

**Management Models**

**AMS SUB Roof-Top Garden for Productivity and Community**

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# Management Models

## AMS SUB Roof-Top Garden

for Productivity and Community

### LFS 450 - Winter 2012

Scenario 6 Campus Greenscaping:  
Management of The First Rooftop Garden  
at UBC-Vancouver

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## 1.0 Abstract

Research to prepare for the new Student Union Building (SUB) Rooftop Garden at the University of British Columbia has been ongoing for several years. As a student group participating in the UBC Food Systems Project through the course LFS 450, we build upon previous projects by researching, discussing, and recommending human resource management strategies specifically directed towards a food production-oriented garden. Research included reviewing past papers, and conducting literary research and interviews. Email interviews with the University of Toronto Sky Garden, The Orchard Garden and a face-to-face interview with Sprouts allowed us to develop management models and to further understand the challenges. With these findings, the group discussed pros and cons of four possible management models; 1) management by a student club, 2) by a single employee, 3) by several employees or 4) a combination of these. As a result, the group identified a club model with incentives, as a potential way to motivate students to offer services for the collective objective of selling to campus food outlets. If lead by a directed studies or paid position, this framework is a starting point that we consider most fitting. Realizing that this report does not have all the answers and direction needed to start the management team, future students should review our work and where applicable continue to develop this management model.

## 2.0 Introduction

### **2.1 Problem Description and Vision Statement**

The Alma Mater Society (AMS) is currently designing and constructing a new student union building (SUB) at the University of British Columbia, Vancouver campus. The new SUB aims to serve as a dynamic gathering place for students to interact and grow a vibrant student community on the UBC-Vancouver campus (Alma Mater Society of UBC Vancouver, 2010). The new SUB aims to have the highest Green Building rating in North America, and

the rooftop garden has the potential to be an important component of this rating (Alma Mater Society of UBC Vancouver, 2010). It will be a place for community building and discussions surrounding food security. With the completion of the new SUB drawing near, our LFS 450 group was assigned to put together various management options, and provide recommendations and implementation plans for human resource management that would best correspond to a production oriented rooftop garden.

## **2.2 Relevance of the project in context of the UBC Food System**

With the correct selection of a management plan for the rooftop garden, the garden will be used to its fullest potential and its maximum efficiency. This will increase the quantity and quality of the crops produced. The rooftop garden is included within the UBC food system since it is intended to grow crops for various food outlets on campus, and provide consumers with foods made with fresh, local ingredients. This will offer students an opportunity to be involved in their food system. The rooftop garden will increase student access to locally grown foods with lower carbon footprints and bring awareness to sustainability issues.

## **2.3 Relevance of Project in Context of North American and Global Food System**

UBC demonstrates its aim to have the highest Green Building rating in North America via the LEED program, partly by having a rooftop garden. In order for UBC to be able to achieve its goal, it is necessary for the rooftop garden to function properly. Proper management of the garden will provide an awareness and example to various Universities and buildings across North America and globally about sustainable food systems. In North America, sewage overflow is a concern. If rooftop gardens became more commonplace they could help reduce the frequency of sewage overflow, since rooftop gardens can delay sewage run-off (Liu, 2002). Also, the population in the world has doubled in the past 45 years, implying that there is a higher demand for food. However, the croplands that are

available to grow food have decreased significantly on a global scale, from 0.5 hectare of cropland per capita in 1960, to 0.23 hectare of cropland per capita today (Pimentel & Wilson, 2004). Rooftop gardens play a role in bringing food production to city settings, which are removed from understanding how food grows. Although these benefits will not be solely achieved by one rooftop garden on campus, it can be a model for future buildings and changes that can become larger scale through replication.

## **2.4 Our Lenses**

Our LFS 450 group consists of members from diverse backgrounds, which had a great influence on how we approached the project. Brittany's experience and passion for farming has allowed her to provide the group with general agriculture insight. Natasha, a work-study student for The Orchard Garden (TOG), was able to offer insights on management experiences she has had with TOG. Toby's involvement with the executive team for an AMS club, Campus for Christ, for two years, gave him an opportunity to learn how a student club operates. As a Food Market Analysis student, Bonnie has taken a number of business and economics classes throughout her undergraduate program, which has led her to understand the importance of cost recovery and financial management. Aldhyan has experience working at a chicken farm and is currently obtaining a Food Market Analysis undergraduate degree, which has given him perspectives on both financial aspects and farm sustainability.

Our individual and collective theoretical frameworks drove us to pursue this project. We connected with stakeholders who aligned with these values. We admit that through conducting research with this perspective, we inevitably held biases in the types of people we contacted. We tried to keep these biases in mind but also value that as a group, our diverse backgrounds and creative ideas could apply our research to create a management recommendation in a way that will be useful for future students involved.

## **2.5 Guiding Principles**

As a group, we believed that the 12 guiding principles of the UBC Food Systems Project were fairly utopian and may not always be practical to apply. Some principles were vague, such as principle 9, “the system is emission and energy neutral.” We thought that ‘system’ should be better defined. Principles 3,5, and 12 were most relevant towards our UBCFSP project.

## **3.0 Methodology**

There were two stages to our research methodology. First was data collection. This consisted of reviewing past papers about the rooftop garden, conducting a more general literature review, conducting interviews and meeting with our community partner Andy Longhurst. Secondly, all of this information was used to inform a round-table discussion within our group, where individual management options were compared and discussed. All of the information was shared between group members through e-mail and GoogleDocs.

### **3.1 Data Collection: *Past Papers***

Two papers from 2010 were reviewed to provide context to the project, and review prior discussion surrounding human management models for the garden. These two papers were: “Design, Vegetation, and Management Plan for the New UBC AMS Student Union Building Rooftop Garden” by Katie McMahan and the “AMS New SUB Rooftop Garden Proposal” document by 2010 LFS 450 students. Both papers were identified in the scenario description as essential documents to read. This was necessary to be able to build on previous work of students. Revision of past documents provided us a better understanding of the gardens’ targets and goals.

### **3.2 Data Collection: *Literature Research***

A literature review was conducted to see if there was any relevant information published about human resource management for small-scale urban farms or gardens. This

was done by searching for relevant information on the UBC Library catalogue and databases, as well as consulting librarians. The same searches were also conducted at the Vancouver Public Library. Keywords used include: “*roof-top garden management, non-profit organization human resources, human resources, institutional memory, garden human resources.*”

Research was also done on the UBC Career Services website for the wages and hours of Work Study positions. It was necessary to understand the wages and costs of hiring a student worker, as it may be part of a garden’s budget.

Most of the research found was for management of non-profit organizations, which may not be directly applicable to the UBC rooftop garden or student run operations. It will be difficult for our group to evaluate models because these models are to be applied in the future, which results in uncertainties.

### **3.3 Data Collection: *Interviews***

Interviews were conducted for an understanding of how particular organizations approach human resources management, and what tools and practices were used to make the human aspects of an organization run smoothly.

E-mail interviews were conducted with three Canadian University Rooftop Gardens: University of Toronto Sky Garden, Rooftop Garden at Trent University, and McGill University rooftop garden. Representatives of these three gardens were interviewed by McMahan in 2010, and were identified as student-run, food producing, rooftop gardens. We decided to follow up with these organizations to understand their management structure more in depth and to assess if it has changed over the past two years. The main contact person of each group was retrieved from McMahan’s report.

We also conducted e-mail and face-to-face interviews with two UBC groups: TOG and Sprouts. These organizations were identified in the scenario description as two model



organizations to review, and McMahan also identified them as good resources. TOG is a good source of information as it is a functioning student-run garden on campus that provides food to a student-run cafe, Agora. Sprouts was interviewed because it is a very successful AMS club that sells organic and/or local lunch items. Sprouts is also a key stakeholder in the rooftop garden, as they are a potential buyer of produce.

Out of the five e-mail interviews sent, only the University of Toronto Sky Garden and TOG responded. E-mail interviews were initially chosen because three of the organizations are located far away, that was the only contact information that was available to us, and e-mail also allows for respondents to reflect when answering. The follow up face-to-face interviews were conducted on April 4<sup>th</sup>, with Renee Wild & Alyse Alaouze from Sprouts and Jay Baker-French from TOG. These interviews were conducted because Sprouts did not respond to the e-mail interview, and it was felt that there was more information to be gleaned from TOG through a more in depth conversation.

Lastly, a face-to-face interview was conducted with the AMS Food and Beverage Department (AMS FBD) ingredient purchaser, Nick Gregory (Gregory, 2012). This was done to understand the purchasing protocols of the AMS FBD.

### **3.4 Guidance from Community Partners**

Throughout the process, meetings with LFS instructors and our community partner, Andy Longhurst were held for model development guidance and advice. We met specifically with Andy Longhurst to understand how the AMS visualized the garden. Near the completion of our management proposal, findings and project/garden status were presented to our community partners. Relevant changes were then made after receiving feedback.

### 3.5 Round Table Discussions

After data collection, five round-table discussions were held amongst group members. In these discussions, possible management systems for the rooftop garden were outlined and discussed. During the first two discussions, we outlined the pros and cons of four management options: **1) Management by a single employee. 2) Management by an AMS Club. 3) Management by several employees. 4) A Combination of the above.** After the discussion, S.W.O.T tables were compiled for the first two options. The first two management options were identified in our scenario outline as 'options to explore', the second two were developed through group discussions, and input from personal experiences.

At the third round-table discussion each group member brought a drawing of a model they brainstormed and described their own management structure idea for the rooftop garden. These descriptions were discussed and common themes identified. This led to the identification of one option to focus on through input from all group members. Throughout, we were keeping the values and goals of our community partner and production goals as a priority. This option became the focus of the next two meetings, and specific strategies for implementing this option were discussed in detail.

### 3.6 Outcome Evaluation

To evaluate our project, we sought feedback from Andy Longhurst, our community partner, on our final model recommendations to see if we met expectations. This was originally planned to be done through the submission of a paper copy, however due to time constraints, it was done solely through a presentation. We also reviewed the original expected outcomes of the project, and the questions outlined in our scenario description, and compared it to the content of our paper to determine whether we answered the questions (Appendix 5).

## 4.0 Findings and Outcomes

### **4.1 Past Papers: *Katie McMahan's Directed Studies Paper***

Past papers we looked at provided diverse information that helped offer a starting point to guide our discussion process. Each paper addressed goals of the garden and offered management ideas.

Katie McMahan (2010) proposed that the Rooftop Garden have 4 positions: the UBC SUB Rooftop Garden Student Coordinator, Sprouts SUB Rooftop Garden Liaison (Sprouts Executive Board position), the AMS Sustainability Coordinator and SUB Rooftop Garden Advisory Committee. McMahan suggested a paid position but since her recommendation the initially planned 509.4 m<sup>2</sup> has been reduced to 147m<sup>2</sup> (A. Longhurst personal communication, March 9, 2012). This means that the estimated income from produce sales can be adjusted to \$2178.42 (see Appendix 1 for detailed calculations).

### **4.2 Past Papers: *LFS 450 Business Proposal for the New Sub Rooftop Garden***

Past LFS 450 paper(s) proposed that the management is to be divided into summer and winter terms with the AMS FBD dominating the summer management and Sprouts the winter (LFS 450, 2010). The paper(s) also suggested the Rooftop Garden to be managed “by a sub-division of the AMS FBD” or even a separate entity within the AMS (LFS 450, 2010). This was not incorporated into our discussion because we did not consider AMS FBD or an AMS entity to be garden management sources.

### **4.3 Literature: *Concepts of Management by Connor 2012***

Our literature research resulted in valuable findings on the concepts of management as well as methodology for assessing services offered. Connor (2012) notes that any discussion of volunteer management must begin with a discussion of the foundational concept of management itself. According to Kreitner (1998), “[m]anagement is the process of working with and through others to achieve organizational objectives in a changing

environment. Central to this process is the effective and efficient use of limited resources” (p. 5). Kreitner identifies eight fundamental management functions that we consider applicable to management of the rooftop garden. These eight management functions would be applicable whether the management structure is run by volunteers, paid staff, or any combination.

*Planning* is the process of formulating future courses of action. *Decision making* involves making a selection between alternative courses of action. *Organizing* involves structural considerations such as the assignment of responsibility and division of labour. *Staffing* involves recruiting, training, and developing people who will have a role in the organization. *Communicating* involves technical knowledge, instructions, rules, and information required to fulfill the needs of the organization. *Motivating* involves encouraging individuals to offer services for collective objectives. Staff or volunteers need to have satisfied needs and valued rewards in order to stay motivated. *Leading* involves the management team serving as role models and adapting to the demands of the situation. Managers must fully appreciate how their own leadership abilities help foster individuals and teams to offer services for collective objectives. *Supervising* involves an evaluation process where desired results are compared with actual results. From there, corrective action can be taken (Kreitner, 1998).

#### **4.4 Literature: *Focusing Service Management Efforts - Olson and Slater 1997***

In order to focus service management efforts, decision makers will need to assess the organization's efforts. With the goal to outline a garden management system that focuses on growing for production, we see the main services of the garden to include garden work opportunity and the sale of produce only. In time, additional services such as community dinners, garden workshops and tours could be added to the rooftop mission. The assessment and decision for the reallocation of services are difficult and must account for

many factors such as service value to the organization, service value to the community, and resources available. For this purpose, Olson and Slater (1997) have created the non-profit Resource Allocation Model with a twelve-step procedure. For the purpose of our discussion, the twelve-step procedure is reduced to five steps. This model (found in Appendix 6) is simple, yet powerful and should be deployed by all non-profit organizations alike.

#### **4.5 Interview with University of Toronto Sky Garden**

The University of Toronto Sky Garden was founded by three passionate people who spent two years voluntarily keeping the garden running. They have hired a few work-study students over the summers to provide garden labour. Now, as the initial founders are graduating, they have transferred garden management to two work-study positions to allow the continuation of the garden. (see Appendix 3 for full interview.)

All of the produce from the Sky Garden is given away to volunteers or the food bank. By providing volunteers with produce, it gives them an incentive to work in the garden (H. Wray, personal communication, March 20<sup>th</sup>, 2012). Since they do not sell their produce, they have found sponsors and grants to fund the labour of the garden, which is the highest cost, compared to the relatively low operational cost of the garden.

#### **4.6 Interview with The Orchard Garden**

In response to the e-mail interview with TOG we received a discussion paper that describes a proposal for a management plan that aims to have a productive garden as well as engage students at TOG (Baker-French & Tymo, 2012). Several important points were outlined in this paper, and through the interview with Jay Baker-French:

- There are three “management seasons” to a garden: summer, spring and fall, and winter. These “management seasons” differ from each other because garden work-load and student availability do not coincide. Most of the work in a garden happens during the summer months, and that is the time of the year when most students leave campus. This has caused

problems in the past, as recruiting volunteers in the summer was difficult, and there was not enough work available to engage students in the fall (Baker-French *et al.*, 2012).

- Creating institutional memory should be an essential goal of the garden personnel. This allows for smoother transition from year to year, and allows the garden management to improve rather than struggle with the same issues year after year (J. Baker-French, personal communication, April 4<sup>th</sup>, 2012).
- Managing sales is often one of the more stressful parts of managing a production garden, as there can be a lot of uncertainty. It is necessary to have a clear idea of who will be buying the produce, how much will be available to harvest, and how these two factors interact.
- Establishing a goal and/or vision for the garden is of utmost importance to allow streamlined management and production. It provides a clear base to answer questions that arise throughout the planning and management of the space (J. Baker-French, personal communication, April 4<sup>th</sup>, 2012).

#### **4.7 Face-to-face Interview with Sprouts**

Sprouts is a student club that runs a cafe and grocery store in the basement of the SUB. They focus on organic and locally grown food and they are entirely volunteer-run. Sprouts is a potential buyer of produce from the rooftop garden, and have previously said that they would be willing to sponsor a volunteer coordinator for the garden (McMahen, 2010).

Sprouts has faced various issues common to student groups, such as; how to create and maintain institutional memory, how to create continuity within the organization, and how to engage and manage volunteers. Sprouts has several strategies that address the issues of institutional memory and continuity. They switched from having an elected board turnover once a year, to having half of the board positions be elected in the spring (March) and half in the winter (November). This allows for knowledge to be maintained on a person-to-person

basis with a consistent working knowledge on how the cafe operates (R. Wild, personal communication, April 4<sup>th</sup>, 2012). Transition reports and handbooks are two other tactics Sprouts uses to maintain institutional memory. Handbooks were created to offer an overview of particular initiatives (Community Eats or Sprouts Box). Transition reports for each board position have been initiated this year. The reports are meant to provide an outline of the job, what the challenges were and how to best approach such challenges. According to the Sprouts Box manager, Alyse Alaouze (Personal communication, April 4<sup>th</sup>, 2012), she is also creating several templates for documents that are necessary each year (e.g. contract between Sprouts Box members and Sprouts).

## 5.0 Discussion

### **5.1 Applying Concepts of Management**

The eight management functions that Kreitner outlines are also applicable for the management of the rooftop garden. AMS has been engaging the student body in the planning process through the initial planning of the SUB design and ongoing through this UBCFSP group. As we outline our research results, brainstorming, and discussion, we hope to outline potential courses of action for decision makers in AMS, as well as involvement from future UBCFSP students to choose between. The organization of the management function can be applied for structure of student-run clubs. A preliminary structure of the rooftop garden responsibilities can be found in Appendix 4. Staffing may include securing and managing of both paid staff and volunteers. Supervision of the garden suggests that managers will need evaluations from the AMS or other supervisors. Tools for evaluation may include the Olson and Slater model (1997) focusing service management efforts.

## **5.2 Focusing Service Management Efforts - Olson and Slater 1997**

The garden management should also have premonition for future factors that may affect service demands or resources available. These factors could include economic, technological, social, industry, or even government issues (Olson and Slater 1997). Both human and financial services are unlikely to remain at the same level of social need and benefit value (see Appendix 4). We could expect a significantly larger population of students on campus during the winter semester than summer which great implications for the management system. To maximize human resources informed of the garden, awareness efforts should be taken prior to the garden's first operation to create excitement and assist in student recruitment.

Financial resources are likewise dynamic. Start-up costs have already been accounted for and funding will be accomplished directly through AMS. Regarding future operating costs, finding sponsors and applying for further funding are a possibility. For example, a Sustainability Fund has been set aside for AMS operations and may be applied for annually as indicated by community partner Andrew Longhurst (2012). Since the capacity for services and operations are also limited by financial resources fund-raising is a sensible option. If garden financial resources to the garden increase through obtaining sponsors, perhaps new services could be imagined and provided by the garden. Neither human nor financial resources are static and both are limiting factors for what services could be offered. As human and financial resources grow, the management system should diversify accordingly.

## **5.3 Option 1: Management by an AMS Student Club**

For a rooftop garden to be run predominantly by an AMS Student Club, there is need for passionate students who have time, energy and skills to invest into the space. Experience has shown at TOG that there is a mismatch in student availability. More students are on campus from September to April, and most garden duties occur from April to



September. However, informal conversations have suggested that there may be interest in being involved in a summer garden club, as there are fewer activities on campus at that time. We suppose that potential benefits, such as being able to take home produce, would assist in motivating involvement in the club. This is, however, a very informal thought process, versus a guaranteed production stewardship.

The SWOT table below outlines the key points made from our round table discussions.

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>● Minimum cost of production to the AMS</li> <li>● Brings together a larger number of students</li> <li>● Allows goals and visions of the garden to remain a collective student driven effort</li> <li>● Flexible to evolve year to year</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>● Will only be viable if the passionate students with available time take ownership to create and maintain such a club</li> <li>● Risk of minimal management commitment, especially in summer months</li> <li>● Too many people involved in the garden could hinder its ability to function properly (to maximize potential)</li> <li>● As a club there is potential that the skills and knowledge are not at a professional level</li> <li>● There may be large variance each year with regard to how much produce is available for sale</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>● We see more community building potential in a club model</li> <li>● Potential connections to similar clubs such as Sprouts and any kitchen type clubs could be an opportunity for expanding connections and use of the rooftop garden space</li> <li>● Engage summer students and offer a summer club opportunity</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>● Club members may feel entitled to the produce they grew, which would minimize produce available for sale</li> <li>● Too many individuals with access to the space could threaten the security of the produce</li> </ul>

#### 5.4 Option 2: Management by a single employee

The “AMS New SUB-Rooftop Garden Proposal” document stated that many UBC students felt strongly about having a rooftop garden on the new SUB. It makes sense,

therefore, to keep the ownership within the student body. For this reason we did not explore the possibility of hiring independent contractors to maintain the rooftop garden.

An alternative to paying an employee would be to offer directed studies positions to students. This would involve students who have supervisors to set learning objectives and grading schemes. We envision a cross faculty collaboration, between LFS and Sauder being beneficial for the garden. An additional alternative would be for Sustainable Opportunities in Youth Leadership (SOYL) mentors from the Think&EatGreen@School Project to take certain responsibilities in the garden in exchange for access to space to run workshops for youth.

Having a single paid employee, especially through summer months, would result in ownership of responsibility to organize the garden. Through discussions with TOG management team, this model is what has enabled their team to plan for productivity and sales in past years. The SWOT table below outlines the key points made in our round table discussions.

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Offers work and learning opportunities for students</li> <li>• Would result in ownership of responsibility to organize the garden</li> <li>• Minimizes risk of neglect in summer months</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• Could make the garden less community focused and more about a business model</li> <li>• This model puts a lot of pressure on the single individual in charge of the garden</li> <li>• Fewer student volunteers may be dedicated and involved in planning and caring for the garden if someone was being paid to do the job</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Potential to really develop a business out of the rooftop garden</li> <li>• Paid employee could be substituted with a directed studies position to students</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Cost of labour is an added cost for the AMS, which may not be available from year to year</li> <li>• Could alienate the paid individual from club management from student volunteers</li> <li>• Might not connect as naturally to clubs, such as sprouts, which are volunteer run</li> </ul>

### 5.5 Option 3: Management by several employees

In a brainstorming session, our group considered the possibility of collaboration amongst gardens on campus. Because TOG is the main case study relevant to the rooftop garden production system, combining management of the rooftop garden and TOG is an idea we considered. Additional options may include a future Geography garden or connections with the UBC Farm. This model could potentially reduce the added cost a coordinator would have directly on the AMS. It would also offer the potential to share resources and knowledge. Produce output could be combined to provide larger orders to campus food outlets, which Nick Gregory, a purchaser for AMS FBD, stated would be preferable (Gregory, personal communication, 2012).

This model option is one we thought was worth mentioning, but we chose not to expand it any further. The justification for not developing this model further is because we believe combining with other garden resources at the start of the garden development would result in basically stealing those resources. The beginning of a garden development will be demanding as there will be ongoing planning and problem solving issues unique to the space. After a year or two of production, a collaboration of management resources across multiple gardens on campus should be reassessed as an option.

#### **5.6 Option 4: Model Selection and Justification - Combination of the above**

We see it worth considering that some of the advantages could be maximized and disadvantages minimized through creating a structure that is a combination of the above mentioned AMS club structure, and a paid employee. Through discussions and weighing pros and cons of those two models, our group sees dynamic and flexible systems as necessary to start the garden. Whether a club, paid position, or directed studies position would successfully manage the space is dependent on human resources available.

The main challenge in not having a paid position would be the risk of not having individuals motivated and equipped to succeed in running a production oriented garden. It is

for this reason that we took the AMS student club model and have tried to outline tactics and motives to gear such a club towards productivity. We believe discounts or meal vouchers at places where the produce is used or sold, being able to take home produce, end of year stipends or academic credit could provide incentive for club members to commit volunteer hours. In case such motives do to not attract an able and willing volunteer workforce, we recommend the AMS remains prepared to potentially pay a work-study position.

Suggestions we brainstormed to recruit a core management team without offering a paid position include:

- a. Find a directed studies supervisor (from LFS or Sauder, or a combination) who is willing supervise one or two directed studies students in trying to fulfill producing and selling produce to Sprouts and AMS food outlets. Through an application process supervisor(s) would select a student(s) to setup a directed studies curriculum with. This would involve forming and supporting a club for volunteer student participation. The SOYL mentorship section of the Think&EatGreen@School Project should be contacted as a potential source of supervision and directed studies students.
- b. Pass the club development task to future LFS group projects or project oriented classes such as the SOYL mentorship program. This would minimize costs to AMS and allow for students to continue as the primary creators of the garden system.
- c. Encourage the first few years of the garden to grow a large variety of crops. The focus should be to find a few niche products to sell to campus outlets. In order to find such a niche, detailed institutional memory needs to be in place from the start.
- d. Encourage club priority to include compiling institutional memory. Past managers of TOG have made the physical labour and actual garden work the priority, and have found that administrative, coordinating and record keeping tasks have been neglected. With those tasks being neglected, it has been hard to pass on learning experiences to future managers.

Last seasons' TOG manager expressed that proper record keeping as a priority would give knowledge to build on. This has great potential to increase future years productivity.

## 6.0 Stakeholder Recommendations

Before more work is put into the development of the production garden model, we recommend our community partners develop a more defined goal and vision for the rooftop garden based on whether the garden is to be a production or community-oriented. This would involve debating pros and cons of production-oriented option versus the community garden model as presented by Group 11. If a production oriented garden is selected, the UBCFSP Coordinator could write a project scenario description for the next LFS450 group with the recommendations that we have listed in the next section before January 2013. In that timeframe, we also recommend for previous documents to be well dated, as we had some trouble identifying what year reports were from (the 2010 LFS 450 reports is an example). Recommendations for our community partners would be to look into potential supervisors that may be needed for work-study students. This should be completed before the SUB construction is complete. In the course of the garden operation, management systems should be revised annually by the AMS for continual improvement on human and financial resources and service demands. Such revision may be done using the Olson and Slater (1997) model that was mentioned earlier in the findings.

## 7.0 Scenario Evaluation & Feedback

### **7.1 Project Evaluation Findings**

After receiving feedback on our outline, we continued to seek guidance and feedback from the LFS 450 teaching team. To evaluate our project at the end of term, we presented our findings to our community partner and asked for feedback. Upon completion of this

paper, evaluation by the LFS 450 team via grading our paper, a review of answering the questions outlined in our scenario description (see Appendix 5), and future groups use of our research is our evaluation method. We had planned to send our report to community partners for feedback, which we hoped to incorporate in our final paper, but we were unable to meet this deadline. We also compared the content of our paper to our two expected outcomes. Our first expected outcome was to recommend a potential management plan for the rooftop garden by building upon previous research and working from finalized designs. Although we have worked towards this, we have not explicitly created a management plan that is an ideal solution for the future rooftop garden. We have, however, articulated our researched scenarios and ideas from which AMS can select. The second expected outcome was to provide an implementation strategy for the recommended management system. We started this by outlining specifics of the club model in Appendix 4 but further development from future groups will be necessary.

In reflection, ideally we would have started earlier and interviewed a larger number of diverse gardens, as it would provide more examples of management systems. However, we were able to recognize success for some of the interview responses that we have received. We also thought the round-table discussions that were carried throughout the course of the project were successful. A few problems that was distinguished while approaching the project was that there was a level of uncertainty for human resources that are available for the garden, and therefore was difficult to obtain the cost recovery. At this point, there was also uncertainty in whether AMS would prefer the garden management to be towards a community garden or a production garden model.

We realized too late that we had overlooked some research results from the past LFS 450 paper (2010). This includes contacting Nancy Toogood who was mentioned in their paper to plan to open a position for a staff person to maintain the rooftop garden. It was too

late to contact her once we found this piece of information. Upon feedback from our community partner after our presentation, we feel our findings and discussion will be useful for the AMS as they continue to develop the rooftop garden plan.

## **7.2 Recommendations for Next LFS450 Students**

Before January 2012 community partners should decide if the garden is best to start as a production garden or as a community garden. If a production garden is selected then the January 2012 LFS 450 groups are recommended to:

1. Coordinate with TOG, since the garden is also in the midst of trying to create an organizational structure and may have more insights as time goes on.
2. Start planning for active promotion, ideally one year prior to the start of its operation to create excitement and thus ease the club's recruitment process.
3. Continue development of club structure and responsibilities. Use club job outline found in **Appendix 4** as a starting point to clearly outline the club structure. Continuing to develop this club outline could include incorporating the system of re-election similar to Sprouts into the club plan [having half of the board positions re-elected in the spring (March) and half in the winter (November).] A club model is recommended with a core management of the club receiving guidance from someone with expertise (at least for the first one or two years) so as to set the club to find its proper orientation. The person with expertise would ideally be a directed studies student, but in the worst case, paid personnel can also be considered.
4. A specific outline of transition reports and handbooks should be outlined.
5. If AMS chooses that they want to focus more on garden specifics than human resource management, we recommend contacting AMS for desired produce for sales
6. Past papers have shown that students are keen on volunteering garden work for the rooftop garden through surveys (LFS 450, 2010). Future group should survey students of UBC and

see if there would be an interest for garden work or student club work for the rooftop garden; follow up with interested parties and run through the selection process for potential student club candidates.

7. Use TOG as a resource for initial planning, record keeping and volunteer management documents and strategies as they are currently developing these resources.



### 8.0 Media Release

As fourth year UBC students in the faculty of Land and Food Systems, we were given the task to propose management options for the new AMS Rooftop Garden that will be a part of the new Student Union Building upon its completion in 2014. The garden was first proposed in 2010 and since its approval, there has been much planning for its implementation. Past groups have compiled business proposals, architectural designs and vegetation options. Our work examined management options such as management by an AMS club, paid employee, and work-study positions alike. Our proposals will primarily serve a production garden that would sell food to AMS Food and Beverages. We also explored partnerships with local green initiatives such as Spouts, The Orchard Garden, and UBC Farm. We look forward to the grand opening of the Roof-Top Garden, which will be an icon for vibrant student community and learning and an apex for the new SUBS's goal in attaining the "Highest Green Building Rating" in North America.

### 9.0 Work Cited

Alma Mater Society of UBC Vancouver. (2010). *The Project*. Retrieved March 24, 2012, from My New SUB: [http://mynewsb.com/site/?page\\_id=9](http://mynewsb.com/site/?page_id=9)



- Baker-French, J. and Tymo, N. (2012). Management of The Orchard Garden - Discussion Paper. Retrieved April 2, 2012, from <http://blogs.landfood.ubc.ca/lfsog/discussion-paper-about-the-organizational-of-the-orchard-garden/>
- Gregory, N. (2012, February 2). Personal Communications. (B. Lee, Interviewer)
- Kreitner, R. (1998) *Management* (7th ed.). Boston, MA: Houghton Mifflin.
- Liu, K. (2002). Energy efficiency and environmental benefits of rooftop gardens. *National Research Council Canada*, 17, 20-23.
- The Volunteer Management Handbook. Leadership Strategies for Success. Edited by Tracy D. Connors. 2012
- Pimentel, D., & Wilson, A. (2004). World Population, Agriculture, and Malnutrition. *World Watch*, 22-25.
- University of British Columbia. (n.d.). *Work Study & Work Learn*. Retrieved February 6, 2012, from University of British Columbia Career Services Web site: <http://www.students.ubc.ca/careers/students/work-and-volunteer-opportunities/work-study-work-learn/>
- Olsen, Eric M. and Slater, Stanley F. (1997). Focusing Service Management Efforts: A Model for Nonprofit Organizations. *Journal of Nonprofit & Public Sector Marketing*. 5:1, 25-43

## 10. Appendices

### **Appendix 1: Potential Income Calculation**

#### **Work-Study (University of British Columbia, n.d)**

Minimum work-study wage = \$14.79 / hour

Covered by University = \$9.00 / hour

Funding Needed = \$5.79 / hour

If the rooftop garden has a supervisor from a department, a work-study student may be hired. By having a work-study student, the garden is always taken care and managed by an individual. The work-study student is allowed to work a maximum of 10 hours/week in the winter term, and 20 hours/week in the summer term, with an hourly wage ranging from \$14.79-\$15.80 (University of British Columbia). From this wage, \$9 is subsidized from the department and the remaining will be paid from the garden's earnings. Though it is subsidized by the department, the work-study position will increase the cost of managing the garden. Also, the student may not be as passionate when managing the garden because their goal may be to only want a job.

20 hours/week over the **summer** term (~18 weeks) = 18 weeks \* 20 hours \* \$5.79/hr = \$2084.40

10 hours/week over the **winter** term (~30 weeks) = 30 weeks \* 10 hours \* \$5.79/hr = \$1737.00

**Yearly Total for work study position = \$3821.40**

**Adjusted potential income for the new space:**

Potential income for 509.4 m<sup>2</sup> = \$7548.9

New area = 147 m<sup>2</sup>

(147 m<sup>2</sup>)/509.4 m<sup>2</sup> \* \$7548.9 = \$ 2178.42

Adjusted potential income for 147 m<sup>2</sup> = **\$ 2178.42**

This number is based solely on the estimated income for a garden the size of 509 m<sup>2</sup> provided by McMahan (2010). If this was going to be the sole source of income/funding for the rooftop garden it would be advised to review these numbers with a more detailed production plan.

### **Comparison of work-study cost and potential income**

$\$2178.42 - \$3821.40 = \$1642.98$ . Instead of the initially planned 509.4 m<sup>2</sup>, the latest planned area for the rooftop garden in the new SUB is 147m<sup>2</sup> (CITE PROPERLY - Personal Communication with Andy Longhurst). This implies that: Estimated income can be adjusted as:  $(147)/509.4 * 7548.9 = \$ 2178.42$

### **Appendix 2: Orchard Garden Coordinator Job Description (2008-2010)**

- Review summary of AGSC 450 work and read papers
- Facilitate the formation of a Garden Management Committee consisting of faculty, students and staff who will help provide mentoring and support to students, volunteers and the Garden Student Coordinator. The Garden Student Coordinator will be responsible for sharing group business proposals with the Committee, deciding on specific components to be implemented, and providing regular progress updates. Meetings should be held no less than once a month.
- Instigate and coordinate construction of Garden design (fencing, border, beds, pathway, etc.).
- Establish production and harvesting plan and **ensure continuous care** for the Garden.
- Establish buyer-seller relationships with Agora Cafes and AgUS liaison representatives.
- Maintain regular communication with UBC Farm staff regarding garden updates, provision of resources, volunteers, and seek mentorship.
- Implement a composting system for the Garden.
- Develop promotional materials for the Garden, including signage, and if hours and funding permit the construction of a website.
- Develop an educational component for the Garden, such as creating crop identifiers, developing nutritional profiles for crops, and inviting instructors to incorporate the Garden into their lessons, particularly for the Fall term.
- Develop volunteer positions (for weeding, watering, planting and harvesting, etc.), and **recruit and coordinate volunteers** to help with Garden duties.
- Research bursaries/awards/grants and **elicit donations** for the Garden.
- Develop plans to ensure Garden continuity as the summer transitions into the academic year.
- Maintain a journal recording what is planted and when, dates of maturity, crop yield, weather conditions, any pest problems, and other pertinent observations.
- Maintain a record of hours for coordinating position as well as for volunteers (volunteers could be asked to record and communicate hours with coordinator).
- Create a brief paper outlining successes, challenges and experiences with the Garden, including a summary of recommendations for the following season based upon experiences.

### **Appendix 3: Interview Response from University of Toronto**

*1) How would you describe your management structure? How many paid staff members and volunteer members do you have at the moment? Has this number changed in the past couple of years? If so, what was the reason for the change?*

For the first three years of operation the main managers of the garden were the co-founders (me, Kyla Smith, Sarah Wilson). We oversaw all of the maintenance and volunteer

coordination, grant writing, etc. This was on a volunteer basis. For the third year (last summer), we hired a work study student (through the Department of Civil Engineering) and we also hired another undergraduate student to help out (again, through the Department, with sponsorship money). These two students were paid to work a few hours a week to help out, mostly with garden maintenance, and also giving workshops to students. They were also involved in other environmental initiatives within the Department. This year (4th year of the garden), those same two students will be paid to take over (joint) management of the garden, and will continue as work study students in the Fall. We're in a bit of a transition period right now, since I'm (hopefully) graduating soon and we want to make sure the garden continues in my absence.

*2) Do you earn income from selling crops that are produced in your garden? Does that contribute a significant amount toward your labour/material costs? Where do you sell your produce?*

No, we give everything away. If we don't hire any staff our year to year costs are really low (only a few hundred dollars), so we don't need to sell our produce to keep the garden going. Most of our labour is volunteer anyways. For the first two years of the garden it was all volunteer labour. As for materials, we try to be as self-sustaining as possible. We save seeds every year and re-plant them the following season, we compost our plant waste and use that to amend the soil in spring.

*3) Do you have any tactics that have worked to engage students as committed volunteers? Are those who are involved in garden work allowed to take any of the produce home?*

Yes, volunteers are allowed to take home produce. This is one of the big incentives (I think) of volunteering with the garden. We don't have a specific strategy. Our project is really unique and most of our committed volunteers are genuinely interested in growing food and want to be a part of our group. Also, most people volunteer only 1-2 hours a week, so it's not a huge commitment. Of course, if people want to commit more time to helping out then they are welcome to do so.

*4) I'm aware that you have funding and sponsors for the garden. How did you go about receiving this funding? If a grant was written, who wrote the grant? If there was no funding for your garden, what would be sacrificed? (Is your funding used to pay for workers?)*

Yes, we've received grants, mostly for capital costs to set up the garden or additional components to the garden. I was mainly responsible for doing the grant-writing, which I did voluntarily. We also received some sponsorships initially for materials like seeds and equipment. We just approached local retailers, told them about our project, and asked for donations.

We work with the Department of Civil Engineering a lot as well. They have also donated materials, the use of the rooftop space, and they apply for work-study students each year for environmental initiatives in the department (one of which is the SkyGarden). For the past two years, the Department has also applied for sponsorships through our University's Sponsorship Office. We've received funds from them, and we use that money to hire students to work on the garden, and other environmental initiatives within the department.

#### **Appendix 4: Rooftop Garden Job Descriptions**

**President:** Create Resources, Compile institutional memory, Writing project vision, Schedule meetings, Planning daily tasks, Facilitate meetings, Attend weekly or biweekly meetings with the Sprouts Executive Board, Event planning, Provide regular progress updates and budget reports to the Advisory **Committee (McMahen, 2010)**

**Vice President :** Assist the president

**Secretary & Treasurer:** Record Keeping, Record Meeting Minutes, Bookkeeping, Cash deposits, Create Invoices, Writing/Applying grants

**Inventory:** Build Tools, Build Structures, Order seeds, fertilizers, Purchase supplies, Marketing, Sales, Review fresh sheet.

**Head of Communication:** Direct and coordinate internal and external communicators, Identify tasks for classes/volunteers.

**Internal Communicators (work in team):** Email club members, Support interns, Documentation, Coordinate Club volunteers, Photography, Plan Workshops, Event planning.

**External Communicators (work in team):** Coordinate with external parties (Sprouts, AMS Sustainability **Coordinator**), Coordinate with external volunteers, Maintain/Create Social Media, Blog writing/maintenance, Contribute to Newsletters, Photography, Events promotion (workshops, etc.), Outreach (Public speaking)

**Production Manager (directed studies students?):** Planning daily tasks, Create fresh sheet, Identify tasks for classes/volunteers, Planning crops

**Garden Work:** Bee Maintenance, Cleaning seeds, Digging, Harvesting, Check on the irrigation system, Manage soil, Manage pests, Maintain toolshed, Maintain compost, Mulching, Pruning, Planting, Weeding, Garden maintenance, Host Workshops, Host garden tours, Teach garden skills, Prepare produce for sales, Maintain signs and visual presence, Instigate and coordinate components of the garden's construction and design that are not yet completed (McMahen, 2010), Maintain a written garden Journal of the garden's history including what is planted and when, management activities, dates of maturity, crop yields, weather conditions, pest problems, soil issues and additional observations (McMahen, 2010)

**Advisory Board:** Advise

**General Office Work:** Clean office

## **Appendix 5: Evaluation by Answering Scenario Questions**

### *1. Who will manage the garden? How will they do this?*

In the production model our group has outlined that a directed studies student (or if necessary a paid student), will do the planning for a production garden. A club will be in place to facilitate tasks and will be motivated offer services for collective objectives via incentives provided by the AMS. This may include meal vouchers or end of year stipends for highly qualified and dedicated volunteers.

### *2. What qualifications are needed?*

Appendix 4 outlines task lists organized by potential club/ job positions. Qualifications have not been clearly outlined, but this task list is a starting point to consider who would be able to fulfill the gardens needs.

### *3. Who will the manager or management team report to?*

With our suggestions, the manager(s) of the garden would report to a directed studies supervisor. This supervisor could be the coordinator of the SOYL mentorship program or could be an instructor from LFS or Sauder. If a supervisor is not available, our paper has not suggested who the management team could report to. We do see a supervisor who is

involved in an evaluation process as an important piece in maximizing produce output, so if the AMS had a position with the capability to supervise a garden manager, this would be an option.

*4. How will management be passed from generation to generation?*

We outlined a potential tactic for compiling institutional memory by reporting a system similar to sprouts. We have recommended future group to use the club job outlines found in *Appendix 4: Scenario Questions*

Continuing to develop this club outline could include incorporating the system of re-election similar to Sprouts into the club plan [having half of the board positions re-elected in the spring (March) and half in the winter (November).] We also recommend that specific outline of transition reports and handbooks should be outlined. Recommending this to future groups means we did not cover this question in our report.

*5. Who will actually work the garden?*

Regardless of the management system, we envision most of the physical garden labour being done by volunteers. There are specific job titles to specific tasks in Appendix 4 which give a more clear understanding of what types of positions need to be filled.

*6. What is the needed annual operational budget for the garden?*

We did not address this question other than by outlining the cost of hiring a work study student in Appendix 1.

*7. Where will the management occur?*

We did not address this question.

*8. How will interested students gain access to information about the garden?*

A directed studies supervisor would be responsible for filling the directed studies positions. We stated that through an application process supervisor(s) would select student(s) to setup a directed studies curriculum with. This would involve forming and supporting a club for volunteer student participation. The SOYL mentorship section of the Think&EatGreen@School Project might also be a source of supervision and directed studies students. Additional promotion and information on the garden was not suggested in our paper other than the garden work job list including “maintain signs and visual presence” and the recommendation that the Rooftop Garden must be actively promoted about one year prior to the start of its operation to create excitement and thus ease the club’s recruitment process.

*9. When will change of management occur?*

We have suggested that within the club a system of re-election similar to Sprouts where half of the board positions re-elected in the spring (March) and half in the winter (November). We presume directed students students would likely start in March and would like to add that change of management should ideally occur over a transitional period, rather than a one-time handover of the garden. Also, ideally, the person or group of people taking on the managerial roles would have previously participated in some aspect of the garden, and have a running knowledge of the systems in place. These last two points, however, were not addressed directly in our paper.

*10. Who will look after the garden in the summer months?*

One or two directed studies students are suggested to look after the garden in the summer months. If supervisor(s) and student(s) do not take on such responsibilities, a paid work-study position will be needed.

*11. What systems need to be put in place?*

We have recommended that our community partners look into potential supervisors that may be needed for work-study students. We have recommended that future groups continue development of club structure and responsibilities.

*12. What documentation should they prepare?*

We recommended future groups outline of transition reports and handbooks for institutional memory. Maintain a written garden Journal of the garden's history including what is planted and when, management activities, dates of maturity, crop yields, weather conditions, pest problems, soil issues and additional observations (McMahen, 2010).

*13. How can they build institutional memory?*

We addressed institutional memory in our paper via club roles transitioning at two separate times per year, so that re-election doesn't result in a completely new board. Development of transition reports and handbooks are additional parts for building institutional memory.

*14. How can they contribute ensuring the long-term sustainability of the garden?*

We did not address this question in our report.

**Appendix 6. Olson and Slater Assessment Model (1997) 5 steps:**

First, the organization must identify their existing mission statement and draw a list of all services offered. The mission statement is crucial to an organization as it functions as a benchmark of the organization's end goals (Olson and Slater 1997). In the second step, each service is measured against the mission statement and their significance is identified as 'critical, important, or nice-to-do'. Critical services are deemed to be crucially important as they pertain to the organization's identity. Important services may also be important to the organization's identity, but does not experience urgency. Nice-to-do services are ones that are neither important to the organization's identity nor urgent. Third step is to assess each service in terms of relevance or importance to the surrounding community. A service could be evaluated on a comparable benefit value 'higher, comparable, or lesser' benefit value. Services with higher comparable benefit value are those unique to the community and in high demand. Services with lesser comparable benefit value are services already accomplished by other entities in the community and are in low demand. The fourth step is to illustrate these findings into a graphical representation. Services would be allocated into Figure A based on their importance to the Garden's mission statement and its comparable benefit value.

COMPARABLE BENEFIT VALUE			
HIGHER			
COMPARABLE			
LESSER			
	CRITICAL	IMPORTANT	NICE TO DO
CURRENT STATUS			

*Figure A*

COMPARABLE BENEFIT VALUE			
HIGHER	1 INVEST TO GROW	3 SELECTIVE INVOLVEMENT	6 SELECTIVE REVIEW
COMPARABLE	2 SELECTIVE INVOLVEMENT	5 SELECTIVE REVIEW	8 LEFT FOR OTHERS
LESSER	4 SELECTIVE REVIEW	7 LEFT FOR OTHERS	9 LEFT FOR OTHERS
	CRITICAL	IMPORTANT	NICE TO DO
FUTURE SOCIAL NEEDS			

*Figure B*

The fifth step is strategic decision making. As illustrated in Figure B. A service that is of critical importance to the garden's identity and has higher comparative value falls under quadrant 1 and are areas the garden should invest its resources for growth. If current financial and human resources are not focused on services in quadrant 1, they should be relocated to do so. Services that fall under quadrant 4, 5, and 6 should be subjected to selective review. These services should only be committed to if there are sufficient human and financial resources. Services that fall under quadrant 7, 8, and 9 are services that would better be left for others to do. Committing to these services puts the garden at risk for over commitment and therefore stress, fatigue, and mediocrity. This model is simple yet powerful for decision making.