

Stepping Up to the Plate: The Home Game and Away Game of RRCs Sustainability Initiatives

Paul Vogt, President & CEO of [Red River College](#), describes the organization's sustainability initiatives as a home game and an away game.

Vogt, a homegrown Manitoban, was part of a four-member expert panel discussion at the [World Trade Centre Winnipeg](#) on June 10 dedicated to "Clearing the Air: Climate Change and Business."



"I think the appropriate context for a discussion about 'green initiatives' is that this type of approach is actually an aspect of technological innovation or adaptation, and the main drivers of this type of action in Manitoba need to be SMEs. They are the largest part of our economy, and they'll have the largest impact, not only through their own efforts to better produce, market, and distribute their products, but also by influencing the way we live and the options that we have to reduce our carbon footprint. But that doesn't mean that we all shouldn't be contributing."

According to Vogt, the College's Office of Sustainability challenges RRC leaders to consider and adopt new processes and practices regularly. With a staff of four, this office operates within administrative and academic areas, and is responsible for implementing, coordinating, and advancing existing and emerging sustainability programs and initiatives.

Vogt says that the "home game" consists of the following initiatives and commitments:

1. Coordinating a massive internal recycling program:

RRC tracks all substances that leave its 9 campuses (4 in Winnipeg and 5 rural) – "That is a sizeable impact alone because we have 21,000 students. We're talking about bottles, cans, paper and print outputs, composting, e-waste, and more."

2. Introducing "green principles" into the procurement process:

All large tenders have to go through a green lens.

3. Supporting green transportation for staff and students:

"It's important to note that the greenest thing we ever did was to start building a campus downtown, which is now our second largest campus. About 95 to 98% of our students use public transportation (bus, walking, biking) to get there,

and about 80% of our faculty do as well. Our Notre Dame Campus is hard to get to without a vehicle, so it's almost the reverse for that location."

4. Green building:

All RRC buildings constructed in the past 10 years have been built to LEED Standards – a point of pride for RRC. The most recent building at the College's Notre Dame Campus, the Skilled Trades & Technology Centre, is in itself a true model, and may be one of the most modernized and greenest building of its size in Manitoba. "STTC doesn't have a furnace or heating, it's all geothermal with cool bar technology, but it's also a training instrument. All the building's interactions with its environment – heat exchange and moisture – are recorded on sensors that were built in to the building envelope."

Vogt says that his goal is to ensure that all RRC trades program graduates who will become part of the building industry are conversant in green principles; not just standards, but green innovation, and where the technology is headed.

By Fall 2020, RRC will open the doors to its Innovation Centre, a 100,000 sq ft-Exchange District facility, and a net-zero building with skin comprised of photovoltaic glass that generates energy and changes colour according to weather and the angle in which it is viewed.

"This will be a first in North America, never mind in Canada, and much of the energy for the building will be secured through solar. The Centre will focus on industry-led applied research, entrepreneurship, Indigenous education, and social innovation and enterprise, and will help us welcome up to 1,200 more students."

From the "away game" perspective, in terms of the College's most significant impact on Manitoba, Vogt believes that will be the development of the talent pipeline, in particular for SMEs.

"The kind of companies that dominate the Manitoba economy do not have the wherewithal to do their own R&D, by-and-large. Almost every industry is being heavily disrupted by technology, but then you add to that attempting to be at the forefront of the green curve...Imagine the pressure on employers to make decisions and investments? RRC needs to support SMEs with centres of excellence, research, access to expertise, and ultimately, by graduating a skilled workforce capable of making smart, effective recommendations to improve sustainability."

RRC also supports applied research in three key areas:

1. Transportation:

In partnership with New Flyer, Mitsubishi Heavy Industries, and multiple other contributors, RRC helped develop the all-electric bus, and a significant amount of testing within their facilities. Zero-emission battery-electric propulsion transit buses are expected to significantly reduce greenhouse gas and smog-causing criteria air contaminant emissions. In Manitoba, where the electrical grid is highly renewable (nearly 100 per cent of electricity is generated without burning fuel), the use of

electric propulsion buses is expected to translate to an estimated reduction of 160 tonnes of greenhouse gas emissions, per bus, per year. This summer, RRC will open the MotiveLab™, a state-of-the-art climatic dynamometer chamber for large vehicles such as busses and semi-trucks — essentially a drive-in freezer that can test emissions in conditions anywhere from 50 below to 50+ degrees. “Much of the manufacturing in Manitoba is large vehicles, like Fort Garry Trucks, Buhler, New Flyer, etc., so we will be of service to these companies, and even to the aerospace industry.”

2. Sustainable Construction and Building Envelopes:

“This is another research specialty of ours,” says Vogt. The Skilled Trades & Technology Centre’s building envelope is monitored through RRCs BETAC – the Building Envelope and Technology Access Centre – with sensors embedded in multiple types of materials/designs that monitor, assess, and compare performance in our harsh prairie climate. Vogt says that RRC also worked with Manitoba Hydro on the design and testing of their downtown building, and that the College is continuing that partnership in the development of new houses for the North and for all of Manitoba based on green and energy-efficient principles.

3. Food science:

“RRC will soon open a new culinary lab at our downtown campus. We’ve already been doing extensive research on the use of food waste in the development of other products, such as those in use by the microbrewery industry and in the creation of miso paste, which is a very in-demand product,” says Vogt. Richardson International is also investing in a major food research facility in downtown Winnipeg, so RRC has been developing their lab to compliment what Richardson’s is doing and to enable the rebirth of downtown Winnipeg as a food research hub.

“I am very proud of all the steps that Red River College is taking to improve overall sustainability and to support SMEs in reducing GHG emissions. We’ve been named nine years in a row to [Canada’s Greenest Employers](#), so we must be doing something right.”