McMaster University | ENGINEERING
W Booth School of Engineering Practice and Technology

PROJECT SUMMARY

Industrial Waste Heat Recovery in the Bayfront Industrial Area, Hamilton

CHALLENGE

Identifying technically feasible and economically viable options for harnessing waste heat, reducing energy consumption for various industrial processes to eventually reduce associated greenhouse gas emissions.



PARTNER

Hamilton Chamber of Commerce

hamilton chamber of commerce
your voice in business

An ambitious organization that strives to meet the various needs of their small business members while also providing city-building leadership in new Hamilton and value to their members as well as subset of members.

- Take political action by identifying priorities and developing policy with input from our members.
- Promote Hamilton and local businesses through a variety of local, regional and national media outlets, and our website, publications and social media.

TEAM

1. Bianca Caramento, Manager of Policy and Government Relations, Hamilton Chamber of Commerce
2. Dr. Chi Tang, Assistant Professor, McMaster University
3. Avani Kirit Mehta, M. Eng. Design
4. Muhammad Yaseen Syed, M. Eng. Manufacturing


MILESTONES & OUTCOME

1. Company engagement through industrial site visits & interviews.
2. Data collection and analysis~ energy and GHG emissions calculations
3. Identification of heat sources and sinks
4. Visual Thermal Energy Map for the Bayfront Industrial Area
5. Reconvening with the stakeholders and validating results
6. Proposing recommendations with cost benefit analysis, and feasibility study

VALUE

For partnering industries who have surplus sensible waste heat, the project offers economically viable & technologically feasible solutions and innovative thermal energy mapping: to help optimize their existing processes, improve capital efficiency, reduce the associated energy costs, form new policies and programs to share waste heat and reduce overall GHG emissions to support action on climate change.

NEXT STEPS

1. Hamilton Chamber of Commerce presenting this work to The Atmospheric Fund and spearheading this initiative to regional and provincial levels
2. See the partnering industries invest in the recommendations provided exclusively for their processes, and doing their part in achieving carbon neutrality by 2050.

STUDENT REFLECTION

1. Professional experience as contributing accountable members of an interdisciplinary team tasked to work towards a shared goal.
2. Skills required to collaborate & engage with stakeholders.
3. Technicalities on harnessing industrial waste heat.