



Greening Indoor McGill Initiative (GIMI) Final report

Prepared by: Heidi Hoernig

Prepared for: McGill Office of Sustainability

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1. What GIMI set out to accomplish

As described in the original 2012 SPF application, the project goal was:

- “to promote high-quality, healthy, and green indoor work and study environments across McGill University through the establishment of indoor plants.”

We had envisioned the project as:

- a pilot project, a first step to “establish a base through which to explore a wider initiative to establish and maintain indoor green environments throughout McGill, including not only offices, but also activity spaces like cafeterias, libraries, hallways, and classrooms.”

In particular, this project was designed:

- to leverage student and faculty knowledge of indoor plants as a means to provide information and resources to McGill faculty, students and staff for office spaces.

The SPF application outlined the following GIMI project activities and deliverables:

- Student projects resulting in the distribution of up to 240 plants;
- 2 Workshops (one downtown and one on Macdonald campus)
- A project website
- A survey

2. What GIMI accomplished

Overview

As of the writing of this report, GIMI has:

- Organized or participated in **26 events** – 24 downtown and 2 on Macdonald campus
- Organized **20 workshops**
 - **386 workshop attendees**
- Organized **3 plants sales**;
- Through both workshops and plant sales, GIMI has distributed over **1100 plants** to McGill community members;
- McGill faculty and student Plant Science knowledge and resources have been effectively used to educate the McGill community on the benefits of indoor plants as well as their care and maintenance;
- Some **local sourcing** of indoor plants has been used through provision of plants propagated at the McGill Macdonald campus (**118 plants**);
- GIMI activities have involved **in-kind contributions** worth more than **\$440**, not including volunteer time;
- GIMI activities have involved more than 88 volunteer events, totalling almost **400 volunteer hours**;
- The **GIMI list serv** has been active since June 2012, and has grown to **393 members** from across both campuses;
- **GIMI blog** (<https://blogs.mcgill.ca/gimi/>) has been active since November 2012 and advertises activities and provides information and resources on the care of indoor plants;
- Presented a **GIMI booth** at two McGill Health fairs (2012, 2013);
- Established a **GIMI Youtube channel**
- Produced our first **video**, http://www.youtube.com/watch?v=Ga4_UcGxMso

Detailed description of events

a) Workshops on the Health benefits of plants b) PLNT 310 Plant Propagation and c) Survey

The first GIMI activities were organized through the McGill Boost Your Health Series. McGill Human Resources staff organized the events, the room and the advertising. Prof. Donnelly’s PLNT 310 class propagated 20 plants to give away as door prizes at two workshops, one downtown and one on Macdonald campus. One of Prof. Donnelly’s students, Christie Lovat was the presenter.

Both were well attended: 74 downtown and 15 on Macdonald campus. We used the workshops to promote the project to the audience, and to conduct a survey of participants' interests and skills relative to indoor plants.

Additional outcomes

- Through the preparation of the material for the workshop, we expanded our knowledge of the empirical evidence on the health benefits of plants, across multiple disciplines.
- With 83 people responding to the survey, we were able to gauge the interests and needs of those attending.
- In particular, about half of those responding (54%) indicated that they were interested in workshops.
- We confirmed through the attendance and the survey that there was great interest in indoor plants among McGill staff.

b) *Ficus benjamina* propagation and associated Workshops 3 & 4

The second activity took place from April to August. Plant Science MSc student Christie Lovat prepared and rooted 100 *Ficus benjamina* cuttings. A number of problems were encountered during the rooting process, and therefore it took 2 extra months for the plants to root properly. In the end, 23 plants (consisting of about 4 cuttings each) were prepared for the workshop: "Braiding and Bonding: A hands-on workshop to braid your very own *Ficus benjamina* plant."

This was GIMI's first hands-on workshop. Christie Lovat prepared and presented the workshop material and coached the participants on their activity. Participants were taught how to braid their plant, such that it would fuse and produce an attractive braided stem. Evaluations were universally positive.

Additional outcomes

We learned:

- Participants enjoyed the interactive, hands-on aspect of the workshop;
- 20-30 minutes was about the right amount of time for a presentation;
- Participants were eager to ask questions about all kinds of topics related to plants;
- The importance of a suitable room (lots of space to move around; a place that can be cleaned easily; central location).

c) McGill Human Resources Annual Health Fair (2012 and 2013)

GIMI attended two of the HR organized Health Fair. In 2012, Christie Lovat and Heidi Hoernig donated 6 plants as door prizes to the Fair. The Health Fair was used to promote the project, conduct more surveys, learn more about McGill staff interests with indoor plants, recruit more members for the GIMI list serv and generally, increase awareness about the project.

Additional outcomes

For 2012, this event provided GIMI with the incentive to:

- Prepare a large poster promoting GIMI (Appendix 1);
- Set up the GIMI blog <http://blogs.mcgill.ca/gimi/>;
- The poster has been used several times to promote the project and the blog has been an important venue for advertising and providing information to GIMI members.

We also learned from having orchids on the exhibit table, that orchids are very popular among McGill staff.

d) Loving your orchid right: a noon-hour workshop on the proper care of moth orchids

This workshop has been our most popular workshop to date. There has been great demand for it, and we have had many people attend it more than once. We have held 9 workshops – 8 downtown and 1 at Macdonald campus.

Orchids make excellent office plants: they do not require much light or upkeep, and they flower for long periods of time (2-6 months). Again, Christie Lovat has been the primary workshop facilitator and again, evaluations have been very positive.

Additional outcomes

- We purchased our plants from the company Planterra <http://www.planterra.ca/> and established a very positive relationship with them.
- Through organizing these workshops, we also established a relationship with the Teaching and Learning Services (TLS) unit. TLS staff have been very supportive, in providing an appropriate workshop space and also, helping us to co-ordinate the delivery of workshop plants.
- We developed our own GIMI listserv. Initially, it was an Outlook list maintained by Heidi Hoernig. Fall 2014, it was transferred to a McGill list serv and now hosts 393 people.
- We expanded our advertising to What'snew@mcgill. In addition to the GIMI list serv, this weekly announcement has been the main outreach mechanism to new members. It has been quite successful at recruiting and reaching McGill staff but less successful at reaching students.
- We began to charge for the workshops, to cover some of the costs associated with the workshops, including payment for an expert workshop facilitator (Christie Lovat).
- In fall 2013, we experimented with using a websforms to create an automatic registration system. This worked well but we need our own site as the host site was only available for the one workshop.

e) How does your garden grow? A hands-on workshop on starting vegetable plants from seed.

While this topic falls slightly outside the indoor plant subject, we decided to run this workshop because of the great interest of staff in this area. Christie Lovat had much to contribute, having had her own vegetable garden for years.

We have held 6 workshops on this topic and another is planned for April 3rd on Macdonald campus. In 2013, the workshop filled up very quickly. As a result, in 2014, we organized 4 workshops during reading week. Unfortunately, we did not anticipate that so many staff would be away during reading week, and so attendance was much lower than anticipated.

Additional outcomes

- Christie Lovat's introduction of Cowpots <http://www.cowpotscanada.com/> through this workshop, has been very popular, as well as being an important element to sustainable gardening practice. Cowpots are made from a recycled product, cow manure, rather than from peat used in most other commercial pots. Peat comes from wetlands. Peat production is very destructive to wetlands, an essential ecological asset which needs to be better protected in Canada.
- In 2013, we experimented with our first [video](#), which was posted on the [GIMI Youtube channel](#).
- In March 2014, we used Survey Monkey to evaluate our workshop and solicit feedback.

f) GIMI Plant Sales

In April 2013, we established an ad hoc committee to plan and implement GIMI's first Plant Sale. We held two sales: June 6th and 20th. In fall, 2013, we established a more permanent GIMI Planning committee, to organize the 2nd Plant sale, as well as to organize other activities. The fall sale was held November 28th.

For both sales, Planterra was the again the source of the plants. The first June sale, not all plants were sold and a second sale was required. A total profit of \$414.65 was made.

There was an early snow fall the day of the sale but nonetheless we had a good turnout. Professor Danielle Donnelly and her students propagated 80 Sansevieria and rosemary plants, which they brought for us to sell on their behalf, to raise funds for a composting project for the Macdonald greenhouse. Not all of the total plants were sold, and to date, about

30 plants remain. A few sales have been made by word of mouth and remaining plants will be kept until the next sale in June. The remaining soil has been used to transplant remaining plants from the sale and the MOOS/DAR green wall, so that they will continue to be healthy. The November sale, we used supplies purchased previously, purchased cheaper soil, borrow a car (save on rental), and Heidi donated gas expenses, all in an effort to keep costs down and maximize profits.

Additional outcomes

- For both sales, a total of \$890.44 profit was made towards future GIMI events;
- Total \$360 profit was also made towards the Macdonald greenhouse composter project (Professor Donnelly);
- Despite quite good sales, we learned that to make money we need to be very careful with expenses and to ensure to mark up the plants sufficiently to make enough profit.

g) Care and Maintenance of Succulents.

This topic was extremely popular and sold out within two days. While there were also a number of last minute cancellations, we had almost enough people to fill out the vacant spots. This was an ideal GIMI topic for several reasons. Many succulents are excellent candidates for offices but even more interesting, the jade plant, the plant given to each participant, has been empirically shown to be very effective at removing benzene and other VOCs from indoor environments. Succulents, however, can be tricky to care for (they are sensitive to overwatering) and perhaps, for this reason, a popular topic among our members.

Additional outcomes

- We were able to achieve the right combination of topic, timing, price and popularity. This was the first workshop we almost broke even (only \$13 short).

3. Which project objectives were easy to achieve and how they were built upon

Success as a pilot project: demonstrating need and interest

Our consistent workshop attendance, workshop evaluations, our ever-growing listserv membership quickly came to attest to the need for and interest in the goals of GIMI. Starting with individuals (rather than at the institutional level) proved to be an effective strategy. We have greatly surpassed our original planned deliverables of distributing 160-240 plants (distributed 1100 plants) and holding 2 workshops (held 20).

GIMI's iterative approach to expanding its offerings has worked quite well, and allowed GIMI to experiment with many things, while building a solid base of supporters.

Leveraging McGill Plant Science knowledge

Early in the project, Professor Donnelly brought on board Christie Lovat. At the time, she was an MSc student working with Dr. Donnelly. Christie's qualifications, namely her education, her experience running her own part-time landscaping business and her 3 years' experience as an employee of the McGill Urban Nature Information Service, made her an ideal candidate to working for the GIMI project.

She has been an extraordinary asset to GIMI. Fortunately, she has continued with her PhD with Dr. Donnelly and so continues to be available to run workshops. She has consistently received universally outstanding workshop evaluations. She is well-loved by GIMI participants. While she is paid for her services, she regularly goes beyond the hours for which she is paid and is always helpful and supportive of GIMI.

4. What challenges or failures did GIMI encountered and how they were addressed

Required expertise

Very quickly into the project, we came to realize the importance of the expertise required and also the premium on McGill researchers' time. With on-going cuts on Macdonald campus, affecting the running of the greenhouse as well as other activities in the Plant Science department, it became clear that GIMI would need expertise beyond that of McGill researchers involved in the project and that we would need to pay for this expertise. In other words, while we could rely on volunteer time a couple hours at a time, here and there, if we wanted consistent, high quality, on-going expertise, we would need to pay for it.

The SPF funding has been critical in providing the initial funds for this. But it soon became clear that we needed to generate funds to cover these on-going costs.

Making GIMI financially self-sustaining

We have struggled to achieve the right balance in price, topic, and timing of workshop. The SPF financing has been very helpful in providing us with a base, while we experimented and learned how best to organize ourselves and our activities.

Workshop cancellations and no shows have been an issue. Sometimes there have been enough of a waiting list to fill up the cancellations. We have learned that we need to charge more to eliminate losses at our workshops. Our policy is now to always plan to, at minimum, break even and if possible, make a profit on each workshop. Our plant sales have helped us to generate funds to address the shortfalls that we encountered with our earlier workshops.

Addressing both downtown and Macdonald campuses

Transportation between the campuses is an issue. For example, we hoped to bring plants for Mr. Wees' December Poinsettia sale and spring Easter sale, but transportation, finding a driver and parking have been issues in making this feasible. While we investigated using a McGill vehicle, there were additional costs and permitting such that we decided it was not practical. The downtown-Mac shuttle has been useful for individual travel, but not for transporting plants. For several trips, Professor Donnelly, Heidi Hoernig and Christie Lovat used their own vehicles and gas for transportation, free of charge to the project. We now budget for mileage and parking when personal vehicles are needed, because it is not sustainable for GIMI members to always absorb these costs.

There have been requests to hold more workshops at Macdonald campus, but given the small numbers, it is not as rewarding as the downtown workshops.

Time/Effort

Time pressures have been considerable on GIMI organizers. In particular, the Plant Science faculty have been under considerable time pressures and therefore not all of our planned activities were implemented. In particular, Professor Wees and I put many hours into a plan to include a field project whereby students would come downtown to assess office conditions and office plant health. In the end, several factors made the project unfeasible and we abandoned the plan for 2013 but hope to implement it at a later time.

There is a never-ending stream of great ideas coming to GIMI, but only so much time and volunteer human resources to act upon the excellent ideas.

Effective co-ordination

A major lesson learned is that more effective co-ordination is required to sustain GIMI activities. Heidi Hoernig has undertaken the bulk of the work required for this project and it is not sustainable. Volunteers have been excellent for

helping out with small tasks and with some planning and co-ordination. More is needed to facilitate others to become more involved in the major tasks.

5. Next steps

- Continue with workshops and sales;
- Continue to recruit and incorporate volunteers into all GIMI activities;
- Acquire a new website and develop an automatic registration system on a McGill website (will not work on current blog site);
- Develop an outreach plan to bring more undergraduate and graduate students to GIMI events;
- Explore institutional support for greening indoor spaces;
- Find a GIMI sponsor and open a GIMI McGill account.

6. What GIMI learned and what recommendations GIMI would have if this type of project were to be replicated

The key recommendations from the project are very general. They include:

- Use a gradual, iterative approach to expand your project.
- Work in small steps, celebrate tiny victories.
- Be sensitive to the various pressures that McGill faculty, staff and students are experiencing.
- Be realistic and patient.
- Find ways to effectively integrate volunteers, as much as possible; as early as possible.
- Plan carefully while being open-minded to serendipity.



GREENING INDOOR MCGILL INITIATIVE (GIMI)

<http://blogs.mcgill.ca/gimi/>



WHY INDOOR PLANTS?

Indoor plants make an office look great. And they are good for you too! But don't just take our word for it. Research findings in horticultural science, cognitive and environmental psychology* show multiple positive effects associated with indoor plants.

PSYCHOLOGICAL HEALTH

Indoor plants positively affect mood and make you feel more:

- Happy
- Calm
- Comfortable
- & Friendly



WHAT DO WE DO?

We are promoting healthy, green and aesthetic indoor work and study environments across McGill University campuses through the establishment of indoor plants.

HOW?

- Information & training workshops
- Growing and distributing indoor plants
- Our blog -- blogs.mcgill.ca/gimi/
- Connecting indoor plant-people together



WHO WE ARE



- Faculty, staff and students
- Downtown and Macdonald campuses
- Experts & inexperienced plant lovers
- Welcoming your participation and input

PRODUCTIVITY



Indoor plants have been shown to:

- Reduce stress
- Increase attention span
- Improve test performance
- Increase creativity
- Lessen fatigue

INDOOR AIR QUALITY

Improving indoor air, plants:

- Lower CO₂ concentrations
- Increase humidity
- Remove volatile organic compounds



PHYSICAL HEALTH

- Fewer sick leaves
- Faster post-surgery recovery
- Milder cold symptoms
- Higher pain tolerance



These effects have all been linked to indoor plants

WHAT'S NEXT?

- More workshops and indoor office plants
- Plants for common spaces: e.g. halls, atriums
- Living walls
- ???

FOR MORE INFORMATION & TO JOIN

See <http://blogs.mcgill.ca/gimi/>

Funded by user fees and



*See GIMI <http://blogs.mcgill.ca/gimi/> for study details and full references to research publications. Special thanks to McGill Plant Science MSc. student **Christie Lovat** for compiling research findings and conducting workshops and to the Macdonald campus greenhouse and Dept. of Plant Science. **GIMI founders:** Heidi Hoernig (Research Services, Faculty of Arts), Professor Danielle Donnelly & David Wees (Plant Science)