

# Sustainable Orientation Project Toolkit

**SUMMER 2017**

*A toolkit that summarizes the learnings and resources that were made during the Sustainable Orientation Project of Frosh 2017.*

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# Executive Summary

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This project arose from shared desire by SSMU and MOOS to make frosh more sustainable. It was noticed by staff in both of these institutions that this big event produced a lot of waste and used a lot of natural resources. A plan for a project funded by the Sustainability Projects Fund with the aim of buying more sustainable T-shirts, Tote-bags, and SSMU handbooks was drafted and approved. It was not possible to reach find a more sustainable T-shirt that filled the mandatory criteria, but sustainable alternatives for other frosh apparel, at lower prices than budgeted, were selected. Research on several other sustainability topics was done to figure out if the extra money could be used to fund other projects. Although few of these initiatives were adopted, this led to an important amount knowledge and resources being gathered. The 2017 initiatives included using a tote-bag made out of jute, rather than polyester with 25% recycled content; SSMU handbook using more 100% recycled paper and vegetable based inks, rather than using petroleum based inks and fiber using virgin fibers; the paints used in the BASiC paint fight being more diluted than in previous years, in order to reduce the amount of paint wasted; and XXX for engineering faculty, and vegetarian food only being distributed at beach day and in most events.

The efforts deployed throughout the summer resulted in successes and failures that can provide several insights for frosh and non-frosh people who want to improve frosh's sustainability in future years. It may also be useful to anyone organizing events at McGill. This toolkit was drafted to help people who will undertake these responsibilities in the future start with a solid understanding of the challenges ahead of them and provide them with useful resources acquired in the summer of 2017.

The ultimate purpose of the toolkit is to provide context on all the sustainability aspects and initiatives of frosh that were explored throughout the summer, make the acquired resources available to all event managers at McGill, and provide recommendations to those who will tackle similar challenges in the future.

## Main Recommendations

- 1. Engage every single stakeholder and understand the entire supply chains of frosh before getting any approvals for a project.** For the Sustainable Orientation Project, this would have allowed us to get in touch with the VP internals sooner, understand their reluctance to work with other suppliers, and understand the current supplier's reluctance to work with other manufacturers. In another initiative attempted over the summer of 2017, involving the key stakeholders too late exposed the inaccurate assumptions made by non-frosh individuals and the inefficient use of resources of the initiative.
- 2. Sustainability planning is a yearlong process.** It's important for faculties and people who may be involved in frosh to plan frosh's sustainability throughout the year, rather than only over the summer. For instance, ordering sustainable items from different manufacturers and/or suppliers throughout the year can help frosh and its suppliers feel more confident about making larger frosh orders in the subsequent summers. Planning all year can also allow the faculty committees to apply for SPF funding before the working group leaves for the summer.
- 3. Sustainability training to avoid greenwashing purchases.** Most of the products that claim to be sustainable are greenwashing schemes. It's crucial for frosh sustainability staff to get good training on what are the main sustainability issues at frosh, what are the potential improvements, and what are the potential greenwashing claims they might encounter. Avoiding to fall in greenwashing requires a lot of time and reflection, and these staffers should be given the time and resources that they need to accomplish their work successfully.

Improving sustainability at Frosh is crucial to change the mentality at McGill from a throw-away culture to one that cares about its social and environmental sustainability. It will be an ongoing effort that will lead to considerable changes in the long run.

# Apparel

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## Challenges to changing the status quo

### *Reluctance to change suppliers*

T-shirts and tote-bags are one of the most important expenses for the faculties. Since each leader, O-staff, and froshie gets both a T-shirt and a Tote-bag, there is an estimated purchase of 5'000 bags and 5,000 t-shirts. These items not only represent an important yearly expense, they also carry an important emotional value for the froshies. Late arrivals or poor quality cannot be tolerated for these items, since such incidents are likely to affect the morale of the froshies, leaders, and O-staff. They are a way for froshies to identify with the school and the faculties they belong to.

Frosh committees typically work with Hannah Promotions for all of their garment. This company is a garment printer and supplies a variety of items for the student associations at frosh and throughout the year. Their work as printers includes supply and printing tasks: they supply clothing items that are made from manufacturers and print each faculty's personalized logos on them. They had been working with student organizations at McGill for more than 25 years in the summer of frosh 2017. Each summer, they attend one of the IOC meetings at the beginning of June to present the items that he can offer, suggests each year's best items and tell each representative what their faculties bought on the previous year. Faculties usually order by the beginning of July and finalize their logos around July 10<sup>th</sup>.

It is first important for non-frosh people to realize that committees have had a really bad experiences whenever they bought garment from other suppliers/printers than Hannah Promotions. According to stories reported, garment arrives late, the quality of the shirts or printing is bad, and the frosh committees take a lot of blame for it. Although frosh staff are those who ultimately make the decision, Neil, the owner Hannah Promotions is the person that has to be convinced to work with other companies; frosh staff will be more willing to work with comparable items if they are supplied by this current supplier. For current suppliers, the concern with manufacturers located outside of Canada and who haven't proven to be reliable in other orders is that any of their delays will be blamed on the suppliers, not on the manufacturers. There is an additional concern with all manufacturers; this industry has a reputation for having many manufacturers who ship their orders a few days to weeks late, which would make a big difference for frosh. Hannah promotions has openly said that they would let go of entire orders for a given year instead of working with new manufacturers that they don't completely trust because they do not want to put their reputation at risk. IOC is risk averse and will usually stand on its current suppliers' side because these are trusted individuals who have a lot more experience ordering and printing supplies than any staff or student.

**Recommendation for non-frosh individuals:** Work closely with current suppliers as well as with the frosh staff from the very beginning of any project. When IOC and the rest of faculty frosh are reluctant to let go of current suppliers, the best approach to making garment more sustainable is to determine a series of sustainability criteria and ask the current suppliers to find products that come as close as possible to those criteria. Current suppliers will ask their manufacturers which of their products can best match these criteria.

**General recommendation:** Order smaller quantities of more sustainable products from other companies for other events throughout the year. This can be done either through the current suppliers or with other suppliers and manufacturers. For instance, if someone wants to make next year's Frosh hats more sustainable, they should try out hat manufacturers for smaller events throughout the year. This will give current

suppliers and the faculties a chance to work with this manufacturer at least once on orders that aren't as important as frosh, make sure that this company is reliable, and reassure everyone on working with them for frosh. Ultimately, faculties are the decision makers. A frosh staffer (usually the VP internal) is usually the person who can approve orders that would not go through current suppliers like Neil. VP internals should either try to work with other companies for the first time for a frosh order or they should order supplies directly from sustainable suppliers throughout the year to show next year's VP internal that more sustainable products can be purchased and delivered reliably. Since they have the decision power, it is important for VP Internals to realize that their decisions to try out new companies (through Neil or on their own) throughout the year can ultimately improve the sustainability of frosh.

### **Bottom-up vs top-down approach:**

It was observed throughout the summer that student associations tend to be more responsive when they are put under pressure from the bottom (the members they serve and the student community) then from the top (administration acting outside their authority). In the past, committees accepted significant changes and asked the administration and student community for resources regarding sexual violence education/training, inclusivity, and accessibility because they received pressure from their members. It was noticed throughout the summer that the approach that had been taken to reduce the impact of frosh might not have been ideal to fit the organizational structure of frosh. The desire to implement the Sustainable Orientation Project's sustainability initiatives to all faculty frosh first came from SSMU and MOOS staff, rather than from IOC or the faculties. Advantages of this approach included a higher likelihood of receiving funding from SPF and a centralization of the resources and research in sustainability. Some of the disadvantages included a slow decision making process (every faculty had to approve changes), an uneven and very different level of commitment to sustainability improvement between faculty frosh committees, and an inevitable top-down approach from MOOS/SSMU to the faculties (which made some feel uncomfortable).

**Recommendations for non-frosh people:** Allow individual faculty frosh committees to reach out and ask for resources instead of trying to actively change frosh. Although many people in different positions within the administration might want to make some aspects of Frosh more sustainable, it's important to keep in mind that changes are more effective, rapid, and successful when they arise from IOC and the faculties. Administration support is likely better used when it acts as resource, rather than as an intervener, and when they work with individual faculties and event organizers, rather than with all of IOC.

**IOC and student faculty staff recommendation:** IOC and faculty staff should reach out more to the proper departments of the McGill administration to request some support. Many departments of the McGill Administration can help in making frosh more sustainable. Individual faculties should, for instance, be keen of implementing further sustainability measures using SPF funds or getting in touch with social and environmental sustainability experts (staff, profs, directors...) at McGill to do this in the most effective way possible.

## **T-Shirts**

### **Key sustainability concerns with T-shirts**

The environmental and social impact of the apparel industry has been widely publicized and criticized in the past decades. This impact ranges from the widespread water contamination that results from the overuse of pesticides and fertilizers in cotton culture to the deplorable work, safety, and health conditions of workers who manufacture the T-shirts. The following environmental concerns are associated to a T-shirt made out of conventional cotton that is adopted by most faculties.

The overall carbon footprint of a conventional cotton T-shirt made in China is estimated to be around 8.8 kgCO<sub>2</sub>e, from which agricultural and industrial production represent more than 90% of the GHG. Energy consumption by the manufacturing plant is the greatest single source of carbon that goes in making a T-shirt, followed by the indirect GHG generated from the use of pesticides and fertilizers. (Wang *et.al*, 2015)

Although it is difficult to get data on the environmental impact of the paints, dyes, and other chemicals used in the spinning, weaving, and clothing processes, their environmental and social impact are not to be dismissed. Most dyes require the use of heavy metals, formaldehyde, and/or strong acids to be manufactured. Important amounts of waste dyes and the chemicals used to make them are washed down the drains and into nearby sources of clean water. In developing countries, the flexibility of environmental and safety laws make it such that it's easier for companies to carelessly dispose of these chemicals in local water streams.

The human cost of cheap clothing is very important. Different NGOs have reported cases of workers being payed less than a living wage, workers working more than 80 hours per week, child labor, and even human exploitation and forced labor (Fashion United, 2016). The collapse of the Rana Plaza in 2013, where more than 1100 people died when their clothing factory collapsed, also shed light on the very poor safety conditions that some garment workers put themselves through in order to earn so little.

Cotton is one of the crop that uses the most important quantities of fertilizers and pesticides per unit produced. The total amount used in the US is calculated in million and billions of kilograms, and some reports have analyzed that 17 teaspoons of chemical fertilizers and one teaspoon of pesticides are used for every nine ounces of cotton (Cubie, 2006). Studies have also claimed that a T-shirt made out of conventional cotton uses up to 2700 L of water (WWF, 2013)

## Possible solutions

### Carbon

The most efficient initiatives that address the carbon issue are those that focus on the manufacturing and agriculture part of the supply chain.

The best way to reduce the carbon emissions resulting from manufacturing is to ensure that clothes were made in a plant that use low-carbon renewable energy. Unfortunately, this is a very difficult criteria to verify due to the complexity of the supply chains in the apparel industry and the poor accounting of this value. It is possible that fibers spun, weaved, and clothed in Canada or another legislation with strict carbon regulations have lower emissions in the manufacturing process, but one would have to do considerable research or conduct an LCA to confirm this hypothesis.

Carbon generated from agriculture is usually most effectively tackled by reducing the amount of pesticides and fertilizers used, so these two issues should be addressed together. To reduce indirect emissions that result from agriculture, a first option is to select clothes made out of 100% organic cotton. The "organic" certification of a cotton T-shirt indicates that the plant was grown without the use of most conventional pesticides and synthetic fertilizers, which greatly

### T-shirt

#### Recommendations

- Choose raw materials made out of organically grown plants, fast growing plants that use little fertilizers and pesticides, and/or recycled fibers
- Choose shirts manufactured in facilities powered by low-carbon renewable energy
- Choose T-shirts dyed with dyes that have the lowest toxicity possible
- Choose shirts that have a fair-trade certification or which you can verify were made with respects of the worker's human rights.

reduces the amount of highly potent GHG that resulted from these fertilizers. One could also select materials made out of other plants than cotton. Fast growing plants like hemp and mechanically processed bamboo require very little pesticides and fertilizers to grow, few chemicals to be processed into a fiber, and can produce large quantities of fibers. (NRDC, 2011) (FTC, 2009) Post-consumer cotton, harvested from old-apparel and cotton containing materials, can help to reduce the overall impact of a shirt. Since it's not as durable as virgin cotton fibers, recycled fibers are often blended with virgin fibers to a ratio of 30% recycled cotton. Although the best usage of recycled cotton would be to blend it with virgin fibers of organic cotton, there are still important improvements that result when it's mixed with virgin fibers of conventional cotton. The integration of recycled synthetic materials in the shirts may also help to reduce the total amount of carbon that results from every T-shirt. The use of synthetic fibers like polyester is discussed in more details in the Tote-bag section.

### ***Dye toxicity***

It is very difficult to get information regarding the types of dyes that are used to bleach or color the T-shirts bought. This criteria was not considered for frosh 2017 due to its logistical complexity. It's possible that hazardous chemicals in dyes and their wastes might be disposed of in a safer manner if they are used in Canada or other regulations with stricter environmental regulations, but such assumption would require more research.

### ***Social reinsertion programs and fair-trade certification***

Sourcing T-shirts from social reinsertion companies or other types of social enterprise can help to address the social issues related to garment manufacturing. These types of enterprise use garment wholesale orders to train individuals who have difficulty integrating the workforce (due to discrimination, mental health...). Such businesses located in the United States and Canada usually have higher standards of safety for their workers due to stricter laws in these countries. The presence of unions in any enterprise can also help to improve the safety and wage conditions of workers, although it does not guarantee such outcome. Fair-Trade certified clothing can also be a good indicator of higher social standards because of the strict criteria and regulations involved in fair-trade certifications.

## **Companies that can provide sustainable alternatives**

Appendix 1 provides several company name with some of the quote information that they have provided over the course of this project. Some of these enterprise have stood out:

**Alterna EcoSolutions**: Natalie Delorme, President and Founder of Alterna EcoSolutions, was very collaborative throughout the summer of 2017. Her company offers printing and distribution services of environmentally and socially responsible promotional product materials and she deployed considerable efforts to provide the Sustainable Orientation Coordinator with quotes for this project. She was able to provide organically made T-shirt at a very modest price from a unionized Canadian manufacturer. For future sustainability initiatives regarding T-shirt, it is recommended to get in touch with her before any other company.

**Öom**: This is a Quebec clothing manufacturer and seller. They make products for wholesale and for retail. Most of their clothing are organic and made in Quebec and Canada. They have the advantage of being a possible sponsor, and could therefore reduce their prices. Their products are more expensive, but they could still be an interesting alternative.

**Organic4nature**: They provide organic T-shirts and printing services at low prices.

## Tote-bags

### Key sustainability concerns with Tote-bags

The tote-bags used every year by the faculty frosh have a “cinch” style and are made out of a blend of 25% recycled Polyester (rPET) and 75% virgin polyester (PET). The advantages of using polyester is that it’s a light and cheap material that can carry a significant weight. Worldwide, polyester and canvas (cotton base), are the most common materials used to make this type of bag.

#### *Polyester*

A first concern with polyester is the amount of carbon dioxide that result from its production. It’s estimated that a conventional T-shirt made out of polyester results in the direct and indirect release of 3.8 kgCO<sub>2</sub>eq (Kirchain, Olivetti, *et.al.*, 2015). Most of this carbon is associated to the production and manufacturing stage. Moreover, highly potent dyes considered to have higher toxicological effects than those used on plant-based fibers have to be used with polyester due to the hydrophobic nature of these fibers. The US National Library of Medicine (a, 2005) indicates that one of the main disperse dyes used to dye polyesters in developing countries, Azobenzene, is a “probable carcinogen” and that it’s likely to negatively affect ecosystems it comes in contact with. This chemical is so hazardous that in its recommended disposal method section, the Library states “The most favorable course of action is to use an alternative chemical product with less inherent propensity for occupational exposure or environmental contamination” (US National Library of Medicine (a), 2005). Polyester has a very slow biodegradation rate; this makes it a very durable material, but also means that the material will take a very long time to degrade. Estimates are that it takes between 20 and 200 years for a polyester item to decompose fully (Conca, 2015). Finally, the very fact that this material is made from petroleum, a sequestered form of carbon, increase the significance of the carbon emissions that result from this fiber when it finally decomposes.

#### *Canvas*

Most of the environmental consequences of cotton and its manufacturing were highlighted in the T-shirt section. It’s important to note, however, that a higher density (weight/area) is required for tote-bags, as a tote-bag with the fiber density of a T-shirt would support very little weight. Most online articles and papers tend to give canvas a higher environmental footprint than polyester (Van der Velden *et.al.*, 2013) (Dillon, 2016) (Paster, 2009), and the higher density required for tote-bags likely results in higher carbon footprint.

### Possible Solutions

#### *Canvas materials*

In order to reduce the environmental impact of canvas, which is usually made out of cotton, one could opt for an organic cotton or hemp based canvas. These materials require considerably less fertilizers, pesticides, and water to grow the raw materials.

#### *Polyester*

Recycled polyester (rPET) can help to reduce the environmental impact of tote-bags by helping to close the loop (although not completely). The reuse of resources helps to diminish resources exhaustion and keep more petroleum in the ground. It is estimated that the making of rPET pellets generates 21-29% the emissions of regular PET pellets (Franklin Associates, 2010) (PET Recycling Team, 2017). Due to weaknesses of recycled fibers, the highest concentrations that are usually seen for tote-bags are around 40-60%. Such concentration can still, however, lead to fewer resources being used and lower carbon emissions.

Another way to reduce the environmental impact of polyester tote-bags is to select bags that were colored using anthraquinone, and not azobenzene. Although anthraquinone has environmental and health problematics, such as irritation of the eyes and mucous membranes, these are much less harmful than those of azobenzene (United States National Library of Medicine (b), 2005).

### **Jute**

Jute is a fast growing plant that can reach 3-4 meters within 100 days. It requires very little pesticides and fertilizers to grow, it grows easily without much water added when grown in its natural, and requires very few chemicals to process its fibers. Since its fibers are quite large and durable, they also make up excellent materials for tote-bags. Jute is also considered to be biodegradable (not compostable) by some reports due to its vegetable-base and its relatively rapid decomposition rate (Ross, 2015) (Behera *et.al.*, 2012). Tote bags made out of jute erroneously sent to landfills will likely degrade faster than the current polyester bags.

### **Making the bag durable and reusable**

There is very little data as to how many disposable plastic bags a tote bag like that offered at frosh might spare. Regardless, when choosing a cinch bag, it's important to select a bag that will be as durable as possible so that it can have beneficial uses after frosh. The main criteria to look for is the grams per square meter (GSM).

This will indicate if a bag is thin or thick, and will give more insights as to whether it's likely to last longer. A thicker bag will also be using more resources; the decision makers should evaluate the pros and cons and determine if those receiving the tote-bags are likely to reuse them on several occasions following frosh.

#### **Tote-bags recommendations**

##### *Research recommendations*

- Evaluate dye improvement possibilities in more details.
- Investigate the worker's working conditions, aim for fair-trade certification

##### *General tote-bag recommendations*

- Use organically certified materials or fast growing plants like hemp and jute
- Integrate as much recycled content in the materials as possible
- Use dyes that have the smallest environmental and health impact as possible
- Make the bag as durable as possible for it to be reused after frosh

### **Companies that can provide sustainable alternatives**

Appendix 2 provides a list of the companies that can provide more sustainable alternative. There wasn't any extensive contact with any of these companies because the current suppliers preferred to stick with their own manufacturers. The following table may still be a useful resource to people who want to get in touch with other companies than the frosh 2017 tote-bag supplier.

### **Frosh 2017 decision**

In the summer of 2017, SPF agreed to pay for the cost difference that would result from selecting a tote-bag made out of jute provided by a current supplier. This bag drastically reduced the environmental footprint of the tote-bag and promoted a message of sustainability at frosh. Because its feeling and texture will be different than a regular polyester bag, it will also raise greater awareness to the material making it and sustainability initiatives at McGill. These bags were also considered a good option because their affordability (\$4.50 per bag) will make it easy for faculty frosh committees to integrate them into their budgets. Most faculties decided to provide the jute bags to their froshies.

## Screen printing inks

The possibility to use screen printing inks that were more sustainable was explored following IOC's refusal to try more sustainable T-shirt companies. These inks presented an opportunity to slightly reduce the overall environmental impact of the T-shirts at a reasonable price increase.

### Key sustainability concerns with screen printing inks

There are several environmental and health concerns that arise from the plastisol based inks used each year in frosh's screen printing. These relate to the chemicals used in the paints and the reactants used to obtain such chemicals. By definition, a plastisol based ink is a "PVC-based ink composed of a clear, thick plasticizer fluid and PVC resin" (Anne & Anne, 2012) The PVC and plasticizers used in these inks are considered to be particularly harmful to human health and the environment for many reasons.

#### PVC

PVC, or polyvinyl chloride, is a very common type of plastic polymer that is also used in screen printing inks to give the image a more opaque and rubbery feeling. The main concerns about the use of PVC are related to substances used during the manufacturing phase of the plastic:

Phosgene gas: this substance, used as a building block for PVC, has a bad reputation for being used as nerve gas during the First World War. It can cause acute and chronic liver, nerve, and immune system damage, and is known as a human carcinogen (Fairware, 2015)

Dioxins: The manufacturing of PVC is thought to be one of the main sources of dioxins in the environment. These are among the most toxic chemicals known and used today, and their health effects include hormone disruption, high carcinogenic potency, and the capacity to bio accumulate in wildlife (Fairware).

#### Plasticizers

The environmental and health issues surrounding phthalates are highly contested. Their health issues mostly concern hormone disruption in young age children and animals, as this affects their development and reproduction. Although some expert panels have found that these substances do not cause any harm to developing babies (Kaiser, 2005), the US National Library of Medicine (c, 2005) classifies this chemical as "reasonably anticipated to be a human carcinogen". California, Washington State, and several European countries have also banned their presence in children's toys.

### Possible Solutions

Screen printing inks are very challenging because there are very few inks that provide a clear sustainability improvement. Water based inks, acrylic inks, and silicone inks manufacturers all claim that their product is the ideal remedy to plastisol based inks, but the improvements they claim are difficult to verify.

#### Water-based inks

Water based inks work differently than plastisol inks. They are made out of water, solvents, and binding chemicals that evaporate to leave the color pigment on the T-shirt. Although they present an environmental advantage in that they don't contain any PVC or phthalates, the use of strong chemicals and solvent (which include formaldehyde and several types of alcohols) has been criticized. Since these are made to evaporate off the shirts, the workers that work with these inks can be exposed to high concentrations of potential carcinogenic substances (United States National Library of medicine (d), 2005).

These inks also have a reputation for drying on screens. Unlike plastisol based inks, which only dry when they are "cured", water-based inks can dry on screens, which requires rinsing with water. This leads to important

amounts of wasted ink and contaminated water flowing into the drain. Finally, these inks require exposure to high temperature for an extended period of time in order to dry. Depending on what type of energy supplies this heat, the overall carbon footprint of the T-shirt can also significantly increase.

In the face of all these downsides, it's difficult to determine how much of a sustainability improvement they truly represent. It seems as though only a complete life-cycle analysis would be able to determine whether these inks represent a significant sustainability improvement. It's also worth mentioning that the choice of sustainability criteria might help to determine if the products provide good overall sustainability improvement (defining whether no PVC and phthalate is more important than carbon emissions and workers' exposure to VOC).

### **Acrysol inks and silicone inks**

It's very difficult to determine if these two inks actually represent a considerable sustainability improvement because most environmental claims for these products indicate what is not in the product, rather than providing information on what is in the product. For instance, Rutland's EKO Cotton White Ink is sold with the claim: "PVC-Free and phthalate-free plastisol textile white ink". What's confusing about this claim is that, as previously defined, a "PVC-based ink composed of a clear, thick plasticizer fluid and PVC resin" (Anne & Anne, 2012), for which the most common types of plasticizers are phthalates. Moreover, there are no indications as to what was used to replace these chemicals that are the basis of plastisol based inks. It's difficult to rationalize that the manufacturers of this inks are able to take out PVC and phthalates without replacing them by any other harmful chemicals. Without knowledge of the chemicals that are used to replace PVC and phthalates, there is a high potential for unintended environmental and social consequences.

### **Companies that provide these products**

The following companies provide alternatives to Plastisol based inks. This toolkit does not encourage or discourage these products over plastisol based inks, but simply wants to make acquired resources available to the readers. These inks can be found in appendix 3.

#### **Recommendations:**

There are few recommendations regarding screen printing inks. One could take a guess and assume that acrysol inks and silicone inks are better for the environment, but they would have to weigh the unknown net environmental benefits against the price increase that comes with these inks. Considering the lack of information and unclear net environmental benefit that results with most of these inks, there are no clear recommendations that can be made at this point regarding screen printing inks.

In the future years, it would be advised to persistently ask the companies which chemicals are used in their inks to support their claims of being more "eco-friendly" while maintaining their premium quality.

## **Non-apparel**

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### **Paper printing for pamphlets**

Each year, some of the faculties print a significant amount of pamphlet to welcome their froshies, provide them with the information they need, and give their sponsors more visibility. This leads to an important amount of paper and ink being used and wasted within a few days.

## Key sustainability concerns with paper printing

### *Paper*

The environmental consequences of paper are considerable. When forests are not harvested responsibly, they can be clear-cut. In the short term, this can lead to the death of many animals that don't have the ability to escape and force others to relocate in ever smaller areas. In the long term, clearcutting leads to important greenhouse gas emissions, soil erosion, changes in hydrology, desertification, and biodiversity loss.

### *Inks*

Printing ink is mostly a pigment in a solvent based. These solvents are usually a mixture of water and VOCs, typically alcohols and organic compounds such as isopropyl alcohol, pentanediol, aliphatic diol, and pyrrolidone (HP, 2017) (Canon, 2017). The high volatility of these solvents make them useful for printing, but can also expose workers to high air concentrations of these chemicals. People who are exposed to very high concentrations or come in contact with these chemicals are likely to experience symptoms such as eye and mucous membrane irritations (HP, 2017) (Canon, 2017). It's unlikely that any of these solvents can cause serious environmental harm; alcohols tend to evaporate and disintegrate fairly rapidly, while 2-pyrrolidone "is low risk of harm to organisms and the broader integrity of the environment" (Environment Canada, 2013).

Different companies use different types of pigments to give each ink its colour. It's difficult to give an assessment of the health and environmental impact of these pigments due to the wide range of pigments used and the trade secrets that prevent disclosure of these substances. Whenever possible, identification of the pigments and selection of those with the lowest toxicity should be prioritized.

## Possible solutions

A first way to reduce the amount of paper would be to apply the 2<sup>nd</sup> of the 4Rs, reduce. The faculties that are still printing big pamphlets (10-20 pages) should take example on those that no-longer provide such pamphlets. A few faculties, including PTOT and MacCampus, have managed to distribute the necessary information to their froshies and give their sponsors a lot of visibility through other means than a handbook. These communications outlet include their social media pages and displaying logos on their T-shirts and banners.

### *Type of paper*

**Recycled paper:** If the faculties find it to be too much of a shock to stop the production of a pamphlet altogether, there are two types of paper that can help to reduce the impact associated to the raw materials extraction. Recycled paper, or post-consumer paper, (with concentrations varying up to 100% recycled) is advantageous in that it drastically cuts the amount of resources extracted from nature when compared to conventional paper. This paper is sourced from recycled paper fibers that were processed and reassembled to make new paper products, thus needing less fibers and pulp from trees.

**FSC certified paper:** A second type of paper is paper that is certified by the Forestry Stewardship council. The FSC has a series of criteria that "describe the essential elements or rules of environmentally appropriate, socially beneficial and economically viable forest management" (Forest Stewardship Council, 2017). These criteria require project managers of forestry companies to maintain excellent relationship with the locals and indigenous people, evaluate and mitigate all negative environmental impacts, and promote species conservation in the area being forested, among other things. Although FSC paper is sourced from virgin fibers, it's a way to ensure that the natural resources used for this paper were managed as sustainably as possible.

### *Certification programs and guidelines for inks*

**UL Greenguard:** The Greenguard Certification Program is a certification body that tests the ambient air in workplaces such as offices to test for the presence of harmful chemicals. Products with this certification are certified to emit very little emanation when used in such spaces (Greenguard, 2017). The certification criteria of Greenguard are available on their website. It is encouraged to select printing shops that use inks with this certification whenever possible because it reduces the use of harmful chemicals and improves the health of workers in printing shops.

**UL EcoLogo:** EcoLogo certifies printing inks as more sustainable if they are able to meet the criteria of UL 2801. It was not possible to verify these criteria because access to such criteria required a payment, but EcoLogo does have an excellent reputation in the environmental certification industry. Although a formal recommendation to select products with this certification cannot be made due to the ambiguity of the criteria, it is likely that environmental sustainability improvements result when products with this certification are chosen above others.

**General guidelines:** Some inks without the above certifications can still provide some environmental benefits. Water-less printing inks, inks with low VOC, or inks that contain few or no heavy metals should be prioritized over conventional inks, when possible. In any cases, asking the printing shops which types of inks they use and what information they can provide about their inks is essential in reducing the environmental footprint of frosh.

**Paper printing recommendations**

- Distribute information electronically whenever possible
- Get in touch with several printing shops to find the one that will provide the most sustainable product
- Aim for the recycled or certified paper and inks with the smallest environmental impact possible

### **Companies that can provide sustainable alternatives**

Appendix 4 provides a list of several printing shops in Montreal that can provide more sustainable paper to print the booklets on.

### **Dishware**

As reported by the VP internals, the main dishware items used at frosh are napkins, solo cups, and disposable water bottles. This section of the toolkit will mostly address food/beverage containers such as solo cups and napkins. The following two sections will deal with sporks and disposable water bottles.

### **Key sustainability concerns with dishware**

#### *Depletion of limited resources.*

Conversations with event organizers revealed that up to 5000 disposable glasses were required to provide drinks for 800 people at an event of type “pub crawl”. Such quantities must be used in order for these events to run smoothly and to simplify their logistics. It’s not difficult to imagine that tens of thousands of glasses are used by the 5000 froshies attending multiple events over the 4 days of frosh. The glasses used at these events tend to be red solo cups made out of polystyrene plastic (#6 plastic), a non-recyclable plastic which is also used to make disposable razors and CD covers. As with many other plastics, it uses petroleum as its raw material, and the important quantity of glasses used at frosh encourages the depletion of this natural resource. It’s unsustainable to keep purchasing these glasses because it is common knowledge that petroleum reserves will soon be depleted.

Napkins are also very popular at frosh because they are cheap, they make it easier than plates to grab food such as pizza and hot-dogs, and they are easier to dispose of because they don’t take as much space. These

napkins are most often made of a low quality paper fibers. They are most harmful when made from virgin fibers and are bleached.

### *Accumulation of waste in landfills*

For logistical reasons, these items will usually be thrown out in trash bags. When napkins end up in landfills, their organic matter tends to decompose into methane gas (rather than into carbon dioxide) due to the anaerobic environment, which will make their disposal stage significantly more detrimental. Plastic cups will take decades to breakdown and decompose, and when they finally do, their carbon matter will also likely decompose in large part into methane gas. Their presence in an anaerobic environment is likely to increase their decomposition time and contribute to a heap of trash.

### *Throw away culture*

One of the most important impact of these items, often understated but an important focus of frosh 2017, is that the widespread use of cups and napkins thrown out to the garbage promotes a throw-away culture at McGill. New students that arrive at McGill learn the most common practices of the school within the first few days/weeks; this is when students learn whether students tend to communicate more through Whatsapp or messenger, when they learn if there is an emphasis on waste disposal or if they can carelessly throw out their garbage... The behavior exhibited by coords, leaders, and O-staff is therefore crucial to educate the froshies on what is socially acceptable at McGill.

## **Possible Solutions**

### *4Rs*

The first strategy to help organizers divert some of this waste from landfills is by using the 4Rs strategy. This strategy can help one reflect on the following questions

Rethink - Does this event really require x? This question is useful in that it allows organizers to put everything that they use into question to ensure that they are only buying what they absolutely need for their event.

Reduce - Does this event really need that much x? This question will help event managers realize that even if they need to buy certain items, they might not need to buy as much supply as they first thought to buy.

Reuse - Can we plan to buy certain items with the purpose of reusing them several times? This can push event managers to buy items that are reusable instead of disposable. Buying reusable mugs is a great way to reduce the amount of disposable mugs used at frosh. Another example: in 2017, the engineering faculty decided to buy paints and decorations worn by its leaders and O-staff to reuse left-overs next year, rather than having everyone buy their own decorations and throw out extras.

Recycle - Are we using recyclable materials? Can we prioritize the use of metals over poorly recyclable plastics and paper? These questions are also important in that they can help to choose materials that are the most sustainable, they can help to spread the word about where to dispose of certain items during the event, and they can help to anticipate how much recycling and garbage should be available at the event. Event organizers might also want to encourage the use of materials that are easy to recycle multiple times, such as metal and glasses, over others that have a limited recyclability, such as paper and plastics.

## **Compost**

When the above strategies are not possible due to logistical reasons, contamination, etc., composting might become a better option. Compost can help to tackle the accumulation of waste in landfills by breaking down organic matter faster and in such a way that it can be reused for other purposes in the near future. This makes the products used at frosh more sustainable because it encourages an upstreaming of the resources, rather than a downstream.

For instance, napkins cannot be recycled because the quality of their fibers is too low and they are often contaminated with food. Due to their high bio-degradability and capacity to meet compost conditions, they can be sent to composting facilities such that their nutrients can be reused as compost within a year.

Many dishware items, such as plates, utensils, cold cups, hot cups, and cup lids can also be sent to composting facilities if they are made in polymers like poly lactic acid (PLA) and are stamped with a seal from third party certifiers like the Biodegradable Products Institute. These third parties test each products to ensure that they meet ASTM D6400 and ASTM D6868 standards to ensure that they will properly degrade to compost when in compost conditions.

**“Compostable” vs “biodegradable”:** It’s important to look for the word “compostable” along with a third party certification, because many companies try to greenwash their products by using the words oxo-biodegradable and biodegradable. Words like these simply indicate that a product will degrade under the activity of micro-organisms (Dumont, 2016), without specification as to the amount of time for this degradation to occur, the required environmental conditions for this product to degrade, whether a material may lead to soil toxicity, or whether it will really be soil enriching in the end (Cooper, 2013).

**Have compost bins at the event:** Finally, it’s crucial that any initiatives to use compostable dishware also include compost collection. Compostable products are certified to bio-degrade within 6 months at certain temperature and humidity conditions that are often only reached in composting conditions; their disposal in garbage bins does not guarantee that they will degrade any faster than other conventional items. Left on the ground, they may also take years to decompose. Moreover, even if compostable products do degrade faster in a landfill, their carbon content will usually degrade as methane instead of carbon dioxide, a greenhouse gas 21 times more potent. Having compost bins is therefore essential to ensure that the money invested in the compostable items truly leads to sustainability improvements.

## **Companies that can provide sustainable alternatives**

### **Compostable dishware**

Buying compostable dishware can be quite challenging because manufacturers often reach the consumers through the intermediary of distributors/suppliers. The challenge is therefore to get in touch with distributors selling the products that one is interested in. Alternatively, contacting several distributor and asking them for the certified products they have can be quite challenging because they have low demands for this kind of products and therefore hold little variety and inventory. Appendix 5 provides a list of several types of products for which compostable options are available by manufacturers/distributors around Montreal. Two companies can help to simplify this research due to their manufacturing and supply capabilities:

**Compost Montreal:** This company is better known for its compost collection services, but it should be noted that they sell several compostable products on their website. Their products tend to be among the cheapest of compostable products available. Their website does not explicitly say that the products are certified to meet the ASTM’s compostability standards, but workers of Compost Montreal have provided written assurance that their products met these standards and that they degrade well in their composting facilities.

Staples's Sustainable Earth line: In order to meet the increasing demand for sustainable products, Staples has created the Sustainable Earth line of product, which encompasses a wide range of certified compostable product. Event managers will not have to worry about finding distributors for Staples' product because these can either be shipped to one's address or be bought in some of their stores. Although their products tend to be slightly more expensive, their line of products seems to be slightly more extensive than Compost Montreal's.

### **Compost collection**

There are two companies in Montreal that take care of most compost collection. RCI environment is well known for their recycling and garbage collection, as well as their portable toilet services. They also offer compost services for regular pickups and for events.

Compost Montreal has a greater focus on compost collection and they are better known for their residential compost collection services. They also provide compost collection for events. Although they never replied to a quote request for one of the frosh 2017 events, future frosh organizers should still attempt to get in touch with them to see if their pricing is more advantageous than RCI Environment.

Appendix 6 has more details that were provided by the company when they were contacted in the summer of 2017.

### **Reusable dishware**

Several companies provide reusable dishware services. The big advantage of this option over compost is that it results in lower amounts of resources being exploited and eventually sent to a compost site. However, this option tends to be more expensive, have higher water usage, increase the logistical complexity of the event, and only be suitable for events happening outside. Some company names are indicated in the table below; event managers can take the liberty of exploring the price and logistics of this option to determine if it is properly suited for their event. Appendix 7 lists several companies in Montreal that can provide reusable dishware.

**Dishware recommendations**

- Start by applying the 4Rs principle
- Evaluate the logistical feasibility of using reusable dishware
- Implement compost and recycling in your event's planning

## **Reusable Sporks**

Over the summer, the idea of SPF providing reusable sporks was explored as a means to reduce the amount of waste produced at Frosh. The idea was let go for several reasons, explained below, but this section is written with the hope that the resources gathered and the reasoning behind the decision may be useful to someone else in the future.

### **Environmental impacts and benefits of sporks**

SPF's thoughts before proposing the idea to IOC were that important quantities of utensils were distributed and disposed of throughout frosh meals. The environmental impact of disposable utensils is similar to that of solo cups: utensils are often made from non-recyclable polymers which results in an accumulation of waste in landfills and act as an important drain on limited natural resources. When compost initiatives are put in place for dishware such as plates and glasses, utensils become an important source of contamination because too many attendees tend to throw out utensils with compostable food containers.

Sporks were identified as a good option to reduce the amount of utensils being used because they would serve as froshies' only utensils for the entirety of frosh (and could be used after frosh) and would reduce the amount of disposable utensils used. The idea was rejected by IOC because it was stated that:

- Too many froshies would lose them by the first and second day
- A majority of meals were not provided by frosh, and therefore the use of utensils is not necessarily consequential to frosh (has more to do with froshies eating out at restaurants)
- Most of the provided meals do not require utensils (pizza, hot dogs...)

## Lessons from forks

It was therefore determined that providing sporks would result in trying to solve a problem that is not really a frosh problem. An important learning came from this attempt to improve sustainability at Frosh: regardless of how good an idea from a sustainability staffer or volunteer may be, working closely with those who organize the logistics of the events and getting their perspective very early on is essential to properly identifying problematics and minimize potential wastes of time, efforts, and energy.

## Companies that can provide sustainable alternatives

A list with potential providers is provided in appendix 8. Despite the fact that these products were not suitable for frosh 2017, these resources are provided with the hope that they may be useful to someone else in the McGill community.

## Water

Providing water at frosh is extremely important to help froshies who have had too much to drink and to avoid heat strokes. Water bottles are usually available at events such as pub crawls, concerts, and discover McGill. Water bottles serve two main purposes: they facilitate the distribution and the containment of water at events. It pays off to consider these two purposes separately, since sustainability initiatives targeting both of these aspects are required to address the logistical concerns of reducing the amount of disposable water bottles used at frosh.

## Logistical justifications for disposable water bottles

### Containment

Although Healthy McGill has traditionally paid for the costs of reusable water bottles, this initiative has been abandoned as of frosh 2017 for budgetary reasons. Which McGill body will pay for the reusable water bottles in exchange for widespread recognition is a year to year decision with no guarantee of renewal in future years. Whether these bottles will reappear in froshies' tote-bags in the future will have to be determined in future summers.

In these circumstances, disposable water bottles become necessary for frosh and Discover McGill organizers to serve water because it's better for froshies to have water on hand than have them line up at water fountains every time they need to have a sip of water. Not providing disposable water bottles would increase the rate of alcohol poisoning, dehydration, and heat shock. Moreover, since it's rare that froshies coming from outside the city bring their reusable water bottle, a disposable water bottle is the only water containment option available to them in the short term.

### Distribution

When leaders and O-staff need to provide water to 5000 people within 10-15 minutes, it's much easier for them to do so when they can distribute 5000 bottles than by having 5000 people lineup next to the nearest water fountain and fill whichever bottles they have on hand. Traditional stationary dispensers tend to be inefficient in large scale events.

## Environmental impact of disposable water bottles

It was not possible to calculate the total amount of water bottles used at frosh every year, but some anecdotal data can help to imagine the total amount of disposable water bottles used. For instance, each student that attends Discover McGill receives a disposable water bottle in their tote-bags in the morning and another one for lunch. Considering that approximately 5000 students attend, one can estimate that at least 10000 water bottles are distributed by CL&E alone during Discover McGill.

The water bottles bought for these events can be of different types of plastics, although often from #6 plastics. The environmental consequences of these bottles resemble those of solo cups: they result in an accumulation of waste, contribute to the depletion of a limited natural resource, and their plastics contribute to the “floating continents” seen on most of today’s oceans.

## Possible solutions

### Containment

Reusable water bottles can be bought inexpensively in large quantities. It is recommended to use bottles made out of recycled materials to reduce the overall impact of the bottles themselves. The bottles should come in a medium size of approximately 500 ml such that they are easy to transport while providing enough water to last several hours.

### Distribution

Distribution options become logistically possible when froshies have their reusable water bottle. Overall, the objective is to reduce the amount of individual packaging that comes with the water. There are two main options that can be used:

**Water Wagon:** McGill and a few companies offer renting services for water-wagons. These wagons are either plugged in to the water system with a hose or can contain up to several thousand liters of water. These machines are convenient in that they can be placed in more strategic areas than stationary water fountains, have many water outlets to accommodate large size crowds, and have higher water pressure than water fountains to prevent a long queues. The advantages of reducing the amount of plastic wasted has to be weighed against the carbon emissions from the transport associated to these wagons; most companies able to provide this services are located in Ontario and the United States.

**Water jugs:** If it’s logistically impossible to have a water wagon at an event, water jugs can become a good plan B. Water companies offer services to bring water jugs and take them back after usage for events as big as those occurring at frosh. These jugs can be used upright with a water pump or inverted when coupled with a dispenser. Although this option results in more plastic being used than with water wagon, it is still preferable to using disposable water bottles. In order to save money, alleviate the logistics of transport, and further reduce the amount of bottles used, a few bottles can be bought (enough to ensure there won’t be a long queue) and refilled with a water hose as they become empty. For further waste reduction, the bottles and their dispensers/pumps can be kept to be reused in other faculty event throughout the year.

### Water Recommendations

- Provide reusable water bottles
- Evaluate the best option between water wagons and water jugs for water distribution

## Companies that can provide sustainable alternatives

Appendix 9, 10, and 11 provide information about manufacturers and suppliers of reusable water bottles, water wagons, and water jugs. There was not any extensive contacts with any of the above companies, except

for quote requests, so individuals interested in having updated quotes should simply follow the company's procedures.

## Sponsors

Sponsors help the different faculty froshes improve the quality of their events without drastically increasing the prices. These sponsors provide money or services in exchange for increased visibility during events, on T-shirts, on Tote-bags, or any other promotional means offered by the faculty froshies.

Sponsors can be a central point of sustainability through their involvement in financing sustainability initiatives and through the values they transmit. Involvement in sustainability initiatives can occur when sponsors provide more sustainable services (i.e. a vegan restaurant providing a vegan meal instead of pizza) or by helping to pay for more sustainable products (a sponsor helping to pay for reusable water bottles or more sustainable apparel). The values transmitted can also have an important impact on the event's credibility in terms of sustainability; an event will have less sustainability credibility if it's sponsored by BP and Suncor than if sponsored by Tesla and Enercon.

Identifying sustainable sponsors is complex due to the variety of potential sponsors involved in frosh. Most sponsors tend to be bars or cafés located around the McGill Campus who may provide cheaper drinks at certain events or financial contributions. The bigger donors are multinationals such as CIBC, ScotiaBank, or Telus who have extensive CSR web-pages but conduct investments or activities that are contrary to sustainability values. So how should faculty froshies determine which potential sponsors are the most sustainable and which ones they should approach first?

A black list is a good first step. Frosh's image will be better off if none of its sponsors were petroleum companies, tobacco companies, or arms manufacturers. In order to portray values that reflect frosh's desire to be as sustainable as possible, faculties should also target companies whose activities and business plan are significantly more sustainable than the rest of their industry. For instance, MEC's business plan includes selling a significantly higher proportion of their items with materials that include recycled polyester, hemp, and organic cotton than H&M and Walmart. Finally, what is being promoted at the event can certainly influence the overall image of the event; a bank that has involvements in pipeline projects and wind energy projects would benefit its image and frosh's image by discussing its wind energy projects alongside services it can offer students. Although this is a small detail, it can influence the overall image of frosh.

Appendix 11 provides a list of several companies that promote a sustainable lifestyle or who are more sustainable than most other companies in their industry.

## Training

Training coordinators, leaders, and O-staff is crucial to fully integrate sustainability in frosh. Since frosh staff are immersed in frosh planning, they are able to observe and work on more sustainability improvement opportunities than MOOS or other administration staff. Sustainability training can also help every group leaders and other staff member make better decisions throughout frosh, which is likely to result in major sustainability improvements in the end.

## Focus on environmental sustainability

The training that coords, leaders, and O-staff get already has a lot of inclusivity and accessibility content. In recent years, frosh has deployed considerable efforts to improve its inclusivity and accessibility training to make it accessible for everyone who wishes to attend. Every staff member gets several hours of trainings created with the collaboration of sexual violence, accessibility, and inclusivity clubs/groups/organizations at McGill. The types of sustainability trainings which were observed to be the most lacking were environmental sustainability trainings. In the future, sustainability staffers or volunteers should aim to target this topic above social sustainability topics in order to provide the greatest understanding of sustainability to the different people working in frosh.

### Training recommendations

- In future, include more content about institutional learning to learn about past successes and failures of each faculties.
- Include training on the importance of fixing goals in sustainability to help keep track of desired sustainability improvements.

### *Frosh 2017 training*

The 2017 coords environmental sustainability training focused on

1. Identifying unsustainable aspects of events and solving them
2. Understanding the general rules of recycling and compost
3. Learning about sustainability efforts at McGill.

The 2017 leaders and O-staff training were similar. Both of their contents focused on the second point, and leader's training had more content on the 3<sup>rd</sup> point to help leaders be more comfortable discussing this topic with the froshies. The coordinator's training is available in another document found in the same zip file as this toolkit under the name "Coordinators Sustainability Training 2017". To obtain the leaders and O-staff's sustainability training, please contact the Campus Life & Engagement office. The sustainability training is included in other sections of their training.

## Other important issues and learnings

### Red Frogs

Red Frogs is an international non-profit whose mission is to "provide a positive peer presence in alcohol-fueled environments where young people gather, educate young people on safe partying behaviors, and promote and provide non-alcoholic and/or diversionary activities that engage young people in these environments" (Red Frogs, 2017). Throughout frosh, they provide water and snacks near alcohol serving spaces to help froshies cool down and sober when in need. They are a completely independent body from McGill, IOC, and faculty student associations.

The idea of working with Red Frogs was explored because they waste countless snack bar wrappers and cups to distribute food and water to the froshies who need them. The idea had to be abandoned quickly, however, because their independence from the McGill administration wouldn't have allowed SPF to fund any sustainability improvements.

In the future, sustainability coordinators could explore their openness to making sustainability improvements and what would be realistically possible. It will not be possible to allocate SPF funds to these initiatives since SPF does not fund bodies which are completely separated from McGill entities. Some initiatives could include trying to provide water by using the froshies' reusable mugs, providing snacks that are not individually wrapped, and sourcing water from water jugs instead of water bottles.

## SPF for individual faculty committees

It was noticed this summer that some faculties have a greater ambitions to become more sustainable than others. Over the month of July, the possibility of funding sustainability initiatives at certain events using the extra funding available was explored as a way to further improve the sustainability of frosh. This measure was not approved by SPF for several reasons, one of them being that the project had been approved for all faculties and that such distribution raised concerns about funding being equally shared among faculties.

In future years, individual faculty frosh committees or event organizers should plan sustainability improvement far ahead and apply for SPF funding early on. Faculties that need extra funding because they anticipate important price increases to implement new sustainability improvements could be receive the cost difference if they can come up with good plans that respect SPF criteria early on.

## Feedback

### Frosh Staff feedback

Frosh staff's feedback is essential in making sure that future year's frosh will be able to successfully implement sustainability initiatives. The following points are a summary of the recurring comments from this year.

#### *Successes:*

- Reflecting on each aspect of an event and on each item purchased was key in identifying sustainability weaknesses and the financially and logistically feasible alternatives. It was most successful when done with all team members (i.e. with all VPs involved in some way in an event's planning).
- This reflection can lead to lower costs. Engineering was able to reduce its spending at one of their event by providing water jugs instead of water bottles. Re-evaluating every purchases for sustainability reasons can identify areas of environmental and financial waste, and solutions can help to reduce both of these types of waste.
- Training the coordinators, O-staff and leaders was successful in raising sustainability issues. For coordinators, this gave them the tools to reflect more on planning. The project also gave them the tools to implement more ideas in the upcoming years.

#### *Challenges:*

- According to the faculties, budget is still an issue. Large and small faculties have cost reduction as their priority because it is believed to be important for the greatest number of froshies to participate.
- There are internal divisions about sustainability even in the committees that are most progressive on sustainability topics. Reaching compromises is the best way to achieve incremental steps.
- Sustainability initiatives were initiated too late in the summer. In the future, the sustainability coordinators should be hired at the same time as the other coordinators and begin their work in May.
- Logistics of sustainability may be more difficult for smaller faculty committees to organize because they don't have as many O-staff and Leaders. It was suggested that SPF may assist them in organizing compost and recycling pickups.

### Froshies feedback

#### *MOoS' survey*

A first survey was conducted by the McGill Office of Sustainability. The raw data can be consulted in appendix 12 of the appendix section. These were filled in voluntarily by students who had the opportunity to win one of the 50\$ prizes at one of the McGill cafeteria in exchange for anonymously filling in the survey. 21 students filled in the survey. Nearly 40% of those who filled in the survey were from the engineering faculty, 25% from the education faculty, and the rest split in the other faculties. Here are some of the survey's highlights:

- When asked about the importance of making frosh more sustainable, all froshies considered it was an important aspect of frosh. Two thirds claimed it was very important, and one third said it was somewhat important.
- Most froshies were made aware of the sustainability improvements implemented this year. Over 80% answered that they were made aware of these changes.
- Several changes had been made to this year's frosh to make it more sustainable. The changes with the highest awareness level were the purchasing of sustainable jute bags (two thirds were aware that this year's bag was more sustainable than those of 2016) and waste minimization (57%). Froshies were less aware that a Sustainable Orientation Coordinator had been hired (24%) and that the leaders had received training in sustainability (43%)
- Sustainability seems to be extremely important to froshies. 100% of respondents said that if they would want all events at Frosh to be more sustainable, and 100% of them said they would be willing to pay their frosh ticket an extra 5\$ for the money to be spent on improving the sustainability standards of frosh.
- Several items stood out when the froshies were asked about ways to make frosh more sustainable in future years:
  - The most frequent suggestion is to stop distributing information pamphlets. The respondents claim that they do not read them and that important volumes end up in the trash. Providing these resources online would better fit their needs.
  - An increased amount of recycling bins and compost bins was also recommended. Moreover, reminding froshies of the location of their recycling bins and to put their waste in the proper bins would also reduce the amount of garbage left after an event and reduce the overall waste volume. Rewards systems that would promote recycling and composts have also been suggested.
  - Students recommended to reduce the amount of water bottles being distributed and to focus on guiding them to tap water sources more frequently instead. Reminders to fill their water bottles before leaving a certain location (instead of simply handing out disposable bottles) was also brought up.
  - A greater usage of the mugs, for the faculty that provide them, was requested. Students claim that drinks more often than not are served to them in plastic cups, which makes their mugs obsolete.

### **Post-Frosh survey**

The post-frosh survey was filled in by students from all faculty frosh and provides feedback on a wide range of frosh-related topics. Three questions relating to sustainability were asked in this year's survey in order to get a greater understanding of how the students felt about sustainability in frosh and what improvements they would suggest. Screenshots of the first two questions provided by the CL&E are available in appendix 13. The raw data for the third question is not provided in the appendix question, but the end of this question provides an excellent summary of the froshies' comments.

### **Importance of sustainability:**

The first question asked to froshies were about the importance of Frosh events being sustainable. More than half of the responded said they believed it was either important or very important for Frosh events to be as sustainable as possible. In the second question, more than 4 out of 5 froshies answered that Frosh events should continue to incorporate sustainability standards in their planning. In both cases, less than 5% of the answers suggested a lack of care about sustainability (not important or should not continue sustainability initiatives). The responses to these 2 questions clearly demonstrate a desire by froshies to take part in an event that take actions to become more sustainable. Considering these results, event managers will have to deploy considerable efforts to further increase sustainability initiatives that match their froshies' expectation

of sustainability. As MOoS' survey suggests, frosh managers should feel comfortable about implementing a slight price increase to pay for these initiatives. The third open question was open ended and asked froshies "In your opinion, how could Frosh events become more sustainable for next year?" Among 100 plus answers provided, there are several recurrent themes that should be prioritized in frosh's path to sustainability.

#### Disposable cups

The most recurrent theme was to stop the use of plastic beer cups. These cups are used a lot at pub crawl events because they allow bars to prepare the large amounts of beers before the froshies arrive at the bar. While it simplifies logistics, many froshies complained in the survey that this logistical simplification was one of the most wasteful thing they observed. Moreover, froshies had a difficult time understanding why they were being given reusable mugs if beers would be served in plastic glasses anyways. In some cases, froshies reported not having used their reusable mugs once during frosh.

Although the logistics might be largely simplified and the costs considerably reduced by using the Sleeman sponsored disposable plastic glasses, froshies' feedback indicates that this is one of the weakest aspects of frosh in terms of sustainability. A first way to reduce waste would be to get the bars to fill froshies' reusable mugs instead of using disposable plastic glasses. Even though this might take longer, it may allow to reduce waste and at the same time serve as a cool off time between each drinking place. Another way to deal with this issue would be to use compostable glasses and throw out the glasses in a compost bin once the drinks are empty. This option would lead to higher costs, but it was noted in MOoS' survey that froshies would be ready to pay a slightly higher cost to have more sustainability initiatives at Frosh. Buying compostable dishware could be one of these initiatives.

#### Improve waste management

The second most recurrent topic brought up by students was regarding littering and waste management. Nearly 20 students have reported insufficient number of waste bins, which led to wrappers, water bottles, and other being left on the floor after an event. Many of these students also suggested to have recycling and compost bins available to reduce the volume of waste sent to landfills.

Several measures would help to target this problem. A first approach to solving this problem would be to start from the procurement phase, by opting for snacks that aren't individually wrapped, serve beers in compostable or reusable cups, and reduce the amount of water bottles distributed. A second way to tackle this problem would be to plan to have waste, recycling, and potentially compost available where big events. Ensuring that leaders have at least one trash bag available at all time while going from one location to the other would also help to improve littering.

#### Promotional products

Several froshies have suggested distributing less promotional materials by companies. There was harsh criticism regarding the fact that they received information and deals that they would not have been interested in receiving in the first place, and that they and their friends threw out these pieces of paper without reading most of the information. Many suggested that the information be sent either online or to provide a place to return the cardboard and paper to be recycled more efficiently. One student also suggested that the SPF flyer was not very sustainable, regardless of the fact that this flyer was biodegradable and had plant seeds, likely because they had to put it in the trash/recycling with the other papers.

Frosh promotional packages should undergo serious re-assessment. It seems like sponsors are paying large amounts of money for the paper/cardboard, for the right to insert their flyers in the tote-bags, and are getting very little visibility out of it. In the end, it seems like these flyers are not useful, they result in added costs, and generate considerable waste volumes.

### Reduce the importance of alcohol

Several students have suggested to make alcohol less important at Frosh events because it was not inclusive to people who don't drink or don't like to get drunk for personal, cultural, health, and religious reasons. Some have also suggested that reducing the amount of alcohol drunk at events would help to forge better connections with people, and that the events would be better organized if leaders weren't as drunk.

Some frosh events are already "dry events". The success of these dry events should be compared to that of drinking events and event managers should reconsider whether alcohol is key in achieving the key objectives of their events.

### Other relevant suggestions

Several froshies deplored the over-use of water bottles at frosh. Many would have preferred to have a reusable water bottle being given to them (most people don't have any as they just moved to Montreal) and been able to refill the bottles instead of being given disposable water bottles throughout frosh. Frosh organizers should take a good look at options discussed previously in this report due to the potential environmental improvement that could result, as well as for the costs savings.

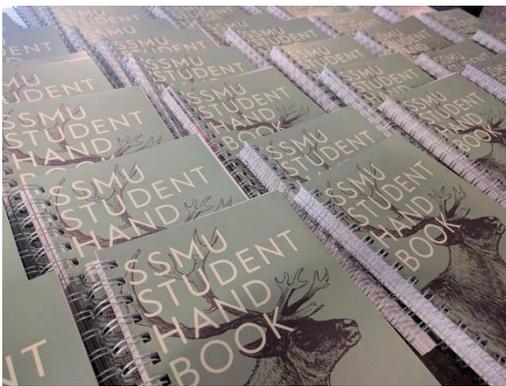
Some froshies felt like they hadn't received enough information about sustainability at McGill and in Montreal. Training the leaders such that they can then train froshies on how they should properly dispose of their waste in Montreal, as well as the new sustainability initiatives that are taken each year, could help to raise awareness of sustainability.

A few students also suggested to provide more vegan options. Frosh has made progress this year by providing vegetarian options at many of their events, but ensuring the vegan options are available would also further increase inclusivity at events. Since vegan meals tend to be cheaper, it may also be logistically and financially advantageous to offer vegan food only.

## Communications (by Toby Davine)

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### SSMU Student Handbook



The SSMU handbook was the initial inspiration behind the larger Sustainable Orientation Project. The project emerged from a meeting in which SSMU and MOOS were discussing the creation of a sustainable handbook, which quickly snowballed into the idea of making all Frosh events more sustainable. The whole process, from idea-generation, to logistical and design coordination, was a truly wonderful collaboration. The MOOS Communications Officer worked closely with Wendy Gamboa (Communications and Publications Manager), Dana Wray (Handbook Editor), and Zachary Kay (Graphic Designer) to create the sustainability-themed handbook for 2017-2018.

Sustainability content regarding the SPF, Vision 2020, sustainable events, getting involved (the "sustainabili-tree"), and green living tips were created by the MOOS communications officer in consultation with the SSMU Environment Commissioner, Anya Sivajothy. An SPF "advertisement" was also placed on the front page of the handbook, designed by SSMU Multimedia Intern Brayden Culligan. Zach and the SSMU team conceived the beautiful design of the handbook, inspired by 19th century naturalist drawings.

SSMU worked with a long-time supplier, Friesens, to print the handbook. They were able to provide more environmentally-friendly options, including 100% post-consumer recycled paper, a metal wire-o, and vegetable-based inks. In the end, the cost of the eco-friendly options ended up being less expensive (e.g. no cover lamination and plastic wire-o), so the SPF did not need to cover any additional costs.

SSMU has indicated that for the following years, they are interested in working with a more local company, as Friesens is based in Manitoba, to cut down on greenhouse gas emissions from transportation and support local businesses.

## Lessons Learned

- Clear deadlines and roles defined early in the process allowed our teams to work well and efficiently. We were also in frequent communication when things did not go according to plan, which helped us adapt quickly.
- Approach partners well before the deadline to allow for new ideas and collaborations to flourish. We approached SSMU earlier in Fall 2016 regarding the handbook and they let us know that re-contacting them at the end of March was preferable, as that is when content development would begin. Given plenty of advanced notice, SSMU was very amenable to the new sustainability theme and they were able to make alternative arrangements with their supplier, Friesens.

## Sustainable Frosh Communications

Communications for faculty frosh events was a little more challenging given the number of faculties involved. While having an 'agreement' made between MOOS and the faculties helped clarify the conditions of our collaboration, it proved difficult to stick to the initial plan.

### SPF Card in Frosh Bags

- While there was a period in the summer when we thought that inserting an SPF ad in the individual faculty frosh guides was a better idea than a loose postcard in each Frosh bag, in the end, it was much simpler to stick to our original plan to include a postcard. This is because each faculty had different printing needs and dimensions for their guides and sending individual graphics was not possible given the limited capacity of the MOOS team.
- Frosh cards were printed on 100% recycled paper and vegetable-based inks using the local printer Rubiks.



### SPF logo on Frosh Bags

- As far as we know, SPF logos were placed on all faculty frosh bags with varying degrees of prominence. While all faculties were asked to send a mock of the bag design with all the logos to the MOOS Communications Officer, only two faculties did this (Engineering and Education). Anecdotally, many Arts frosh bags were spotted on campus with the SPF logo prominently featured on one side (see image).

### Survey

- MOOS submitted three questions to the general SSMU Frosh survey that is sent to all frosh participants. The questions included:
  - How important is it to you that Frosh events be made as sustainable as possible?
  - Do you think that all future Frosh events should continue to incorporate sustainability standards?
    - In your opinion, how could Frosh events become more sustainable for next year?
- The MOOS Communications Officer also created a survey using [Lime Survey](#), a free program available to MOOS staff and students through IT Services. Survey lime created a URL for the survey, which was made into a tiny url to easily fit it on print materials. This survey was publicized on the SSMU handbook and on the Frosh postcards. Students who participated in the survey were entered to win one of two \$50 gift certificates from the McGill cafeterias. These gift cards were generously donated by Student Housing and Hospitality Services.
- The Lime Survey received 21 responses total (17 full responses), many of which offered their comments to make Frosh even more sustainable next year.
- A more in depth report of the Frosh Survey can be found in the appendix 12.

### Social Media Outreach

- MOOS reached out individually to all faculty VPs on the IOC with two sample social media posts promoting the sustainability aspects of frosh, but received no responses. Because frosh accounts are closed groups, we have no way of knowing if they used these posts.
- MOOS posted on its own accounts (@SustainMcGill Instagram, Facebook, and Twitter) about the sustainable frosh project and the SSMU handbook.

*Additional Comms:* [McGill Reporter piece with video](#) mentioning 'sustainable frosh' and jute bags.

### Lessons Learned

- Working with so many faculties meant that it was difficult to maintain effective communication with the VPs to make sure that our message was being conveyed. In the future, it would be better to work with fewer faculties or with faculties who have taken the initiative/have a real interest in making their events more sustainable. It is my impression that they would likely be more amenable to promote this

message themselves as opposed to having the message given to them by an external McGill unit (MOOS).

- The Frosh bags were an effective communication tool for the SPF. By walking through campus and attending orientation events (i.e., Discover McGill), the SPF logo could be seen on many of the jute bags and several first-years remarked to MOOS staff tabling for the SPF that they recognized the SPF name from the bags. Overall, the bags were a highly visible tool that increased SPF brand awareness.

# Appendix

## Appendix 1: Sustainable T-shirt providers

Company/distributor	Product name	# Printing locations	# colors used	Quantity	Unit Price	Printing Price	Shipping	Total Price (excl taxes)	Sustainability property
Bonfire		2	2	5000	18.52	Included	\$500	92600 USD	Organic T-shirt
Farm fresh clothing	Men S-X	1	1	5000	9.5	50 cents per location and added color	\$1500-2200	49250 USD	Organic T-shirt
TS Designs		1	1	5000	10.5	N/A	N/A	52500 USD	Organic T-shirt
Respecterre	100% coton Bio	2	3	5000	14.66	N/A	No info; from Qc	73300 CAD	Organic T-Shirt
Alterna ÉcoSolutions	T-Shirt coton bio homme	1	1	5000	9.6	Varies with quantity	N/A	48000 CAD	Organic T-Shirt, made in Quebec, unionized labor
Efforts		2	2	5000	5.75	4.25	N/A, from Texas	50,000 USD + shipping	Organic T-shirt
Mantisgraphic	Apparel 100% Organic Cotton	2	3 front and 1 back	5000	9.6	N/A	5450	53450 USD	Organic T-shirt
Les petites mains		0	0	5000	11	N/A	N/A	55000 CAD	Social reintroduction program + organic cotton
Öom		0	0	5000	12.3	N/A	N/A, from Qc	61500 CAD	Organic cotton, made in Canada
Hae Now	Everest Unisex Organic Tee	2	2	5000	5.75	2.9	From India	42640 USD	Organic cotton, fair trade certified
Organic4nature		2	2	5000	10.95	Included	Free	54750 CAD	

SOS from Texas									
Jerico									
Royal Apparel									
Pro-dev									
Ethixmerch									
Econscious									

## Appendix 2: Sustainable Tote-bag providers

Company	Product	GSM	Quantity	Price	Shipping	Total price	Sustainability advantage	Contacts
Bulletin Brands	Recycled PET Drawstring Backpack	Unknown	8000	\$1.30	Shipping + custom fees not included	10400 USD	60% recycled PET	Suzette Bergeron, suzette@bulletinbrands.com
Custom Earth	Custom Cotton Drawstring Backpack	Unknown	8000	\$1.77	Shipping not included	14160 USD	Organic cotton	Cory Epstein, cory@customearthpromos.com
	Custom Non-Woven Drawstring backpack	80	8000	\$1.26		10080 USD	100% recyclable, has rPET	
Idea Stage	rPET Cinch Bag - Post Consumer Recycled Material	150	8000	\$1.86	No information	14880 USD	85% recycled PET	<a href="http://www.ideastage.com/RPET-Cinch-Bag---Post-Consumer-Recycled-Material-553219967">http://www.ideastage.com/RPET-Cinch-Bag---Post-Consumer-Recycled-Material-553219967</a>
Promotions Hannah	The Environmentalist JUTE bag	Unknown	8000	4.5	Included	36000 CAD	100% Jute	Neil Janna, jolly1@sympatico.ca

Positive Promotions	rPET Drawsting Backpack	Unknown						<a href="http://www.positivepromotions.com/rpet-drawstring-backpack/p/osw2840/">http://www.positivepromotions.com/rpet-drawstring-backpack/p/osw2840/</a>
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### Appendix 3: Sustainable screen printing inks providers

Company	Product line	Type of ink
Rutland	EKO Inks	Unknown
	SXT Inks	Silicone Inks
	WB Inks	Water-based
Image star	IMS Silicone	Silicone Inks
Inkcups	SI Series	Silicone Inks
Silicone Inks	SYLUB	Silicone Inks
ScreenPrinting.com	Green Galaxy Inks	Water-based
Permaset	Permaset Aqua	Water-based

### Appendix 4: Sustainable paper printing inks providers

Company	Type of paper	# of booklet	# of pages	Price (excl tax)
Impression Litho-Pro	Conventional	1000	20	\$1,760
	100% recycled	1000	20	\$1,850
Bureau en Gros	100% recycled	1000	20	\$1,950
Imprimerie CDN	100% Recycled	1000	20	\$2,250
Copie 2000	Recycled	1000	20	\$1,617
Click Imprimerie	Recycled	1000	20	\$1,495
Friesens	Recycled	1000	20	\$2,360
		Extra Units \$1.32 each		

## Appendix 5: Compostable dishware providers

Type	Name of company	Name of product	Name of supplier	Price	Quantity	Unit Price
Plates	Compost Montreal	9" Compostable bagasse plates	Compost Montreal	\$47.85	500	\$0.10
	Staples	Sustainable Earth, Compostable 9' plates	Staples	\$22.94	250	\$0.09
Forks	Compost Montreal	Wooden forks	Compost Montreal	\$110.38	2000	\$0.06
	Staples	Sustainable Earth Compostable Forks	Staples	\$19.99	300	\$0.07
Knives	Compost Montreal	Wooden knives	Compost Montreal	\$125.26	2000	\$0.06
	Staples	Sustainable Earth Compostable Knives	Staples	\$19.99	300	\$0.07
Spoons	Compost Montreal	Wooden spoons	Compost Montreal	\$134.38	2000	\$0.07
		Sustainable Earth Compostable Spoons	Staples	\$19.99	300	\$0.07
Hot Cups	Compost Montreal	Hot beverage cups, 12 oz	Compost Montreal	\$118.69	1000	\$0.12
	Ecotainer	12 oz. Biodegradable paper cup	javapackaging.org	\$130.00	1000	\$0.13
	Staples	Sustainable Earth Compostable Hot cups	Staples	\$56.99	500	\$0.11
Cold cups	Compost Montreal	Cold beverage cup, PLA, 12 oz	Compost Montreal	\$122.40	1000	\$0.12
	Fabri-Kal	Greenware, , GC12, 12 oz Biodegradable Clear Plastic cup	javapackaging.org	\$109.00	1000	\$0.11
	Staples	Sustainable Earth cold cups	Staples	\$35.46	300	\$0.12
		Compostable Bags 48x60		\$19.95	10	\$2.00

Compostable bags	Compost Montreal		Compost Montreal	\$160.00	100	\$1.60
Napkins	Staples	Sustainable Earth, Multifold Paper towels	Staples	\$31.71	4000	\$0.01

### Appendix 6: Compost collection providers

Company	Size of pickup	Fees	Total fees	Other
RCI Environment+CC23:123	Container, 10x8x4	Shipping: 125\$, Waste pickup: 195\$, Processing fees: 90\$/ton (minimum of 2 tons), Renting fees for container: 5\$/day.	Total for 4 days at frosh and 1 pickup: 430\$	If there is too much contamination, they might refuse it and have to ship to landfill at the client's fees
Compost Montreal	Quote not provided			

### Appendix 7: Reusable dishware providers

Name of the organization	Price range
McGill plate club	FREE
Location Gmax	\$
Loca Concept	\$
Foodie Traiteur	\$\$
Celerations group	\$\$
Festi-Reception	\$\$
One Stop Party Rentals	\$\$

## Appendix 8: Sporks providers

Company	Product	Currency	Price	Quantity	Unit Price	Size	Material
Eartheasy	Biodegradable Bamboo Sporks 24-pack	USD	\$9.95	24	\$0.48	Tiny	Bamboo
Canadian Tire	Light My Fire Spork	CAD	\$2.99	1	\$3.44	Regular	Plastic
Rock Gear Distribution	Light My Fire Spork	CAD	\$3.00	1	\$3.45	Regular	Plastic
Crate&Barrel	Caesna Mirror Spork	USD	\$9.95	1	\$11.44	Regular	Metal
Alibaba	Wholesale custom good quality bamboo spork	USD	\$2,700.00	10000	\$0.28	Regular	Bamboo
Ebay	Spork Combo Picnic tableware	CAD	\$1.22	1	\$1.40	Regular	Metal
Ebay	Newly Plastic Camping Hiking Travel out Spork	CAD	\$0.99	1	\$1.14	Regular	Plastic
Ebay	Travel Outdoor Camping Foldable Spork Cookout	CAD	\$1.05	1	\$1.21	Regular	Metal
Ebay	3.25" disposable bamboo veneer tasting sporks	USD	\$51.65	48	\$1.24	Tiny	Bamboo
Little Cherry	Bamboo Sporks-Pack	GBP	\$29.99	100	\$0.34	Tiny	Bamboo

## Appendix 9: Water Trucks

Company	Products	Daily fee	Max # ppl
US Pure Water (USD, excluding shipping)	Just-4-fun	500	15000
	Fiesta-4	650	15000
	Festie Bestie	650	15000
	Mode Wheelz	750	15000
	Mini-Ma	750	15000
Event Water Solutions		2000 USD (w/ shipping)	15000
Quench Buggy	No information provided		

Water on wheels 7'500			
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### Appendix 10: Reusable water bottle providers

Company	Product	Price for 5000 units	Unit Price for 5000 units
Quality Logo Products	Bike bottle	4000USD + tax	≈0.80 USD
Adco Marketing	20 oz. Custom bottles BPA Free	~4000USD+tax+ shipping	≈0.80 USD
Entripy	HL-16	10005 (w/ tax & shipping) CAD	≈ 2.00 CAD
My Next Promo	Value Leader bottle		
	Legend bottle		
	Side Track Bottle 26 oz		
	Budget Saver Bottle with Push Lid		
Bike bottle 22 oz			
Promotional products Canada			

### Appendix 10: Water jugs provider

Provider	Size	Fees	Shipping included	Ship on weekend?
Labrador	18L	\$5/bottle	No, 5 \$ total	Yes
Amaro	18.9L	\$5.50/bottle	Yes	No

### Appendix 11: Sustainable Sponsors

Company	Industry	Size	Benefit
TD	Bank	Large	Carbon Neutral bank
Bikurious	Bicycle	Small	Green transport

BQAM	Bicycle	Small	Green transport
Bixi	Bicycle	Medium	Green transport
Tesla	Cars	Large	Electric cars
Produits Lemieux	Cleaning products	Small	Biodegradable cleaning products
Öom	Clothing	Medium	Eco-clothing
Patagonia	Clothing	Medium	Eco-clothing
GE Windpower	Energy	Large	Renewable Energy
Enercon	Energy	Large	Renewable Energy
Canadian Solar	Energy	Large	Renewable Energy
Hanwha Q Cells	Energy	Large	Renewable Energy
Vestas	Energy	Large	Renewable Energy
United Power	Energy	Large	Renewable Energy
Jinko Solar	Energy	Large	Renewable Energy
Hydro-Quebec	Energy	Large	Renewable energy
Siemen's Windpower	Energy	Large	Renewable Energy
Goldwind	Energy	Large	Renewable Energy
Trina Solar	Energy	Large	Renewable Energy
JA Solar	Energy	Large	Renewable Energy
Eden market	Food	Small	Vegan/organic food
Club-organic	Food	Small	Vegan/organic food
Green panther	Food	Small	Vegan/organic food
Lola Rosa	Food	Small	Vegan/organic food
Vega	Food	Medium	Vegan/organic food
avril	Food	Medium	Vegan/organic food
Copper Branch	Food	Medium	Vegan/organic food
Lufa farms	Food	Medium	Locally grown food
Yves veggie cuisine	Food	Large	Vegan/organic food
Puretea organic tea	Food	Large	Vegan/organic food
MEC	Outdoors & Clothing	Medium	Eco-clothing
Atmosphere	Outdoors & Clothing	Medium	Eco-clothing

Cascade	Paper products	Large	Recycled content
Teo Taxi	Taxi	Medium	Electric Taxi
STM	Transit	Large	Green transport
United Airline's carbon offset	Transport - Airline	Large	Carbon offset/green transport
Less Emissions	Transport - Airline	Large	Carbon offset/green transport

## Appendix 12

### Field summary for import

How important is it that Frosh events are made as sustainable as possible?

Answer	Count	Percentage
Very important (SQ001)	14	66.67%
Somewhat important (SQ002)	7	33.33%
Neutral (SQ003)	0	0.00%
Somewhat unimportant (SQ004)	0	0.00%
Not important at all (SQ005)	0	0.00%

### Field summary for aware

Were you aware that Frosh events were made more sustainable this year?

Answer	Count	Percentage
Yes (Y)	17	80.95%
No (N)	4	19.05%
No answer	0	0.00%
Not displayed	0	0.00%

What sustainable actions at Frosh were you aware of?

Answer	Count	Percent
Purchasing of sustainable jute bags (SQ001)	14	66.67%
Hiring of sustainable orientation coordinator (SQ002)	5	23.81%
Training frosh leaders in sustainability and inclusivity (SQ003)	9	42.86%
Minimizing waste and improving recycling (SQ004)	12	57.14%
Other	3	14.29%
Not displayed	4	19.05%

ID	Response
4	Reusable Items
21	Issuing reusable cups
25	Reusable mugs for all attendees, along with the encouragement to use them

Do you think that all future Frosh events should be made more sustainable?

Answer	Count	Percentage
Yes (Y)	21	100.00%
No (N)	0	0.00%
No answer	0	0.00%
Not displayed	0	0.00%

Would you be willing to pay an additional \$5 for your Frosh ticket to ensure that Frosh events could incorporate higher sustainability standards? (e.g. organic cotton Frosh t-shirts, composting, and reusable cups)

Answer	Count	Percentage
Yes (Y)	21	100.00%
No (N)	0	0.00%
No answer	0	0.00%
Not displayed	0	0.00%

### How could Frosh events become more sustainable for next year?

Answer	Count	Percentage
Answer	16	76.19%
No answer	5	23.81%
Not displayed	0	0.00%

ID	Response
4	Reusable water bottles, reduced waste from plastic/garbage, more awareness
5	Online resources rather than cards
6	Some of the items/pamphlets given to students were in plastic bags. If possible, an alternative way of putting items together should be used.
7	Use sustainable materials to build the frosh tents.
8	Using biodegradable silverware such as edible spoons and ensuring that everything at events is reusable, recyclable, or biodegradable.
12	Employing a rewards system that promotes recycling at frosh events eg. disposing garbage, beer bottles properly etc.
13	Maybe not do the slip and slide because that used a lot of water. Also be more explicit to the students about what sustainable things you've done, making it more clear to us.
15	Use tap water instead of bottled water
17	less plastic water bottles being handed out
18	not drinking out of cheap beer cans, giving us real/healthy food, not just gross pizza
19	If we can have more recycling bins on the grass in front of the campus.
20	Frosh could be more sustainable if the organisation would not give us the frosh package full of stuff that maybe the students won't use and throw it into the garbage. If students need stuff, they will be it.
21	Froshies could also be reminded to recycle and clean up after themselves during opening ceremonies, particularly for beach day
23	Keeping the millions of pamphlets that we get to a minimum
24	By using more biodegradable things.
25	Encourage events to utilize reusable mugs more- we were given mugs, but most events handed out drinks in plastic cups. Make it a rule that you can only drink if it is from your reusable mug (within reason) to cut down on unnecessary waste

## Appendix 13

### Q33. How important is it to you that Frosh events are as sustainable as possible?

	Frequency	Valid Percent
Not at all important	47	4.8
Somewhat important	271	27.5
Important	380	38.6
Very important	287	29.1
Total	985	100.0

### Q34. Do you think that all future Frosh events should continue to incorporate sustainability standards?

	Frequency	Valid Percent
Yes	827	84.3
No	18	1.8
Unsure	136	13.9
Total	981	100.0

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