1. Problem

There are over 1100 fume hoods at the University of Toronto (U of T) St. George campus.

- A fume hood is a safety device that exhausts fumes at an average of 800 cubic feet of air per minute (CFM). They use a lot of energy!

2. The Opportunity

- The Sustainability Office used a pilot campaign called Just Shut It! to measure the potential energy savings of Variable Air Volume (VAV) fume hoods if students shut their sashes while not using them.
- Estimated potential annual energy savings of up to $100 000 per year!
- How can these energy savings be sustained?

3. Sustaining Behavioural Change

- Analyzed feasibility of recommendations from previous human factors research conducted on fume hood behaviours in undergraduate students.
- Investigated results from the Just Shut It! campaign held in the U of T Department of Chemistry (see below).

4. Solution Package

Based on intrinsic and external motivators, team elected to develop fume hood sustainability package that promotes safety culture through education:

1. Implement fume hood training module for all undergraduate and graduate students, which includes:
   - Training video
   - Training manual
2. Install sash stickers on all VAV fume hoods: reminds students of appropriate sash height
3. Develop sustainability pledge: encourages commitment
4. Develop sustainability representative code of ethics

- The solution package was presented to client and stakeholders to much satisfaction.

5. Evaluation and Future Work

- Concluded that the following factors inhibit users from adopting energy-efficient behaviors:
  - Forgetfulness
  - Misunderstanding
  - Intangible benefits
  - Unwillingness
  - Behaviour not praised
- Concluded that the following elements contribute to successful behavioural change:
  - Reminders
  - Awareness
  - Voluntary stewardship
  - Ownership
  - Peer pressure
- Estimated potential annual energy savings of up to $100 000 per year!
- Benchmarked activities of sustainability groups in other universities and efforts of environmental groups in labs across campus.

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