

The Sustainability of the UBC Food System Project: A Sustainable Business Plan for

Agora

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The Sustainability of the UBC Food System Project

Group 7 (2004)

General Tasks & Scenario 1:

A Sustainable Business Plan for Agora.

April 2004

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Abstract.

The UBC Food System Project is in its third year and aims to assess and improve the sustainability of the UBC Food System. Building on the best of the general models prepared for this purpose in 2003, we examine the sustainability of one specific part of the UBC Food System, namely Agora, the student-run food outlet in the Faculty of Agricultural Science's MacMillan Building. We select a total of four indicators to represent and measure economic, social and ecological sustainability, and we assess Agora's current business model against these indicators. While we find that Agora does well with respect to ecological sustainability, we find significant room for improvement in economic and social sustainability. Several recommendations are made with respect to each indicator, and instruments are provided for measuring and assessing progress over time.

Introduction.

In our view there are two central and strongly interlinked problems with the UBC Food System (UBCFS). The first problem is that UBCFS faces a range of unusually diverse and challenging demands, reflecting the diversity of the system's numerous stakeholders. The second problem is how to prioritize these competing demands.

The UBCFS faces multiple stakeholders: the University, its students, staff and faculty, the local community, government mandated regulators, suppliers, the market, the union, employees, and managers. All have a stake in the UBCFS, and all present the system with their own demands. In prioritizing and responding to these demands, UBCFS expects above all to be financially self-sustaining. At the same time, however, the system strives to provide a full range of food products and services to a diverse clientele, at low prices, within a narrow and fluctuating window of time, while simultaneously contributing to campus sustainability and the sustainability of the local, regional and global ecosystems. This is an extremely challenging mandate and we are pleased to be able to assist the UBC Office of Campus Sustainability and the SEEDS programme in meeting this challenge. Our specific role in this regard will be to review and assess the work done by previous consultants, and to then build on this work, concentrating in particular on one component of the UBCFS, namely Agora, the student-run food service outlet located in the Faculty of Agricultural Science's (FAS) MacMillan Building.

In the final analysis we will find that while Agora is unique among UBC food service outlets in terms of the constraints and opportunities it faces, it does have the potential to contribute in some interesting and important ways to the overall sustainability of the UBCFS.

Value Assumptions.

Although as consultants our Group is determined to provide a balanced assessment of the system and the proposals to reform it, we are aware of the need to acknowledge our own biases and the value assumptions underlying them. We are a diverse group, with backgrounds in food science, trade economics, nutrition and health, but we share a common commitment to the principle of sustainability, which we have applied to our assessment of the UBCFS and Agora. To us, sustainability means that the UBCFS and its component parts must be economically viable, must contribute in a significant way to the food security of the UBC community and to the food system literacy of its members, and must, within these constraints, minimize its impact on the campus, regional and global ecosystems.

We acknowledge therefore that our analysis is informed by a weakly anthropocentric value system, since we are placing human values of economic welfare and food security first, while tempering this with the recognition that achieving these objectives depends to some extent on the sustainability of the ecosystem that underpins our economy, society and individual well-being.

The Model.

In assessing the 2003 models for the sustainability of the UBCFS we found most resonance theoretically, and in terms of values, with Group 14. We have therefore chosen their model as the ‘best in class’ of 2003 and propose to build on the foundation they laid last year in our own, current analysis of the UBCFS and Agora. Group 14 clearly has a very strong grasp of systems theory and sustainability concepts and this is reflected in the

strength of the model they present. This model also reflects our own values as, for example, when Group 14 states that “we view the livelihood of our species as ultimately the most important....however we also recognize the interrelatedness of all things and believe that....the key to our survival and the health of our community is determined....also by the health of the surrounding environment” (Group 14, 2003). This is clearly a weakly anthropocentric view and so corresponds with our own value system. We also like the graphical tool adopted by Group 14 to measure and track sustainability, and will be retaining this rainbow ‘Sustain-O- Meter’ in our own model.

We largely support Group 14’s problem definition, namely that “there is a need to explore not only the individual components [of the UBCFS] but the myriad of interactions that take place between them” and therefore to develop a model “that will enable future generations of students to study the sustainability of the UBCFS as a whole” (Group 14, 2003). We do, however, now find it necessary to modify, or update this problem definition to include the identification of specific solutions to specific problems faced by specific subunits of the UBCFS, in our case Agora. We recognize from the outset that these specific solutions will need to be consistent with our more general values and goals while also being realistic within the constraints faced by Agora and the UBCFS.

This is a point of departure for us from the excellent foundation laid by Group 14’s work then, as we use the general model and graphical tools they provide to frame our investigation and analysis of a subcomponent of the UBCFS.

The Indicators.

It is our opinion that the indicators selected by Group 14 are inadequate to assess the place of Agora in the ‘sustainability-unsustainability continuum’ as we define it. We have therefore elected to graft different indicators onto Group 14’s basic model. Specifically, we have chosen four indicators, one to assess and measure ecological sustainability, one to assess and measure economic sustainability, and two to assess and measure social sustainability.

Economic Sustainability.

Given our underlying anthropocentric values and the constraints within which Agora operates, we feel that economic viability is the key to economic sustainability. This is subtly but importantly different to profitability, since it allows for the existence of economically viable but non-profit operations such as Agora to exist within the UBCFS. In fact it would even allow for a loss-making Agora to be classified as economically sustainable, as long as any subsidies and grants it obtained in return for contributing to, for example, food security or the FAS curriculum were themselves provided on a sustainable basis.

We propose measuring Agora’s economic sustainability against traditional economic indicators, via an annual examination of its profit and loss accounts, but taking into account the sustainability of any financial contributions it may receive from the FAS, the AgUS or other external sources. If Agora is unprofitable in terms of its sales then, but has guaranteed funding from FAS, AgUS or UBC Food Services that compensate for these losses, we can say that Agora is economically viable and thus meets our definition

of economic sustainability. The length of time over which this funding is guaranteed will be the key to determining the level of Agora’s economic sustainability.

We will deem Agora to be 100% economically sustainable if it is either independently profitable (revenues exceed costs) in the year of examination, *or* if it has guaranteed funding sufficient to meet its fixed costs for the next three years. We will deem Agora to be 0% economically sustainable if its revenues are less than its costs in the year of operation *and* if it does not have guaranteed funding sufficient to meet its fixed costs for either that year or any future years. In between these two extremes we propose balancing profitability and funding as follows.

Measuring Economic Sustainability

Economic Sustainability (%)	Profitable	Funding to Cover Fixed Costs
100	Yes	Not required
	No	Guaranteed for 3 years
75	Yes	Not required
	No	Guaranteed For 2 Years
50	Yes	Not required
	No	Guaranteed For 1 Year
25	Yes	Not required
	No	Guaranteed for Current Yr
0	Yes	Not required
	No	No Guaranteed Funding

Using a percentage scale to measure economic sustainability will allow us to easily locate Agora on the Sustain-O-Meter, and to track changes in its economic sustainability over

time. In this model 0% sustainability represents the left hand most edge of the red sector of the rainbow that is the Sustain-O-Meter, while 100% sustainability represents the right hand edge of spectrum.

Social Sustainability.

Our primary indicator of social sustainability is food security. We have chosen this indicator for two reasons. First, we do not believe that a community, or society, can be sustainable as long as its basic needs are not being met, and we see food security as *the* most basic human need. Second, we believe that food security can act as a proxy for health, another basic need, allowing us to build health into our model of sustainability. In as much as diet is a contributor to physical health, our measurement of food security will also therefore serve as a proxy for healthfulness. We define food security here as the population of a community having access, at all times, to “nutritious, safe, personally acceptable and culturally appropriate foods” (Kalina, 2001). We propose that Agora’s contribution to the food security of the MacMillan community be assessed via a survey that measures the acceptability, affordability and availability of the food products and services it provides. We provide a questionnaire for this purpose in Appendix 2.

Our secondary indicator of social sustainability is the level of knowledge held within a community about issues affecting the food system of which that community is a part. The rationale for including this indicator stems from our belief that if more people understand food system issues, these issues will be easier to address, and sustainability will therefore be easier to achieve. We see a central role for Agora in both measuring food system awareness now and in increasing awareness over time, both independently and via its greater integration with the FAS curriculum. We recommend that the

measurement of food system awareness be done principally via a survey questionnaire, provided in Appendix 3. We also make a number of recommendations, below, as to how Agora can contribute to raising food system awareness within the MacMillan community.

We will deem Agora to be 100% socially sustainable if all survey respondents assert that Agora meets their food preferences and if all respondents assert that Agora has influenced their understanding of food system awareness. We will deem Agora to be 0% socially sustainable if no respondents assert that Agora has made them think about food system issues, and if none assert that Agora meets their practical needs. For situations between these extremes we suggest using a simple average of the responses to these two questions. For example if 75% of respondents have their food preferences met and 25% have increased awareness of food system issues, then Agora would be found to be 50% socially sustainable. Again, using simple percentage measurements will allow Agora's level of social sustainability to be shown on the Sustain-O-Meter, together with any changes to this level of sustainability over time.

Ecological Sustainability

Our chosen indicator here is the percentage of waste generated by Agora that is recycled – either through the University's own recycling and composting operations or through the city's. We recommend that this indicator be measured via a count of the recyclable and compostable materials entering Agora, and the percentage of these that are diverted to the recycling/composting system. This task can be simplified by placing recycling bins in and around Agora and monitoring their contents. In our view Agora will be ecologically sustainable in direct proportion to the percentage of its recyclable waste that is recycled/composted. It would be 100% ecologically sustainable, for example, if

100% of such waste is diverted from the general waste system, and would be 0% sustainable if none of this waste is so diverted. Ecological sustainability could thus be tracked via the Sustain-O-Meter as per our indicators for economic and social sustainability.

We have selected this indicator, rather than perhaps food miles, local production or organic sourcing as it is both more practical to measure and, crucially, to change. In essence this is because it occurs *within* the UBCFS and is largely subject just to decisions made within the UBC community, as opposed to being external and therefore involving external decision makers over whom we have less, if any influence. That said, we do acknowledge the importance of food miles as an indicator of food and ecosystem sustainability, and the contribution that a ‘buy local’ policy can make to the economic and social sustainability of the local food economy, and we therefore support the general drive towards reducing food miles that we see emerging within the UBC Food System Project’s growing body of literature.

We believe that these indicators, properly measured and taken together, will allow us to go some considerable way towards locating Agora within the ‘sustainability-unsustainability continuum’ as represented by Group 14’s Sustain-O-Meter, and to track changes along this continuum over time.

Specific Tasks.

1) Assess Agora's Current Business Model.

Current Model

A business model can be described as “the method of doing business by which a company can sustain itself” (Rappa, 2004). Agora operates under a particular type of a business model, described as a “Community Model”, whereby community members have a high investment in both time and emotion in the success of the venture (Rappa, 2004). In other words it is a business model based on loyalty.

Agora is a non-profit, student-run food service facility operating on the ground floor of the MacMillan Building between 9.30 and 12.30 am Monday to Wednesday. It is governed by a student committee from the Food Nutrition and Health (FNH) department of the FAS and is staffed by volunteers. Agora currently sells baked goods, coffee and a variety of convenience items such as juice boxes, granola bars and packaged crackers. Every second Wednesday Agora also sells lunch items such as sandwiches and soups. Agora is committed to purchasing local and fair trade products whenever possible, and to sourcing its produce from UBC Farm, in particular, when conditions of supply and demand allow. It has a modest inventory of equipment and a daily turnover of approximately \$40. Profits are negligible and are reinvested in the business, to purchase new equipment. Agora currently has an arrangement with UBC Food Services whereby rent on the unit is waived, and is additionally supported by the AgUS with a grant. The degree to which these arrangements are sustainable over time is not clear, since they currently extend only up to financial year 2005.

Agora produces little waste, mostly post-consumer food wrappers and coffee grounds. The coffee grounds are composted, and the food wrappers could be easily captured for recycling. Agora's prices are low, reflecting its non-profit status and commitment to food security, and it sees its training and use of volunteers as providing experiential learning and a contribution to raising food system issue awareness.

Agora operates outside the mainstream of the UBCFS, and is not subject to the same constraints and pressures as other UBC food service outlets. Within the constraints of its funding arrangements it is, in effect, free to set its own agenda and priorities, and so to make sustainability its single guiding principle. This guiding principle is reflected in Agora's efforts to minimize waste (ecological sustainability), provide inexpensive but nutritious food to its customers (social sustainability) and to do so while remaining economically viable (economic sustainability).

Assessment and Recommendations.

Our assessment of Agora's business model with respect to our indicators of sustainability is that although the current model provides a strong foundation, this is not sufficient to ensure sustainability. In short we consider Agora to be close to achieving ecological sustainability but not yet economic or social sustainability.

Specifically with respect to social sustainability, we feel that Agora currently fails to make a significant contribution to the food security of the MacMillan community since its limited food offerings and hours of service are insufficient to outweigh its low prices, and that it also fails to make a significant contribution to food system issue awareness. With respect to economic sustainability, we feel that Agora is not currently economically viable because it fails to make a profit *and* has failed to secure long term guaranteed

funding sufficient to meet its fixed costs. With respect to ecological sustainability we find that Agora does well, producing little waste and adopting recycling/compositing as a policy goal. We do still feel that there is some room for improvement in this area though.

In order to increase its economic, social and ecological sustainability, Agora's business plan needs to spell out how it can better understand and meet the demands of its customer base, take active steps to increase food system issue awareness, put its funding arrangements with Food Services and the AgUS on a more permanent footing, and more fully integrate itself with the FAS and its curriculum. We therefore propose that:

- Agora survey its customer base with respect to their food wants, using the questionnaire we provide as a model, and then integrate a plan for the realization of these needs into its broader business plan.
- Agora provide a physical facility (such as magazine racks or shelves) for the display and exchange of information on food system issues, and investigate the feasibility of hosting weekly/bi-weekly interdisciplinary presentations/discussion forums on food system issues.
- Agora approach Food Services, the AgUS and the FAS with proposals for longer term funding, exploring with these stakeholders what they would expect in return for funding, and how Agora can meet these demands while remaining true to its core values.
- Agora introduce recycling bins for the food wrappers and other post-consumer wastes it generates and develop plans now for how to deal with the food waste it will generate in the future as its operations expand.

- Agora take steps as detailed below to integrate itself more completely with the FAS and its core curriculum.

While these proposals reflect our own views on how Agora can move to a more sustainable business model, they are also informed by lessons learned from other student-run food service outlets at other Universities and colleges, whose case studies we reviewed as part of this project. A more detailed description of Agora's current business model is provided in Appendix 1. Questionnaires to assess customer satisfaction, customer demands, food security and food system awareness are provided in Appendices 2 and 3. Details of the lessons learned from other student run food service outlets are provided in Appendix 4. Steps to integrate Agora with the FAS curriculum are provided below, and in Appendix 5.

2) Integrating Agora into the FAS Curriculum.

One of Agora's unique advantages is its already close relationship with the FAS, a relationship that, if properly managed, has the potential to make Agora not only economically sustainable but also capable of contributing in a very meaningful way to the greater sustainability of the Faculty, the FAS community and the wider UBCFS. We believe that the best route to achieving this is via the greater integration of Agora with the FAS curriculum.

Agora and the FAS share a number of core values, including a commitment to sustainability, health, environment, community and excellence within an interdisciplinary framework characterized by first class research and experiential learning. In addition there are several existing FAS courses where we see a natural fit between FAS learning

objectives and teaching methodologies on the one hand, and Agora's needs and capabilities on the other. These two factors combined provide significant scope for greater mutually beneficial integration and we make a number of detailed recommendations in this regard in Appendix 5. These include:

- Using Agora as an alternative model for the study of small agri-food business management in FRE 302.
- Using Agora for experiential learning in food analysis, nutritional labeling, food safety, food marketing and food preparation in FNH 301, 340, 341 and 440, respectively.
- Using Agora as an outlet for raising awareness of food system issues, from an interdisciplinary perspective, via the provision and exchange of written information, the sponsoring of food-system related presentations such as catered "Monday night forums", or via other innovative vehicles.

3) Lessons Learned from Other Student-Run Food Outlets.

Other colleges and Universities have, over time, developed student-run food operations of various types. It is our belief that lessons can be learned from these other operations and applied to Agora and we have therefore reviewed the experience of these student-run food outlets. The principal lessons learned are that customer demands should be ascertained via a survey, that long term funding should be secured from the host University or College, and that, where possible, food products should be purchased locally, for nutritional, economic and ecological reasons (McGill, 2003). These lessons largely reflect our own assessment of what Agora's business plan should look like, as

enunciated above. Details of our review of other student run food outlets are provided in Appendix 4.

Conclusion.

Agora is a small, slightly out of the way, non-profit food outlet providing a limited range of food products and services on a limited basis to a limited clientele. On the face of it therefore, it seems that the contribution Agora might make to the overall sustainability of the UBCFS is limited. We believe, however, that Agora can make a very considerable contribution to food system sustainability and that it can, in effect, punch considerably above its weight. We base this assertion on the following observations:

- Agora operates outside the mainstream of the UBCFS and so is not subject to the same constraints and pressures as other UBC food service outlets. It is, in effect, free to set its own agenda and priorities and so to make sustainability its single guiding principle.
- Agora is housed within and run by students of agricultural and food sciences whose value system and outlooks differ significantly from those prevailing in the wider UBCFS. “Sustainability is us” could be the motto of this group in fact, rather than “profitability is us”, the motto prevailing elsewhere in this system.
- Agora has the potential to bring the full weight and influence of an entire University Faculty to bear on the issues and actors it seeks to influence and is, again, quite unique in this. The more that Agora integrates itself into the core curriculum of the Faculty the more secure and sustainable it will be, and the greater influence it will wield.

In summary then, we believe that by integrating itself with FAS, by being both a reflection of and a champion for the FAS values of sustainability and student-led innovation, and by being free to chart its own course independent of the constraints faced by other UBC food outlets, Agora can establish itself not only as a sustainable subunit within the UBCFS, but as an exemplar of sustainability on campus that others can turn to for inspiration, advice and example.

List of Recommendations.

- Agora survey its customer base with respect to their food wants, using the questionnaire provided in Appendix 2 of this paper, and integrate the results of this survey into its business plan.
- Agora provide a facility for the display and interdisciplinary exchange of information on food system issue awareness.
- Agora investigate the possibility of hosting weekly/biweekly interdisciplinary discussion forums and/or presentations on food system issues.
- Agora track its impact on food system awareness using the questionnaire provided in Appendix 3 of this paper.
- Agora approach UBC Food Services, the AgUS, and the FAS to discuss long term, sustainable funding.
- Agora take further steps to integrate itself with FAS and its core curriculum.
- Agora introduce recycling bins for the collection of post-consumer food waste in and around Agora.
- Agora measure its economic, social and ecological sustainability using the indicators and measurements outlined in this paper and locate itself accordingly on the Sustain-O-Meter.

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Appendix 1.

Agora's Current Business Model.

The Agora Kitchen space: towards a locally based sustainable food system.

Business Description

1.1.1 Mission Statement

- The student-run Agora creates a learner-centered approach to interdisciplinary education. Volunteer students will gain an understanding of the science and management of food and nutrition in the context of the principles of land, food and community. Additionally the operation of Agora should foster an environment of connections and interactions between the different disciplines of the Faculty.

1.1.2 Key success factors

- Funding support from the Faculty of Agricultural Science, the Food, Nutrition and Health (FNH) Committee, and the Agricultural Sciences Undergraduate Society (AgUS) including rent subsidy, capital investment and security on kitchen equipment.
- Location - Due to the closure of the UBC Food Services in Agora, there will be a lack of food and beverages provided to students and staff in the Macmillan Building.
- Theme - Our menu is designed with health and affordability in mind.

1.1.3 Challenges

- No air ventilation system, unable to cook meals: Meals are cooked in the FNH Kitchens Room 140 and transported to Agora. Need to ensure that food temperatures are not within the "Danger Zone".
- Food Service Operation Permit by the Health Board
- Dependable volunteer base

1.2 Business Goals

- Year One Goal - Achieve balanced income and expenses while preventing net loss with continued co-operation with the faculty on Co-op and volunteerism. Discuss learning opportunities with faculty members.
 - Student Events: Host efficient and safe preparation of meals (i.e. Wednesday Lunches, Community Dinner, Bakesales, Wednesday Nite BBQ and other social events).
 - Second Term:

- Opportunity for an AGSC 450 case study
 - If feasible: sandwich bar open twice a week. Re-write the business plan.
 - Continue discussion of adapting course curriculum: sustainable food production, minimizing ecological footprints, Food Safe, Food Quality Management to be implemented next year.
- Year Two Goal - Implement teaming opportunities
 - Course development: Integrate food service kitchen into FNH curriculum (Nutritional Sciences, Food Sciences, Dietetics) such as the production of value-added foods: pestos, jams, jellies, sausages.
 - Farm Link: provision of continued supply of local, organic produce.
 - Financial: Gain an annual growth rate of 3% and begin phasing out non-organic ingredients from our menu.
- Five Year Goal - Ability to pay off all investment (stovetop, fridge, oven), secure Agora to create a permanent fixture for the Faculty curriculum, while achieving an annual 5% growth in the long run.

Action Plan

- 1st half of the 1st year (October to December 2003)
 - Negotiate co-operation with UBC Food Services, the Faculty of Agricultural Sciences, Agricultural Sciences Undergraduate Society, and the FNH Student Committee regarding funding support and equipment security.
 - Acquire Food Permit Registration
 - Partnership Agreement created with UBC Food Services
 - Investigate marketing aspects and make necessary adjustments (price, food choices, customer feedback, etc.)

Projected Events:

October

- Week of October 14: Finalize suppliers and permit. Finalize volunteer schedule.
- Week of October 20: Grand opening --products offered are coffee & muffins, weekly FNH bake sales. Use of 2 compartment sinks and soup holders for "Community Dinner" on October 22: begin Wednesday Hot-Lunch on 22nd.
- October 27: Monitor sales of coffee and muffins (progress report). Usage of 2 compartment sinks for set-up and clean-up of Pumpkin Carving (Oct 30).

November

- o November 5: biweekly hot lunch cycle continues until last day of classes. Monitor sales and customer feedback.

December

- o Review end of year sales report gross profits and assess capacity to have a sandwich bar (opened twice a week) for next term. Plan upcoming events and production schedule for next term.

- 2nd half of 2004 (January to March)

- o Owners meeting for viability/direction of the business and made necessary adjustments (menu choices, hour of operations, inventory, equipments, revenue and expenses, cashflow, etc)
- o If feasible; contact food supplier for sandwich bar
- o Set up new volunteer schedule

Production Plan

3. 1 Overview of Operations

Operations	Descriptions
Land	2357 Main Mall, The University of British Columbia, Vancouver, B.C.
Building	MacMillan Building 1st floor
Facilities	Agora Cafe and Lounge
Available Equipment	Oven, microwave, display case, 2 soup holders, beverage cooler, safety box, steel racks, 2 compartment and 1 compartment sinks and cooking-ware
Needed Supplies	Serving-ware, cutlery (discount for customers <i>bringing own</i> cutlery?), food preparation utensils

- Sandwiches (if feasible, term two):
 - o Majority of herb, fruits and vegetables supplies will be obtained from UBC farm and local farmers/suppliers.
 - o Weekly Inventory turnover ensures fresh quality of our products, and ensures minimum loss/wastage on expired supplies.
- Agora Committee is responsible for running the whole business and implementation of food service establishment into Faculty curriculum.

3.2 Production cycle

October to November 2004

3.2.1 Daily Production Cycle

8:00 pm	Delivery of muffins and coffee. Chefs preparing food inside kitchen (back of Agora)
9:00 am	Agora opens. First volunteer shift cashes in.
10:00 am-11:00	Continue serving coffee and muffins.
11:00 - 12:00	Cash out from first volunteer shift and change over (cash in) with second volunteer shift.
1:00 pm	Agora closes for clean up and cash out.

3.2.2 Weekly production Cycle

Monday	Monday Munchies (Freshly baked goods made by FNH committee Baking Crew). Coffee
Tuesday	Coffee One-day old baked goods
Wednesday	Coffee Wednesday Lunch (9 am - 11 am: food preparation, 11 am to 1: pm selling) Wednesday BBQ (2 pm - 4pm Food preparation) Use of counter and display case, food holders for selling (5 pm - 7pm)
Thursday	Agora closed. Meeting with Agora Committee: overview of weekly sales.
Friday	Agora closed.

- (If feasible, term two) Sandwich Bar opened twice a week:
 - Majority of herb, fruits and vegetables supplies will be obtained from UBC farm and local farmers/suppliers.
 - Weekly Inventory turnover ensure fresh quality of our products, and ensure minimum loss/wastage on expired supplies.

3.3 Risk Management for Production

- Business Risk
 - Price Risk - Fluctuation in fresh produce will be minimal due to biweekly changes in menu choices. Rent and equipment fluctuations will be controlled through contract negotiation to maintain competitive meal prices and profit margin.
 - Production Risk: Variability in units of production (i.e. Wednesday meals prepared a night) will be adjusted accordingly to customer feedback and sales, At least one volunteer, is trained on HACCP management or holds a Food Safe Certification Level 1, and Serving-It-Right Certification to ensure our products comply with the Ministry of Health Services safety standards

- Financial Risk
 - Risks will be leveraged through a combination of partnership, investment, and subsidies from the Faculty and student society. End of term financial analysis with conservative sales estimates to reduce surprises.
- Risk Strategies: Accept
 - The main purpose of this business is not to make a huge profit but to provide an **educational experience** for undergraduate students through provision of a food service to Agricultural Science students, faculty and staff at fair prices. The business is anticipated to grow slowly in its first 3 years, by expanding in gradual, carefully managed steps.

Different Aspects Of Production

- Political
 - We promote and only sell fair-trade coffee. Majority of our fresh food supplies will be from the UBC farm.
- Community
 - We obtain food from our community (UBC farm and local suppliers) to serve our community (FAS).

Human Resources Plan.

A committee consisting of the following positions will manage the student-run Agora Café:

Agora General Manager	<ul style="list-style-type: none"> - Stocks and supplies management- monthly inventory and purchasing. - Oversees operation flow - Maintaining food satisfaction
Production Manager	<ul style="list-style-type: none"> - Assist general manager in overseeing production and operation flow. - Assist in monthly inventory and purchasing.
Finance Officer	<ul style="list-style-type: none"> - Financial budgeting - Accounting - Cashier float box

Volunteer Coordinator	<ul style="list-style-type: none">- Ensuring at least one volunteer per shift holds a food safe certificate or is signed up for a course.- Scheduling weekly volunteer shifts.
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- Each partner needs to report his/her responsibilities to all members in the Committee.
- Since this is a row business, all members need to discuss development ideas for better managing, marketing, and for keeping food quality and price appropriate for the FAS community.
- The revenue and net income need to be calculated daily to determine how to business works. Each member is free to give constructive inputs to make any changes for the Agora's progression.

Appendix 2

Questionnaire On Food Security & Customer Demand.

Intended Audience: All Visitors or Customers of Agora

- 1) How often do you come to Agora?
 - a. Never
 - b. Once a week
 - c. Two to three times a week
 - d. More than three times a week

- 2) In your perception, are the food options available at Agora suited your preferences?
 - a. Yes
 - b. No

- 3) Would you like to see Agora provide more full-meal options?
 - a. Yes
 - b. No

- 4) If yes, what meals would you like to see sold at Agora?
 - a. Pasta dishes
 - b. Sandwiches
 - c. Grill items
 - d. Other – please specify

- 5) What convenience foods would you like to see sold at Agora?
 - a. Fruit
 - b. Chocolate bars
 - c. Baked goods
 - d. Other - please specify

- 6) Are Agora's operating hours suited to your needs?
 - a. Yes
 - b. No
 - c. If no, please specify what hours do suit your needs.

- 7) What is your perception of the current food prices at Agora?
 - a. Cheap/ Inexpensive
 - b. Fair
 - c. Expensive

- 8) How much do you spend to buy food in a week?
 - a. Less than \$ 50
 - b. \$ 50 to \$ 100
 - c. More than \$ 100

- 9) What is your disposable income per month?
- Less than \$ 200
 - \$ 200 - \$ 500
 - \$ 500 - \$ 1000
 - More than \$ 1000
- 10) In your opinion, how much is the suitable cost for one nutritious meal?
- \$ 3 - \$ 4
 - \$ 4 - \$ 5
 - \$ 5 - \$ 6
 - More than \$ 6
- 11) Would you be interested in pre-ordering lunches from Agora?
- Yes, one day in advance.
 - Yes, on a weekly basis.
 - Yes, on an ad hoc basis.
 - No.
 - If yes, please provide contact information.
- 12) Would you be interested in having Agora cater your meetings and other events in MacMillan?
- Yes
 - No
 - If yes, please provide contact information.
- 13) What is your vision for Agora?

Thank you for your time in completing this questionnaire.

Appendix 3.

Questionnaire on Food System Awareness

Intended Audience: All Visitors or Customers of Agora

1) How do you rate your general level of awareness with respect to food system issues?

High

Moderate

Low

2) List the 3 issues you feel are most important with respect to the food system?

3) Have Agora's existence, example and activities caused you to think or think more deeply about food system issues in the past 12 months?

Several times

Once or twice

Not at all

4) Do you think sustainability as a food system issue is

Very important

Somewhat important

Not important

5) Rank the following indicators of food system sustainability in terms of their importance to you

Profitability

Food Security

Recycling/composting

Other – please specify
6) Rank the following issues in terms of their importance to you

Food miles

Production methods

Composting/recycling

7) Rank the following issues in terms of their importance to you

Use of chemical inputs in agricultural production

Use of water conservation technology in production

Use of low/zero tillage methods in production

8) Rank the following issues in terms of their importance to you

Price of food at the till

Diversity of food offerings available

Number of outlets and hours of operation

9) Rank the following issues in terms of their importance to you

Buying fair trade products

Reducing food miles

Supporting local producers

Appendix 4.

Review of Other Student Run Food Outlets

Foodservice operations at other universities and colleges that are student-run can provide examples and guidance for the appropriate business model for Agora that will achieve the most success. Many universities and colleges throughout North America have student-run food operations. These range from food co-ops to large fine dining restaurants.

At the University of Massachusetts there are several student-run operations. These include the Earthfoods Café, an ovo-lacto vegetarian co-op, Sweets N' More, for baked items and snacks in residence, Sylvan Snack bar, a residential snack bar open late, and Greenough Sub, another residential snack bar. These operations provide a diversity of food and decentralized locations to best serve the students at U. Massachusetts.

The University of Toronto has the student-run Vegetarium Café, which is praised for meeting the needs of vegetarian students on campus that are not met elsewhere. However, the hours of operation of the Vegetarium Café are limited and there are more accessible and cheaper options with more variety off campus (Food Security: A study of University of Toronto students' Attitudes and Needs Towards Food on the St. George Campus).

At McGill University about 20 food operations were or had previously been student-run until campus foodservice was privatized in 2003. Until 2000, many campus cafeterias were student-run until a re-negotiation resulted in the University taking back the operations. This resulted in significant budgetary reductions for many student societies that were partially made up for by grants from the University. This is an example of how a successful student-run business is not necessarily secure as financial conditions and leases are largely manipulated by the University (McGill Tribune).

Hospitality schools often have student-run restaurants that provide students with the opportunity to learn cooking, serving, and managerial skills within foodservice establishments. Vancouver Community College is an example of this.

Agora is in a unique position as it was previously operated by UBC Food Services is currently leasing from them. The clientele for Agora is limited as are the facilities available for food production, thus pre-made goods are largely required. Suitable case studies to compare to Agora are unavailable, however lessons can be learned from other universities that may provide guidance for the Agora initiative.

Care must be taken to ensure that the needs and desires of the clientele are being met otherwise students will choose to purchase their food elsewhere. The clientele of Agora should be consulted to determine what foods are most desired as well as what the hours of operation should be. Communication with UBC Food Services and an appropriate

lease is crucial to ensure that once successful, Agora may remain student-run and not reverted back to a UBC Food Services operation.

A key aspect of a student-run food operation in Agora should be to purchase local foods. This aids in providing more nutritious foods and greater ties to the surrounding community as was demonstrated by the Hendrix College students who successfully increased in-county purchases from 1% to 15% and in-state purchases from 6% to 30%. The local economy benefited greatly from this initiative (Feenstra, 1997).

References:

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Appendix 5.

Integration with FAS

As noted, integration of Agora with FAS has several advantages. Firstly there is already a great deal of synergy between the two organizations in terms of values and principles. Secondly Agora is a living example of the abstract ideas being taught in many FAS courses, and so offers the potential to provide valuable experiential learning opportunities to students. Thirdly Agora needs sustainable funding, and FAS can provide this. And finally, Agora attracts customers from all parts of FAS, and so offers the opportunity for interdisciplinary communication and learning.

1) Integration with FAS Courses

AgSci 100

Course Outline: Orientation to the programs and learning environment and core values of the Faculty of Agricultural Sciences; career programs; survey of professional opportunities and requirements, introduction to developing a portfolio of learning outcomes and accomplishments.

- New students can be introduced to the MacMillan building and Agora when they meet AgUS and FNH committee representatives (possibly a field trip?).
- Agora can be one of the volunteer opportunities for students to complete their mandatory volunteer hours within the faculty.
- The questionnaire on food system knowledge can be used to assess new students' awareness of food system issues when they take AGSC 100, for comparison with their knowledge in second, third and fourth year. This will enable the measurement of both Agora and FAS's success in raising awareness among students of food system issues.

FRE 302.

Small Business Management in Agri-Food Industries.

Current Learning Outcomes: business planning process & development; business structure options; marketing; accounting statements and financial analysis; risk management issues & strategies; and human resource management basics & regulations within the context of agri-food business management.

- Agora can be used as a case study in this course, or as a business model for students to directly apply their knowledge in human resource management, accounting, marketing, etc.

- Agora can be used as a case study in this course of an alternative business model – one focused on social rather than financial profits, for example, or one that puts sustainability at its core.
- Students in this course can be tasked with reviewing Agora’s current business model and suggesting changes that improve upon this model without sacrificing Agora’s core values.

FNH 301.

Food

Analysis.

Course Outline: Principles of and procedures for analysis of the chemical, physical and sensory properties of food, proximate analysis, introduction to instrumental analysis; introduction to anatomy and physiology of sensory perception, reporting and analysis of data.

- Students can test/analyze the food items produced and sold in Agora to practice their acquired analytical skills.
- Results from the analysis can be made available to consumers in Agora who wish to know the nutrition information of the food items.
- Conduct sensory perception experiments and report findings to Agora for feedback about consumer preferences, etc.

FNH 340.

Food Theory.

Course objectives:

Understand the characteristics of the ingredients used in the preparation of foods, both their chemical composition and physical properties and the effect of various factors on these aspects during their preparation.

Identify appropriate quality standards of the food products and be able to account for the failure to achieve these standards.

Understand the function/role of food ingredients and their interaction in the preparation of foods.

Understand the basic principles and concepts involved in the preparation, processing and storage of food and food products.

- Instructor can use Agora’s food items as an example in discussions regarding quality standards of food products, students can assess the quality of Agora’s food items.
- Knowledge gained from this course can be applied to preparation, handling, and storage of Agora’s food items.
- Students could be given an assignment to prepare a food handling manual for Agora volunteers for example, and/or run training courses on the subject for these volunteers and other interested students. Working with FAS to gain accreditation by provincial food-safe officials for this manual/course would serve to increase

both social sustainability (via human resource development and increased awareness) and human health and so food security.

FNH 341.

Food Theory Applications.

Course Objectives: Experimental and practical application of scientific principles and theories to problems of food preparation.

- This laboratory course involves the preparation of large quantities of food items, can be adapted so that excess food items made by students can be sold in Agora or designed specifically for Agora.
- OR students can voluntarily make more batches of food that can be sold at Agora in lieu of paying the Lab fee (ie. Agora can reimburse the Lab for the cost of ingredients and in return the students will volunteer their services)

FNH 342.

Consumer Aspects of Food.

Course Outline: Economic, physiological, social, cultural, and environmental factors influencing food choices and consumption. Legislation governing food; food markets and merchandising techniques; criteria for food selection.

- Agora can be a case study for learning about consumer trends, preferences, etc.
- Students can apply their knowledge about merchandising techniques and consumer psychology to promote Agora as a food outlet
- Use this class to review, improve and monitor questionnaires on food demand and food system issue awareness. Also on how respondent's socio-economic and cultural backgrounds influence their food demands and awareness.

FNH 440.

Food Service System Management.

Course Objectives:

To introduce students to the systems which comprise a food service operation and the role of the manager in controlling these systems.

To develop skills in menu planning, recipe development and food costing and understand how the menu influences all aspects of food service system operations including labour allocation.

To understand the importance and inter-relationship of these systems in all areas of a food service operation to manage department resources effectively.

To apply the theory and obtain practical experience in a food service operation, through the co-ordination of a group special events menu at an off-site location.

To introduce the concepts of human resource and labour management including working in a unionized environment.

- Students can develop a menu plan, recipe costing & specifications, marketing plan, production schedule, and HACCP Food Safety plans for Agora as an assignment (these tasks are already part of the course assignments)
- Students can analyze Agora in a discussion about the human resource management.

GRS 290/390.

This is a one credit “forum” course where GRS students meet every other Wednesday evening for presentations on food system issues, exchanges abroad and other topics of shared interest.

- Use Agora for information displays and presentations. Set up an events committee of GRS students, under the Agora Committee to liaise with other FAS departments and students and to facilitate a “Monday Night Forum” whereby students get together over coffee and cookies to exchange information and viewpoints and for presentations on food-system issues from an interdisciplinary perspective.

2) Faculty Core Values and Principles:

The FAS core values and principles, and an assessment of how Agora can contribute to their realization are as follows:

- *Sustainable systems: balancing ecology, economy and community to provide for a positive future for society.*

Agora offers the opportunity to demonstrate the sustainable systems concept in action. By ensuring that Agora meets our criteria for economic, social and ecological sustainability we can ensure that it not only conforms to this core value but is also an example of it for others to follow.

- *Food: the necessity to provide safe, nutritious and adequate food supply.*

This is analogous to our food security indicator. By ensuring that Agora provides a variety of safe, culturally acceptable and affordable food products we can ensure that Agora conforms to this core value.

- *Health: focus our contributions on the determinants of health which are related directly to sustainable systems, to food supply, and to clean air, water and soil.*

By ensuring that Agora offers only safe, nutritious foods it will meet this core

value. By using Agora as an outlet for the dissemination of food safety and nutrition information it can become an even greater contributor to this effort.

- *Environment and community: Whatever the human enterprise, activities are connected to the land and have to do with individuals, their environment and community. Human interactions and issues of social justice and rights are part of the whole ecosystem and therefore are essential ingredients to sustainability. Human capital is a key resource for managing sustainable systems.*

Agora can contribute to human capital by giving students valuable experience in designing and running a food service operation that incorporates the core values of the host institution and demonstrates social, ecological and economic sustainability.

- *Excellence: All activities of the Faculty aim for excellence.*

By focusing on food safety, nutrition and sustainability Agora can reflect this drive for excellence and be an example of faculty excellence in action.

- *Flexibility and responsiveness: Over time the Faculty must be able to move with changing contexts and be flexible and responsive in its evolution.*

Agora has already demonstrated this flexibility – when food services decided to close Agora due to its unprofitability it evolved into a student run operation. We are now reassessing Agora again. By regularly assessing the demands of its clientele via customer surveys, and by responding to these demands, it can continue to meet this core value.

- *Give priority to learning and learners. To develop innovative learning experiences to assist their success in meeting the challenges of the workplace*

As a student-run operation integrated with FAS, Agora clearly falls under the description of an innovative, practical learning experience for those involved in its operation and management.

- *Integrate an interdisciplinary world view with a global perspective & intercultural understanding. Encourage interdisciplinary and intercultural systems approaches.*

Agora can meet this goal by ensuring that the committee expands from an FNH committee to an interdisciplinary committee including students from agroecology, FRE and other departments, and by acting as a clearing house for information and exchange between departments, peer groups and disciplines.

- *Emphasize problem-solving and opportunity-seeking. Organize our research, learning and administration around interdisciplinary teams as a way to generate and consolidate knowledge required to address land, food and community issues.*

As above.

- *Create an environment for intellectual debate.*

Agora can organize the food and agriculture equivalent of “philosophy cafes”, whereby they provide a space for organized weekly/monthly debates on food system issues with coffee, cookies etc, and a moderator, or panel, drawn from or organized by the Agora committee.

- *Connect students and researchers to workplaces and experiences. Ensure that learning and research are connected to the everyday world as a context for learning and an anchor for sustainability; Provide students with numerous "connecting" strategies in their university experience.*

As above.

- *Integrate and collaborate within the university and our own diverse clientele.*

Again, provide a range of foods, use customer surveys to ensure we are meeting our clients needs, organise debates, involve all disciplines in the committee etc etc.

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