funding requirements and project promotion as well as labour issues have all affected the SmartBus project. And now, a couple of other ‘wrinkles’ need to be factored in: the *Privacy Act* impacts how GPS information can be used and stored, and accessibility legislation is compelling some further technology purchases and implementation. Despite the hurdles, Lassey says they are meeting the established benchmarks of improved operational and cost efficiency.

Lassey has had several years of experience in the transit area, and not just in Ottawa. He says, “OCTranspo is a leader, and wants to be at the forefront in the adoption of new technology to improve transit service.”

Building on the current technology base, they are already considering purchasing some

options. One of the first is the smart card fare system, and ensuring it is compatible with the current system running in Gatineau, so that riders in the National Capital Region can move seamlessly between the two city bus systems. The Ottawa system will be based on the successful GTA smart card system, known as “Presto,” being used by 9 transit agencies in the Toronto area.

To address accessibility issues, a next-stop-announcement audio and visual system will be deployed on the buses so that bus stops will be announced automatically, not by the driver as is being done now.

A bit further down the road, will be a traffic signal priority system, where the in-

stallation of a disc on each bus will allow existing traffic light ground loops buried in the roads to recognize the bus, and either delay or advance the green signal to optimize the movement of the bus within traffic.

Lassey pointed out that without the collaboration of OCTranspo, Supply Management, and many other city departments, none of this is possible. And he adds that, “without the ongoing support of Ottawa city council, the province of Ontario and the federal government, all of whom have been on board since the beginning, the future would not be possible either.”

