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Accolades OCEA

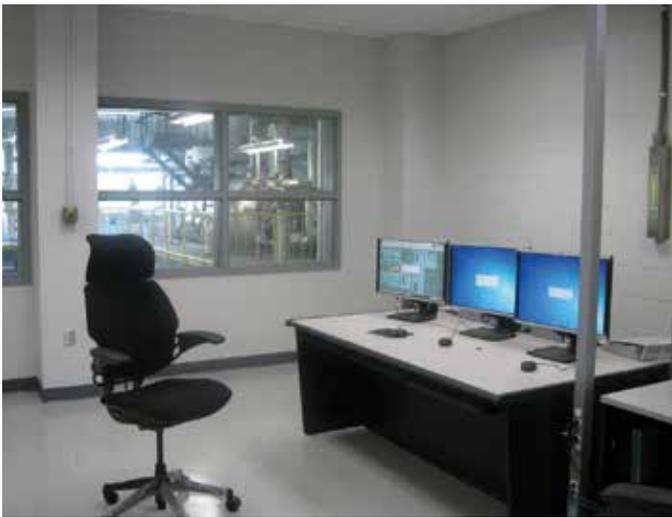
Ontario Consulting Engineering Awards

FEATURING THE
WILLIS CHIPMAN AWARD WINNER:

**McIntosh Perry
Consulting Engineers Ltd.'s
Industrial & Mine Area Clean-Up,
Phase 3: Deloro Mine Site**

Eramosa Engineering Inc. London Health Sciences Centre: Energy Management

An INNOVATIVE DATA SOFTWARE TOOL



Gets LHSC
on track with
their energy
management

The London Health Sciences Centre (LHSC) is responsible for operating and maintaining the power plant and energy systems at three hospitals and four medical centres in the London, Ontario, area. To optimize the operational efficiency of its power plants and energy systems, it needs timely, accurate data presented in a concise format. However, there was an issue of data integrity that persisted. This was because the data collection and reporting process was a highly labour-intensive manual process.

“The way the data was gathered or it was stored, quite often, there were errors in it or inaccuracies, and that resulted in a mistrust of the data,” says Nick Hallas, president of Eramosa Engineering Inc., a specialized consulting engineering firm that works primarily with electrical, instrumentation controls, supervisory control and data acquisition (SCADA), and information technology services. As he says, “We don’t build bridges, we don’t build roads.”

One of the reasons the data had errors was because it was being manually collected and written on paper and then later entered into spreadsheets. At times,

the data was entered incorrectly, which meant the results the spreadsheets came up with weren't 100 per cent accurate.

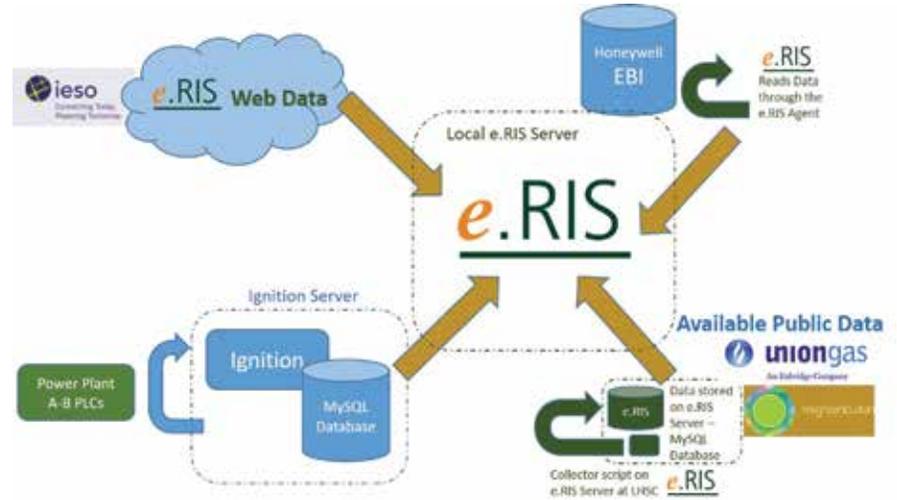
As well, confusion over the sometimes illegible writing meant additional time had to be spent going back to the field to re-check the figures.

Data is of critical importance to LHSC. It's used for:

- Procuring natural gas and electricity
- Regulatory compliance
- Monthly billing of electricity, steam and chilled water to customers
- Reporting to internal and external stakeholders

As well, it helps LHSC decide when to run the power plant equipment based on the market price of gas and electricity. It has two gas turbines, a steam-driven turbine and diesel generators for on-site power generation. "They monitor the cost of electricity and when it gets to a certain point, they will actually start up their facility power generation because it'll actually be cheaper for them to generate their own electricity rather than buy from the local utility," says Hallas.

A data tool developed by Eramosa called e.RIS (Eramosa Reporting and Information System), is now being utilized by LHSC as its data management and visualization solution for its power plant



and energy systems. "This is a software tool that we developed," says Hallas. "It's a web-based reporting system that can connect to multiple data sources, a SCADA historian, Excel and CSV files. It'll connect to data sources that are hosted on the Internet, SQL databases, as well as other databases."

Implementing the system had its challenges. There were eight different data sources that needed to be fed into the e.RIS system. Not all of the data is relevant, so it was important to sift through it to find out what was needed and ensure it's in the proper format. A formatting issue that was evident was in the recording of dates. "There are multiple ways to show the date and time. You go month-day-year, year-day-month or year-month-day. There's all sorts of

ways to show it. All the data was coming back in different formats," says Hallas. This was one way in which data had to be manipulated to ensure it was consistent.

The impact of using e.RIS is already paying off. The amount of time previously spent collecting, collating and reviewing power plant and energy data has been reduced by 20 to 30 per cent, resulting in an approximate cost savings of \$40,000 per year. As LHSC continues to use e.RIS for calculations and reports, time and cost savings will improve. "Once you have access to the data and you understand it, you can start using it to improve operational efficiencies, power reserves and cost reductions. Essentially, it's limitless as to what you can do with it," says Hallas. ●

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 eramosa.com 519-763-7774