THE CLIENT
A College that offers year-round career programs that lead to certificates, diplomas, and post-diploma certificates, as well as adult upgrading and English language learning.

SUSTAINABILITY INITIATIVE: ENDOCUBE

Through our Better Tomorrow 2025 corporate responsibility roadmap to reduce the carbon footprint, Sodexo promotes EndoCube, an energy-saving device that can economize as much as 30% of the energy consumption of food refrigeration units.

BACKGROUND
I regularly meet with the school’s Green Committee and work directly with the Sustainability Coordinator at the College and we are always looking for little things that have a big impact. Low energy commercial refrigeration is recognised as being an important aspect of reducing the CO2 output around the world and so we decided to change the way we approach refrigeration temperature control when we read about EndoCube in the Better Tomorrow Plan.

EndoCube, which is a temperature-mimicking sensor for commercial refrigeration lowers the air temperature in your refrigeration system due to more efficient cooling. EndoCube fits over the refrigeration thermostat sensor and changes how fridges and freezers work by mimicking food rather than responding to fluctuating air temperature.

CHALLENGES
We didn’t know of anyone else who had implemented it, but for around $100 each we purchased the sensor and it ended up being super easy to install. The only issue I had was that the thermometers in my refrigerators had to be updated so I needed to bring someone in to make those changes. That cost me an extra $1500 but I still feel it was a good investment that will go a long way in our relationship.

"Small ideas that make a big impact are not things I want to shy away from – they are things I want to do more of. If I can get a lot of traction out of a relatively small investment like EndoCube, it helps make us strong partners for the lifespan of our contracts. It’s such a small risk to take for such a big reward.”

Elric Nielsen, General Manager
Business Segment: Education
SUCCESSES
While we did have to hire someone to install new thermometers in the refrigeration units in order to use EndoCube, if you have the correct thermostats then you can just screw it into the wall yourself and plug the thermometer into the gel pack. It’s that simple.

We don’t have the equipment here to track how much energy we’re saving but we did do a little experiment where we looked at how much time the refrigeration was turning on and off before and after installing EndoCube. We could see that it was running less, and while that doesn’t meet the requirements of a complete scientific study, we feel that these devices are making an impact. You might be financially gaining four to five thousand dollars a year for the cost of $100 so think of that over 5 years.

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IMPACT
Nearly 20% of the world’s energy is consumed by refrigeration equipment. All refrigeration units work in a series of cycles, monitoring air temperature in order to decide when to switch on and off. But air temperature rises faster than the temperature of food, so refrigeration units work harder than necessary. This leads to excessive kWh consumption and undue wear and tear on the equipment. The results are higher energy bills and shorter equipment life spans.

The EndoCube allows the thermostat to monitor food temperature rather than air temperature. Reducing the need for the refrigeration compressor to cycle on and reducing the need for the equipment to work harder than necessary.

Apparently EndoCube can save up to 33% on refrigeration energy costs. We’ll see long term what the effects are, but we anticipate seeing savings in the next year.

RECOMMENDATIONS
I would definitely recommend that you suggest EndoCube to your clients. There are no moving or electrical parts and it is easy to install. If you can extend the life of equipment, save energy, have safer food as the food temperature is being controlled automatically, and save money in the long run – it’s a no brainer.