

**Designing a Social Online Network: Decreasing Fragmentation in the UBC Student Led
Sustainability Movement**

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COMM 490D

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Executive Summary

The University of British Columbia has recognized sustainability as being a prominent issue over the past decade, and has become a leader in advocating sustainable practices. Although the University has made many admirable steps, due to the size of the campus, the existing communities remain fragmented. This hinders the overall success of the student led sustainability movement. Considering the present time and dire need for change, addressing this issue is of utmost importance.

Through careful research of the sustainability movement on campus, we identified the key issues surrounding student groups involved in such initiatives at UBC. Under the overarching issue of fragmentation, a lack of communication, collaboration and consensus, create barriers that prevent groups from reaching their full potential. With these issues, and our target audience in mind, we designed a social online network aimed at bridging these gaps.

Built upon the three pillars of sustainability, stressing the social, economic and environmental implications of our actions, this social online network provides an essential core for this decentralized community. The process of designing this site included research into elements of web design and programs that target sustainable behaviour, which translated into the creation of grey box diagrams (illustrations which outline the information layout of the site).

We recommend that this design be implemented at the University to address the identified issues. In addition to covering the features and functions of this site, we have provided an outlined agenda regarding the development and implementation of this social online network.

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Introduction

On September 28th, 2007 the government of British Columbia announced that new legislation would require all government institutions become carbon neutral by 2010. The University of British Columbia has long been a leader in sustainability and once again has the opportunity to lead by pushing new boundaries. Currently, the University is developing policies that will enable it to reach carbon neutrality, however, there is still a long way to go. Numerous different campus communities are confronting various challenges, one of the major issues being the fragmented student led sustainability movement. Although many groups exist that are working towards a common goal of sustainability, without a collaborative effort, the full potential of this movement cannot be realized. This project focused on the analysis of the student side of the sustainability movement on campus, and proposes a possible solution.

Through the process of interviewing students, staff and faculty numerous issues within the student led sustainability movement were identified. Not only is there inconsistent use of the term “sustainability” but there is also a large disconnect that exists between the groups that comprise this movement. This causes limited communication and collaboration that links similar efforts together. The movement itself lacks a centralized core to facilitate this communication between groups and reach out to the general student population. Existing groups also struggle with organizational issues, as they try to manage limited resources and attempt to understand and work within the system at UBC. This fragmented community, in combination with an overarching issue of student apathy continues to hinder success.

In order to address the identified concerns regarding the student led sustainability movement at UBC; we designed a social online network aimed at unifying the existing structures. Taking into consideration the rapidly growing world of social online networks, techniques for fostering sustainable behavior, and the basics of web design, this system is designed to facilitate communication and provide a centralized core for the movement. Within this framework, groups will be able to display their goals and objectives, identify common and unique interests, and create connections with other campus organizations. Students will have the ability to easily access information about the events, initiatives and groups working within the movement. Overall, this online network will provide a foundation for offline collaboration, awareness and a stronger sustainability movement on the UBC campus.

As UBC is facing the challenges of becoming carbon neutral, it is crucial that the campus be united. The administration needs to ensure buy-in from all components that make up this unique community. Since the purpose of a university is as a place for both research and education, gaining a commitment and making connections with the students (an integral part to this community) is essential. We suggest that in order to foster this relationship, the administration work with the established structure student groups have formed, making the movement stronger.

The following report discusses the two phases of this directed studies. Both the issues identified within the sustainability movement, as well as the resulting design for a social online network will be outlined. The basis for defining sustainability was founded on the concept of the three legged stool; incorporating social, economic and

environmental aspects. Finally, we will discuss ways for moving forward and the possible implementation of the designed site.

Issues with the Sustainability Movement at UBC

As was mentioned in the introduction, many issues became apparent over the course of the initial interview process. The following is a brief summary that will cover these issues, with a focus on those that will be addressed by the website. A more thorough analysis of these issues can be found in Appendix A.

i. Definition of Sustainability

The UBC Sustainability Office uses the Brundtland report's definition for sustainability: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Yet this definition is not used across campus. A key issue at UBC is the lack of consistency with both the use of the word "sustainability" (in what context) and how it is defined.

ii. Bureaucracy and Implementing Change

One of the most common concerns expressed during the course of the interviews was the difficulty of implementing change on campus. Many students feel that their voice is not heard, and while that may be the case, it was also revealed during the interviews that there is a weak understanding of the University system. At UBC there is fragmentation even at the level of the administration, and while this leads to frustration on the student side, it is not an impossible system to understand. Thus, in order to address this issue, having a clear outline of how the UBC system works is one of the goals of our website.

iii. Lack of Supportive Community

Student groups within the environmental movement rarely work together, nonetheless work with those that have more of a social or economic focus. This issue of fragmentation is one of the largest problems hindering the success of the movement. With the amount of time and energy put into all of the events and initiatives that different groups organize, the movement could be much more successful with better communication and collaboration. Yet, there appears to be constant competition for members, resources and event ideas, further limiting the success of each group and the movement as a whole.

iv. Advertising

UBC is a campus of over 40, 000 students with 25 faculties and schools, and many different communities. When student groups consist of 7-10 members (often, but not always more), there is a real challenge in publicizing events and initiatives. Without having a central place to advertise, events often pass with few students aware of their occurrence. In addition, there is no central place to learn about all the different groups that exist. Even though the AMS has a list of clubs, the email addresses are often obsolete and the site only includes groups that are registered as an “AMS Club”, when many student organizations choose not to be.

v. Student Apathy

The issue of student apathy is a topic that is not easily addressed, but seems to be quite prevalent on campus. Without feeling part of a community, people do not have an incentive to engage, or commit to change. Without a sense of accountability, there is no pressure to become involved. In addition, when you are considering a population of

students who's priority is academics, there is often hesitancy in committing to anything extra. Thus, since UBC is such a large campus, it does not provide the arena to support these actions, and as a result, students are often apathetic.

vi. Time Availability and Organization

The student lifestyle is one that often consists of little relaxation or free time, thus when joining a group many students are deterred when meetings are not run efficiently. Student groups need to work on being more organized and effective so that they can both accomplish their goals and keep people motivated. When they lack a mission statement or clear outlined objective there is often no direction.

vii. Elitism

Student groups are similar to many communities, when everyone knows each other, without meaning to, the group as a whole can be exclusive. During the interviews, a number of students pointed out that in order to “get in” to this community, an individual must have both persistence and a vision of how they would like to participate. Although that might be ideal, many students join because they do not know what their goals are and would like to learn about different opportunities. Thus, working to make new members feel more welcome would be beneficial for groups to keep in mind.

viii. Continuity and Knowledge Sharing

Due to the nature of university, students cycle through every four years. This creates complications with sharing information between those who are leaving and the new members of a group. As well, due to the lack of connection between the groups there is rarely knowledge sharing amongst them. Another inhibiting factor is the structure of the school year, with an annual fourth month break, students are forced to restart every

September. This often leads to repeated “reinventing of the wheel” and discontinuity of efforts.

Website

Social Capital and the Internet

After addressing all the issues, and analyzing the audience that we are dealing with, we decided that a social online network would be the best tool to create. Considering university students in this day and age, where spending hours a week on Facebook is not unusual, trying to engage students through an online community was determined to be the most effective. Therefore we felt it necessary to look into previous research that has addressed the connections between social communities and the Internet.

The issues of social engagement and weak community ties that have been raised as a major issue in the UBC sustainability movement, are not of recent concern. Researchers in the fields of sociology and psychology have attempted for decades to uncover the fundamental factors that promote involvement, participation, and community commitment. Robert Putman (Wellman et al. 2001), highlighted that the decline of civic involvement in America, observed since the 1960's is due to the decreased civic connection to the government, a decentralization of community life and an increased individual alienation. Although these issues pertain to a variety of aspects in society, they also play a strong role in hindering the promotion of sustainability.

Robert Putman, outlined what he coined “social capital” as encompassing two forms: *Network capital*, the relations with friends, neighbors, relatives, etc., and *participatory capital*, individual involvement in politics and voluntary organizations.

Further research and papers have added a third category to the list, *community commitment*, through organizational involvement (Wellman et al.2001). These ideas are still used in the study of social engagement and have now been integrated into the development of social online networks.

Past theories argued that increased web usage was directly linked to individual alienation and the disintegration of physical communities (Wellman et al.2001). However, in today's day and age, where the forefronts of communication are supported online, the use of the Internet as a social networking tool deserves thorough investigation. Some evidence suggests that the observed decline in community involvement is rather a shift from physical settings to social online networks (Wellman et al. 2001). This causes communities to be established and accessed from the private home. The Internet has proven to expand communities founded upon common interests and has overcome spatial limitations, linking together people from all over the world (Wellman et al.2001). While web usage can appear to create individual isolation, research indicates that increased online relations transfers into physical space, increasing communities of both online and offline interactions (Wellman et al.2001). Therefore, contrary to the belief that the Internet distracts users from their immediate surroundings and communities, social online networking correspond with an increased involvement in offline organizations and political activity (Wellman et al 2001). Social networks designed to support offline communities, such as Netville in Toronto, or Blacksburg Electronic Village, further show how computer-mediated connections have positive effects on social capital (Ellison et al. 2007).

The applications that support the social networking aspect are commonly termed as Web 2.0. Social computings and online groupings include programs such as blogs, wikis and open source communities (Parameswaran et al 2007). Among these different sites, several common characteristics exist that differentiate them from traditional web applications. They provide a continual flow of new content, accelerating the pace of the online world (Parameswaran et al 2007). Previously existing outlets relied on quality of information, rather than the rapid upload of new content. These new applications that create a continual refreshment of material, provide new sources of accessing information and ideas (Parameswaran et al.2007). The ability to tag and sort information has transformed the standard procedures of providing links, which often supplied outdated information (Parameswaran et al.2007). Tagging allows the highest rated material to climb to the top of the page, establishing a bottom-up structure, and further increasing general access to updated content, of higher quality.

For the purpose of this project, we would like to create a social network that will build on the existing foundation of the sustainability movement at UBC. Ideally ties between members will be strengthened, as well as those with the student population, in order to create and support a stronger community centered on the theme of sustainability. According to this research, online communities have the ability to foster offline involvement and thus support existing movements, with the potential for making them stronger.

Fostering Sustainable Behavior Change

When creating a social online network, there are many issues that need to be considered apart from general web design. Fostering behavior change requires overcoming numerous barriers and relies heavily on a communal effort and commitment. Environmental psychologist, Doug McKenzie-Mohr, specializes in designing programs (offline) to promote sustainability, in light of social engagement issues. McKenzie-Mohr argues that the main reasons why people do not engage in sustainable behavior are: that they are unaware of the activity, they perceive barriers with engaging in the activity, or they do not recognize any benefit from changing their current behavior. People gravitate towards actions with the highest benefits and fewest barriers. These barriers vary between individuals and extend beyond a general lack of knowledge and unsupportive attitudes. As well, the barriers need to be identified independently for each project (McKenzie-Mohr & Smith 1999).

When developing a program to encourage behavioral change, uncovering the barriers, as well as exploring different marketing techniques is essential. McKenzie-Mohr and Smith highlighted in Fostering Sustainable Behavior, the importance of incorporating commitment as a behaviour change tool. Individuals, when having agreed to do a small request are often much more likely to comply to a larger subsequent request (McKenzie-Mohr & Smith 1999). Meeting a request often alters the way people perceive themselves, in the manner that they portray their morals and values through their actions. This identity awareness, along with a desire to be perceived as consistent by others, allows incremental commitments to be an effective behavioral change technique (McKenzie-Mohr & Smith 1999). Written commitments have also shown to be more effective than

verbal commitments, and actively involving an individual within a community achieves the greatest outcome.

Other behavioral change tools that McKenzie-Mohr and Smith discuss include the use of prompts and social norms. Prompts create consistency and reminding individuals of an activity increases the chances of completion. The use of social norms exploits the role that other people have on our own behavior. Studies have shown that individuals will adopt an incorrect answer in order to concur with the response of others (75%) (McKenzie-Mohr & Smith 1999). As with prompts, social norms should be used to encourage positive behavior, and should capitalize on personal contact.

When designing a social online network for the sustainability movement at UBC, these behavioral change techniques need to be taken into consideration. Integrating these tools and concepts into the design of the network will allow us to create an effective online program that will translate into a stronger offline community and sense of involvement.

Web Design

In order to develop a website, we had to gain a basic understanding about the important elements of design. Our focus was not on learning how to create a webpage that has all the necessary applications (ie. learning HTML), but rather to gain an understanding of what makes a good webpage. Thus, we tried to follow Jakob Nielsen's motto "users spend most of their time on *other* websites" (Nielsen 2007). This meant that we tried to make our site both simple as possible and have features and elements that were intuitive (based on previous website experiences for users).

In Jakob Nielson's book "Designing Web Usability", as well as on his home page (Nielson 2000, 2007, 2008) he discusses how to make a successful website. The main point stressed, is the importance of simplicity and consistency. He discourages the use of flashy backgrounds, text that is too similar in colour to the background, headlines that are "cute" rather than clear, and too many details on the page. In order to make our site as "user-friendly" as possible, we tried to take into account many of these aspects. To make this clear, throughout the description of our design, we will state the reasons for certain features based on Jakob Nielson's recommendations (Nielson 2000, 2007, 2008).

However, Jakob Nielson is evidently not the only one who knows about webpage design. In order to get a feel for utility and how we wanted our page to look, we searched the internet for sites that have similar features to those that we will be using. As well, we tried to take into account responses from those who would be using the site (ie. those that replied to the survey). Findings from looking at different sites and the survey lead us to the same conclusions of what Jakob Neilson suggests, that simplicity (and more basic in design) is ideal (Nielson 2000).

Grey Box Diagram Analysis

The process of developing a social online network involved identifying the issues to be addressed, gaining input from future users and designing the site. This phase of the project involved a number of components. First, we decided what features and functions we wanted to be present and sent out a survey to obtain views on what this site could provide and what thoughts were about the features we decided on (Appendix B). Using the compiled responses, we came up with a basic graphic design, in the form of "grey

box” diagrams (Appendix C). These diagrams are the most basic form of what the site would look like, without colour, graphics or extra design features. The purpose of developing these diagrams is to show people the information layout, and get their reactions on the content rather than distract them with any specifics. We then developed a colour version for the homepage only (Appendix C, Figure 22), in order to present a more finalized vision of what it will look like. Finally, we held a panel workshop to receive feedback on the content of the design.

This section of the report will walk through the different components of the website (as shown in grey box form) based on what would be present for different users. These users are: an individual browsing the site, a student logged in and a group. We will discuss the benefits of the features and the reasoning behind why we chose them, with reference to responses from both the survey and the workshop held.

Individual user (not logged in)

The social online network that we designed can be accessed by anyone, without having to create a login. Figure 1 is the basic layout of the site, and Figure 2 shows the main page, which was designed to emphasize the most essential components, and to capitalize on elements of simplicity and usability. The calendar, which is the core of this social online network, is the first accessible tool. We designed it to ensure that regardless of monitor size, this feature would be the primary item users see. The remaining tools are available in the right and left hand columns. The tabs located on the left bar, provide simple and quick links to the remaining chapters of the site. These columns, along with the title bar at the top will remain constant with each page, allowing the navigation of the

site to be easier. Many of these features were influenced by previously existing sites and social online networks, and fundamental components were kept consistent with existing templates for increased familiarity and therefore, usability.

i. Calendar and Events Pages

The main purpose of the calendar is to provide a central advertising tool, as well as to create a visual representation of all the campus events and initiatives. This allows for a connection between campus groups and the student population. During our initial interviews and survey, many students expressed the need for a common location for advertising, which would inform groups of each other's initiatives and potentially prevent overlap. The event calendar designed, provides this space, thus allowing groups to manage their resources and time in a more effective and collaborative manner. As well, it provides the student population with a central means for accessing information about sustainability events on campus. This in turn, gives a sense of community and connects all the belonging members.

The calendar is designed to display the current week's events and initiatives. This format is subject to change, dependent on how many events take place during a week (if there are few events, the calendar could show the upcoming two weeks). Alternatively, if there are multiple events taking place during one day, a scroll bar will appear on that day, allowing the user to scroll down to see all of the events. Under each day, the events are listed with a picture/logo and a title. When clicking on the event, a link will take the user to the "Event Page" (Figure 3). This page is designed to provide essential information, such as location, date and time, thus providing a simple way for any individual to access

information about the sustainability events on campus. An event page can be created by groups, and will be discussed in the Group User description.

ii. Definition of Sustainability

Located above the calendar is a definition of sustainability (Figure 2). Repeatedly during the initial interviews the concern was expressed about the vagueness of this concept. We will provide a definition that clearly represents the importance of all three aspects: social, economic and environmental, and emphasizes communal responsibility. Through this definition, we hope to represent the terms upon which this site was created; sustainability is a stool supported by three legs, all equally important. Once the site has been established, the possibility of having a rotating definition, including more creative interpretations of the term, has been discussed. This definition will appear at the top of most subsequent pages for this site.

iii. Blog

Through discussions and feedback over the process of this project, it has become evident that having a continual flow of new content available on the site is a necessity. This keeps the user intrigued and interested in returning to the webpage. For our social network, in order to maintain a consistent supply of new content, we decided to include a blog. As can be seen in Figure 2, below the calendar is a sustainability blog, where articles about current issues or interesting topics that incorporate elements of social, economic and environmental issues are posted. The blog would not be open to the general public for posting, but rather, we would have identified bloggers that would write consistently for the site. Any student, staff or faculty could apply to write for the blog, which provides a venue and opportunity for publication. Depending on the amount of

content produced by bloggers, we could also RSS feed articles from other UBC newspapers or blogs into our site. This would provide a more diverse representation of the varying concerns and issues around campus, as well as provide links to the various other publishing sources at UBC.

iv. Tabs

There are three tabs located on the right side of the main page, as can be seen in any of the figures representing the grey box diagrams, since these will stay constant (Figure 2). Designed for simplicity, the tabs will link users to further information.

The first tab is titled “Topics” and provides a link to a sustainability aggregator. As shown in Figure 4, there is a list of topics that fall under the definition of sustainability. The compilation of this list is something that needs to be developed further, taking into consideration the diverse nature of this definition. However, the list should be kept as small as possible, in order to avoid clutter and to maintain usability. Upon clicking on a topic, the link will take you to a page that compiles a list of the events, groups, professor’s research and courses that fall under that heading (Figure 5). This tool provides an overall picture of how a topic is integrated at UBC and a quick, accessible way for students to acquire information about the initiatives and opportunities on campus. When clicking on either an event, group, professors’ research or course that has been listed, the user will be directed to a profile page, similar to the events page discussed previously. Groups will have the ability to decide what topics they and their events fall under, when creating an account, or posting an event (this is described in the Group User section).

The second tab is titled “Groups” and is similar to the “Topics” tab, in that it provides a list of all the sustainability groups on campus. In the survey we conducted about sustainability and social online networks, a number of people responded that they would benefit from a central list of groups and group descriptions. Deciding how the groups should be categorized was the most difficult component of designing this function. We decided to maintain the theme of sustainability and categorize groups based on the overlapping components they fall in. As seen in the Venn diagram in Figure 6, sustainability is represented by social, economic and environmental components, and this site includes groups that fall within the overlapping areas. The groups will be listed under 4 headings: social-economic-environmental, environmental- social, economic-social and economic-environmental. Upon creating a user login, a group will decide which heading they fall under. Categorizing the groups in this manner was designed to represent all three components and further eliminate the feeling of overall fragmentation. Portraying groups within this Venn diagram will ideally evoke a stronger feeling of connection and community.

By clicking on one of the groups listed, the user will be directed to the “Group Profile Page” (Figure 7). This includes the group’s objectives, past history and description, as well as the current and upcoming events and the profile pictures of members. At the top right corner, there is a link for meeting minutes, allowing visitors to access the posted minutes for the group. This profile page will allow users to view summarized information about a group in an easy and simple manner. Having a consistent template between group pages also allows users to browse through the different profiles without having to adjust to variously formatted sites.

Not only does the “Group Profile” provide a central advertisement for the various organizations on campus, it also creates a space where group members can reflect back on the main objectives and upcoming events. This page also includes the pictures of the virtual members (the process of joining a group will be discussed in the Personal User section). These members’ pictures will allow users to place faces to the existing community and help provide a translation between the growing online network and the physical offline community, further strengthening the sense of a sustainability movement at UBC.

The third tab is a general “Forum” designed to allow users to initiate discussion around topics in sustainability (Figure 8). Many respondents to the survey, agreed that having a forum would be beneficial (70.6%) (Appendix B) This function is designed to facilitate communication and discussion amongst the various members of the UBC campus, and thereby creating a stronger sense of community. The general forum follows the common format used in most sites, increasing the utility of this feature (Figure 8). Any user may view this function, but in order to post on the forum, a user must be logged in.

On the left bar of the main page, there is a search function for the entire site. This was strongly recommended by Jakob Nielson, in order to provide users a tool to find what they’re looking for (Nielson 2008).

Personal User

User’s have the option of creating a personal login when visiting this site. The Login is visible on the top left corner of the main page, and creating an account provides

access to additional tools and applications. The information required to create a login is limited to the user's email address and name. Optional information includes year and area of study and a profile picture. This will be displayed in the left bar of the general page (Figure 9). The personal profile is private and can not be accessed by other members or groups of the network. Upon logging in, the format of the site is extremely similar to regular template, however, in the left bar there are additional tools and features, including a personal footprint calculator, the toolkit, a message board and a list of the user's groups (Figure 9). It should be noted that although the scope of this project was for students and student groups, faculty and staff members may also be able to create a user login.

v. *Footprint Calculator*

The footprint calculator was designed to provide users a visual representation of their ecological impact, further communicating the need for individual action. In addition, it would be beneficial to provide the "average UBC student footprint" calculated from all users' information. This once again instills the feeling of community, and rather than place all onus on the individual, it signals a need for community behavioral change. As previously discussed, McKenzie-Mohr and Smith showed how these programs are more effective when individuals see their neighbors and friends participating in sustainable actions (McKenzie-Mohr and Smith 1999). Although details on the functionality of this footprint calculator have been not been discussed, we hope to build on, or use existing programs for calculating one's ecological footprint.

vi. *Toolkit and Message Board*

The toolkit provides users' with information specific to the UBC campus and the sustainability movement. The specific features of this tool will be discussed in the Group

User section. Finally, the message board is a basic tool that allows users to receive notifications of events, meeting minutes and messages from their groups. When an individual receives a message on the site, there will also be a notification sent to their email account.

vii. Joining a Group

In addition to the extra tools provided to the user when logged in, an individual has more options when visiting a group profile. On the right hand corner of the group profile page (Figure 10) there are additional features, such as a “Join a Group” button. This will link the user to a page where they will have the ability to choose various levels of commitment when joining the group (Figure 11). This builds on McKenzie-Mohr and Smith’s argument that people are more inclined to change their behavior if they are asked to do acts incrementally, starting with a small commitment (McKenzie-Mohr and Smith 1999). The options for joining a group include: receiving weekly minutes, notifications of upcoming events and current initiatives, volunteer requests and monthly updates. Dependent on what options an individual user signs up for, these notifications and messages will be sent to the user’s message board and registered email. As well, upon joining the group, an individual’s profile picture and name will appear at the bottom of the Group’s profile page (if they chose to leave their picture blank, there will be a standard photo used). The user will also be granted access to the group forum, which is specifically designed for groups to use as an organization and communication tool.

Group User

As mentioned, one of the most important functions of this site is providing a common space for presenting the various elements that comprise the sustainability movement on campus at any one time. It includes the events that occurring, but also the different groups, and the initiatives that they take on. Therefore, we designed a group login, with the main function of providing a space for them to fill in the information about their group, in addition to having a number of resources available.

As can be seen in Figure 14 there are many similarities between the group login and the personal login. The tabs along the right hand side, as well as the calendar are the same. Since they were discussed in the section on the personal login, they will not be examined here. The differences lie in the resources that are listed for the groups along the left hand bar, and in the more detailed profile that can be seen below the calendar. The information below the calendar contains all the information about the group that would be posted on their public profile which all users can access (with the option to “edit” it).

Terms of membership for creating a group profile include: having at least four members, as well as completing all of the profile information. The four students must provide names, email addresses and student numbers (although the later requirement is up for debate). The entered information, as seen in Figure 14 includes their objective, past history or description, current initiatives, upcoming events, as well as their members. Upon creation of this account, the group will also be prompted to upload a logo or image. Finally, in order to ensure that indecent material is not posted, all registered users will have the ability to flag such content.

The information that a group displays was chosen for a couple of reasons. First of all to address the issue of organization we chose to encourage groups to state their

objective. This provides a clear location for a goal to be established that the group can then refer back to at any time. We also chose to display the group members. As previously discussed, providing the pictures of the various members evokes a sense of community.

The next set of features for Group Users to be discussed is the resources (or links) that are present on the left hand side. These include “Toolkit”, a “Message Inbox”, “Weekly Minutes”, “Post Event”, and “Archive”. However, this list is not exhaustive. As we have gone through the process of developing the site, different ideas have come up, and although these are the features that we think are the most important, others such as “Petition” could be added later.

i. *Toolkit*

The main aim of this component is to provide useful information that will help an individual or group to work more effectively. In replying to the survey, a number of respondents commented that they liked the toolkit idea, especially the information about the UBC system. This feature is not fully developed, as not all categories of information have been fleshed out. As can be seen in Figure 15, those that have been listed are “Understanding the UBC System”, “Running an Effective Meeting”, and “Planning an Event”. These were chosen based on the issues that were addressed in the initial set of interviews, namely that a majority of students do not know how the system at UBC works, do not run efficient meetings and struggle repeatedly with issues around continuity.

To more fully present the content under these “tools”, we developed what would be contained in the “Planning an Event” link (Figure 16). We feel that this is an important

feature to have for a number of reasons. First of all, similarly to the sustainability movement, resources and the different departments on campus are also fragmented. When booking a venue, there are different contacts dependent on where you would like to hold the event. To book a classroom, you have to go through classroom services, but for a room in the SUB you have to go through the AMS, and if you would like to book the Norm theatre you have to go through the film society. To arrange catering, it is a similar situation where there are many contacts for the various options.

A second reason for providing this tool is that many students working within the sustainability movement are not aware of this information, thus relating to the issue of continuity. Without a common area for information to be stored about the UBC system, and the various contacts required when planning an event, individuals are left to “reinvent the wheel”.

When designing this page, we ran into a couple of issues in terms of structure. According to Jakob Neilson, ideally 80% of a webpage should be *content* (Neilson 2000), as well, an issue brought up at the panel was that link heavy pages are not a good idea. In order to address these concerns, we decided to provide content under each link, rather than creating a list of links. This would possibly include the first paragraph that would be present when clicking on that link and then a “[more...](#)” option at the bottom.

ii. *Messages*

This function is like any inbox (Figures 17 and 18). Groups will be able to send messages back and forth, as well as send messages to those who are members of their group. When a message is sent to an individual over this social network, a notification will be sent to their registered email address (as discussed in the individual user section).

Originally we had planned to keep messaging between groups and members internal to the site (thus not having emails sent to separate email accounts), however, we changed the design based on a number of recommendations. In the survey responses, we had one individual claim that they did not check sites unless they had emails reminding them of new content. Similarly, we had the same statement expressed at the feedback panel. Having notifications of messages and updates sent to a user's email address will establish a continual connection between this site and the individual.

On the other hand, the concern of receiving a large volume of emails from a website was also expressed during the survey. In order to address this issue, we created the "levels of commitment" when an individual joins a group. This allows them to choose whether or not they want to receive messages and therefore, eliminates the issue of bombarding users with a high volume of emails.

Finally, the main purpose of this function is to provide groups with an easy means to communicate, thus trying to decrease fragmentation. Upon clicking on the "To" button, a list of groups utilizing this site would appear and groups could send emails to any number of them. Currently most student organizations have an email address, but whether the address is up to date or checked is another issue. Our hope is that when a group signs up for this site, they will register using a current email address, so that communication can be established with other groups.

iii. *Weekly Minutes*

The weekly minutes tool is a basic way for groups to both keep an archive of past meetings, as well as allow them to send out their minutes to all members. As can be seen in the diagram of (Figure 19) the group simply copies and pastes (or types in) the minutes

from their meeting, writes a date and a title, and sends it to both their members and to their minutes archive. This feature again helps to address the issue of continuity, by providing a location for past information on meetings to be stored.

iv. *Post Event*

As was mentioned in the *personal login* section, the calendar is one of the most important features of the site, and this function allows groups to feed information into the calendar. Only a group will be able to post an event, and as can be seen in Figure 20, it is relatively straight forward. The group details the purpose of the event, the date, location and time, those who contributed, and up to three categories under which it falls (ie. those found in the “Topics” tab).

At the bottom of the page is information that only the group will have access to. These functions are again targeting the issue of continuity. Through providing a space for the groups to list the connections that they made, members in the future will be able to see who to contact. As well, below this is information that will be entered in after the event is over. Once the event has ended, the profile will be sent to the archive and groups will be prompted to fill in the remaining information. In order to help future organizers, the input information includes comments about the event, as well as the number attended. Groups will also be prompted to record recommendations in which organizers could refer to when planning a similar event.

It should be noted that UBC is in the process of developing a calendar of events, to decrease the fragmentation on campus. As this calendar will show all the events hosted by campus groups, departments and offices, it will still be beneficial to have one specific

to sustainability. We would like to avoid furthering fragmentation and are eager at the possibility of RSS feeding sustainability events from UBC's main calendar to this site.

v. *Archive*

There will be two archives that will be available to all groups. When they go into their archive feature, immediately they will be directed into their own archive page that will display all past events (any of which they can then click on to gain information) (Figure 21). At the top of this page is also a link to the "Main Archive". This will lead them to a general archive for the whole site, and will have information on all past events hosted by all the campus groups registered on this site (if they have chosen to display their event's information). Groups will have the option, when entering their final comments and the numbers attended, of agreeing to publish the information on the main archive (by clicking a checkbox).

Website Summary

When designing this website, we tried to keep the ideas of Jakob Neilson in mind. Making the features as intuitive as possible was sometimes a challenge, but a goal we strived for. When showing this website to one observer, they commented on how complex it is, with a large focus on the social aspect (eg. having inboxes and internal messaging, the ability to "join a group", etc.). We feel that this aspect is important in order to get personal buy in from users, however we would also like to discuss what this site could look like in a more simplistic form.

There are a number of features of this site which are essential; the calendar, the toolkits, group profiles and a medium for discussion (whether that be the blog, forum or both). In order to account for differences in cost that occur when making a site more

complex, we recognize that a more simplistic site with these four core features would also serve a similar purpose. The site would be less expensive to establish, as well as, would require less time to moderate. However, there are a number of arguments for why a website that serves as a social network is very beneficial. Although a basic site would provide similar information, it would not establish a platform for two-way communication between groups and students. A simplistic website would only allow for a one-way presentation of information, where groups would be able to upload information and students would subsequently be able to view it. This structure does not create an arena for communication, collaboration or for fostering a sense of community. Developing a social online network using open source technology (which will be further discussed in the Coding section), allows all members of the UBC community to be actively involved and to contribute content.

Creating a social online network also allows the site to grow with the UBC sustainability movement. Groups and members will continually come and go, however this flux will not affect the overall online community. The ability to add new members and groups ensures that new content and dialogue will be always uploaded. Building a site based on a proprietor framework, requires continual management and does not allow the online community to grow and change in relation to the UBC sustainability movement.

It should also be noted, when comparing and contrasting the differences of creating a social online network, versus a more simplified website, the audience in which this site is intended for. The scope of this project was focused on the student groups, and the general student population at UBC. This is a relatively technically-savvy audience who

is continually using existing social online networks and open source technology. With the amount of “web-site competition” online, students are less likely to buy into a simplistic website than a social online network. The network provides a stronger incentive for individuals to join and return to the site, when they have the ability to connect and contribute to this community.

Alterations to the site in the face of funding limitations are factors that will need to be carefully considered and discussed. There is a fine line between creating a successful but more complex social online network, versus a simpler site that may not be used by the UBC community. On a final note, discussion with IT services needs to be established, to ensure that the features designed follow the policies and regulations at UBC.

Implementation

The University of British Columbia is currently at a time where there is the potential of making monumental change. In light of the Government Mandate and the estimated \$2 million required to offset emissions, it is essential that the University have a communal effort to reach these goals. This includes the student population and should ideally build upon the existing framework of the sustainability movement. The implementation of this project would be integral to unifying the student organizations and connecting the UBC campus around the issues of sustainability. In the following section, various further steps will be detailed, including key stakeholders who will benefit from this project, possible funding sources, and a launching agenda.

i. Stakeholders and Funding

Finding key stakeholders for this project is the first and most essential step. There are many departments and offices within the UBC community that would benefit from this social online network, apart from the student groups. The first, being the Sustainability Office, who is committed to promoting, and coordinating sustainable practices on campus. Facilitating communication and collaboration between the student groups would be of great benefit to the Sustainability Office, as it will act as a means to network with the student population.

Student Development is also a department that would profit from the implementation of this project. Developing the social online network would not only support student groups, but would create a venue for new students to learn about the sustainability community on campus. We would also like to continue discussion about UBC's main calendar and maintain the option of collaboration. Other possible key stakeholders in the development of this site include the AMS, the undergraduate societies such as the AUS or the SUS, and the BC Campus Climate Network. This project fits timely with the AMS's lighter footprint strategy and the BCCCN's promotion of the Get Evolved campaign.

Forming relationships with these potential stakeholders is a key next step in the implementation of this project and the logical progression after, is obtaining funding. We will first explore possible parties which could provide support and then outline two cost scenarios. We hope that in making connections with these different stakeholders, they may be able to provide fiscal in addition to moral support. A proposal has been drafted and sent to the Sustainability Office and can be found in Appendix F. We also are planning on applying for external funding. Applications will be made for the "Innovative

Project Fund”, money from the Student Environment Centre, the Get Evolved campaign, as well as government grants. In addition, there are the possibilities of obtaining funding through the Teaching and Learning Enhancement Fund, as well as levying a student fee. However, these two final opportunities would only be able to provide fiscal support starting in April and September 2009 (respectively) and are hence, secondary options.

ii. Costs

In discussions with a graphics designer, we obtained an estimate for the development of this site, and will outline two scenarios: developing with a high budget and developing with a low budget.

High budget scenario: \$24,000- \$34,000

This scenario includes using a professional design and website development firm (cost estimated to be \$20,000-\$30,000), as well as funding for two part time positions to work on this project for one term. Although there will need to be further long term funding, this scenario only includes the initial set up.

Hiring a professional firm may be beneficial for a number of reasons. First of all, an entire team will be working on the content layout, graphic design and programming. This will ensure that a thorough job will be done in the process of developing the site, and our design can be closely followed, independent of complexity. As well, hiring a firm to complete the project allows deadlines to be set and guarantees a faster development.

Low budget scenario: \$10,000- \$15,000

This scenario involves incorporating this project into a number of SEEDS projects. The various directed studies include researching all the content for the site, finalizing a design and developing the site (a computer science student). Funding may

have to be allocated towards paying a student to develop the site, as it may be more time intensive than a class.

Although the immediate benefit of this scenario is the lower cost for development, there are a few possible disadvantages of taking this route. Incorporating the different components into SEEDS projects, or class assignments creates fragmentation and will require more time to complete. Hiring a computer science student may limit the number of features on the site and ability to utilize Open Source technology.

Outreach and Initial Launch

The success of this site depends on usership and student group buy-in. In order to promote this site, a marketing campaign will be developed to advertise to both the student groups and the student population. Funding will be required for materials and the possibility of having hired outreach coordinators.

Long term funding

This site will require a manager throughout its existence. Although the first year will be more time intensive, we hope that subsequent years will require a maximum of two hours of maintenance per week. We will need to secure long term funding for this position before the development.

iii. *Coding*

There are two main options for what programming systems to use for this site: the more classical proprietary software (eg. Microsoft) or open source (eg. Linux or Apache) (Wheeler 2004). We would like to make an argument for the use of open source, as we believe it both fits the purpose, functionality and budget of this site. Open Source software follows the ideas that software and programs should benefit both the user and

the programmer (Perens 1999). Software should be “free”, it should be easy to update (ie. the user does not have to repeatedly buy new programs or worry about theirs going obsolete), and the developers should not have to “sell” their programs to large companies and subsequently lose access and ownership (Perens 1999). Open Source systems are composed of “modules” that are developed separately by different programmers, and then put together in a common database in order for this sharing to occur. This form of software is a way for programmers to knowledge share, similar to how we would like groups to do within the sustainability movement, and provides a platform for collaboration.

In 1984 Richard Stallman started the *Free Software* Foundation, which over time lead to the development of the *Open Source Definition* (Perens 1999). This definition outlines the basis for open source technology – that when programmers contribute to Open Source they have the rights (1) “to make copies of the program, and distribute those copies”, (2) “have access to the software’s source code, a necessary preliminary before you can change it” and (3) “to make improvements to the program” (Perens 1999). The key idea is that these programs are fluid; they are continually improved and updated. Although the fluidity can be an argument used against open source, since users might then feel the pressure to constantly be looking for those updates and changing the site, it is in fact beneficial. It is not necessary for the users to repeatedly change the site (in fact Jakob Nielsen recommends against this – Nielsen 2000), but the mere fact that there is constantly new software available and that the program can be changed to prevent it from becoming “archaic”, is in itself a huge argument for its use.

The other reason behind using open source programming is cost. A Cypersource study called “Linux vs. Windows; the bottom line” (2001) documents that purchasing price as well as licensing costs of Windows (a proprietor program) is thousands of dollars more expensive than using Linux (Open Source). Most important to take note of, is that the more people using the system with Microsoft programs the more expensive it becomes, whereas with Linux, it remains the same no matter how many users. This aspect is definitely something to take into account for a network such as ours. Since the UBC community is already over 40,000 students and still growing, having a program that would increase in cost with every new member could have large consequences. The hesitation then lies in whether costs down the line will be more expensive using Open Source, but once again they are not (Wheeler 2004). Where updates for Microsoft can cost up to half of the original price (tens of thousands of dollars), for Linux downloading updates is free, or can be the same price as the original purchasing cost (under \$100).

From these points, it seems the logical argument to conclude that Open Source technology would be the best software to create this site. It is both easier to keep up to date and less costly, and provides a platform from which we can create a thriving social online network.

iv. *Testing*

Once the site has been developed, initial testing will be performed before the launch to the UBC campus. This will include two components. First, the developers and those involved in the creation process will do an evaluation of the site’s technical components. Each feature will be tested to ensure that the site runs smoothly and is easy to use. At this point in time, it will be assessed whether the site follows the original design and if

alterations need to be made. A second set of tests will involve a sample size of the student population evaluating the usability of the site. Again, any necessary changes will be made after this test, in order to ensure usability when it is finally launched.

v. *Installation*

The installation portion of this implementation plan consists of launching the website to the campus, with an initial aim at those who will be the main users. It will include two phases of release. The first phase will be announcing the website to the numerous campus groups that fit under the category of sustainability, and the second launch will be to the general student population.

The purpose of releasing to the student groups first, is to ensure that the site has enough content that when individual users visit, it will be appealing. Ideally the site at this time will have the structure set up for groups to add their profiles and list their events, in order to make the site both interesting and useful when we launch to the whole community. The only other individuals who will be viewing the site during the first launch will be the bloggers. Again, to ensure that there is up-to-date and interesting content on the site when it is fully launched, we will request that bloggers each post a piece of writing prior to the official launch of this social online network.

The advertising for the first launch will be done through personal outreach to the student organizations. From past experiences, we have learned that sending an email to invite a group to an event (for this purpose an event such as one to train people about using the site) is not effective because often groups will not reply or commit. As well, we do not want to use many advertising materials in fear of the student population visiting the site before it is fully updated. In order to engage each student group, a representative

will be in contact with the group one-on-one as the network is being created. Prior to the launch, all student groups will be contacted. In order to make this as easy as possible we will prepare a document outlining the main points to cover regarding the site and its features.

The next phase will include advertising to the whole campus. Since it is in a group's interest to have people visit the site, we aim to engage student groups in advertising the launch of this network. These advertisements will include a variety of mediums ranging from posters, emailing list serves, to announcements at classes. However, we will also be dependent to a certain extent on word-of-mouth. Building up the usership of a website takes time, something that we have taken into account. This is largely why we would like to incorporate bloggers: to maintain a consistent upload of new material that will keep people "coming back for more". The launch of this site to the student population could hopefully coincide with UBC Imagine, and focus on targeting new students who are looking to become engage in the campus community. The development of this implementation phase needs to be further explored. Materials, and means of communicating to the student population will largely determine initial usership rates.

vi. Documentation

There will be a number of protocols and documents developed to accompany the created site. A requirements document from all of the different components involved in its production will be put together. This will include information from the background research, the design process (such as the grey box diagrams developed and reasoning behind why features were chosen), the development (what programs were used), and

finally accumulated responses from the testing and launch portion. This information will benefit both programmers who may be hired later on to do any editing, as well as anyone who would like to repeat the process at another institution or community.

In addition to the requirements document, two other protocols will be developed. The first will be for the manager of the site, and will cover what the job entails. The second will be an ongoing protocol of feedback and recommendations from users.

vii. *Support and Training*

An essential factor that has not been mentioned in detail previously is the role of a manager. Throughout its lifetime, it is likely that the site will require a manager. However, we attempted to design it in such a way that a majority of the maintenance will be done by users themselves (groups will update their own profiles and forums, and users will have to add information to the general forum), so that the manager position is minimal. It is likely that in the first year of its launch the position will require a number of hours per week of work, but ideally this will phase into only an hour or two a week and potentially one larger update yearly.

In the first year, the job will likely involve monitoring of the site, as well as providing support to users. As with any new site, there are possibilities that people will have questions, and therefore it will be the role of this manager to answer those questions and provide any necessary assistance. Thus, in order for them to feel comfortable with these tasks, they will require training. This will include a background on the site's development, a detailed description of the features and purpose of the site, as well as an overview of their role.

viii. *Maintenance*

As was mentioned in the section on support and training, the site was designed in such a way that the manager will have minimal number of tasks, yet a certain level of maintenance will be required. The site will have to be checked periodically to ensure that posts are not inappropriate. The manager will not be primarily responsible for viewing all posts, since there will be a “flag this content” option for users. The manager will be notified of flagged material that has to be reviewed and possibly removed. As well, they will be required to make sure that groups are legitimate.

Finally, the manager will also be involved in the larger scale maintenance of general updates and changes. As with the nature of open source material, there are new modules that are constantly being created. It is not necessary that the site be constantly updated, however a yearly review will ensure that it does not go ‘out of date’.

Conclusion

The design provided above was created to address some of the fundamental concerns regarding the student led sustainability movement at the University of British Columbia. Through the implementation of this social online network, fragmentation would be decreased allowing the existing community to unify under the overarching goal of sustainability.

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We are excited to see where this can go, with potential for implementation and expanding past the horizon of just the student led sustainability movement.

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Interviews:

Three first year students
Eight upper level or graduate students
Two staff members
Three faculty members

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Appendix

Appendix A: Report I

Introduction

UBC has prided itself on being a leader in sustainability since signing the Talloires declaration in 1990. In 1997 UBC was the first university to implement a sustainable

development policy (Policy No.5) and in 1998 created the Sustainability Office. Although from an outside perspective this institution may appear to be at the forefront, the movement from within is far from successful. This report is a collaborative analysis of the issues that hinder the student sustainability movement on the Vancouver campus of the University of British Columbia.

The definition of sustainability highlights the environmental, social and economic implications of our every day lives. Although various definitions exist, the concept itself provides a holistic perspective of resource management, global relations and the ability to have a minimum impact lifestyle. In 1987, the Brundtland report defined sustainability as the "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The sustainability movement on campus is also comprised of the three different aspects: social, environmental and economic. Although the distinctions between the three sub-categories are apparent, there is also overlap present. Student groups that appear to focus on one component often incorporate elements of another, as show in Appendix D. However, the true definition of sustainability falls in the centre where all three facets are equally represented. Unfortunately the current situation on campus is such that there is limited equal representation and few groups incorporate all three components. Groups that fall under the umbrella term "sustainability" have no sense of being a unified front. Fragmentation not only exists within the social, environmental and economic realms, but in the movement as a whole. Through the process of interviews with students, staff and faculty, numerous issues were identified, which will be explored throughout this report.

Findings

Definition of Sustainability

Although the University of British Columbia prides itself for being a lead institution in promoting and implementing sustainability practices, the campus-wide sustainability movement is not without flaws. What appears to be the root of a majority of the issues is the definition of the term "sustainability" and the overall use of it. Debate over the true definition, and the concepts it incorporates seems to be an ongoing argument. The University's Sustainability Office uses the definition from the 1987 Brundtland Report and stresses the importance of factoring in the social, environmental and economic consequences of decision making. Not only does this definition leave room for interpretation as to what would compromise future generations, it does not provide a solid foundation for how all the components of sustainability can be addressed.

A faculty member interviewed claimed that the main problem with the sustainability movement is that the term “sustainability” hasn’t been defined. This term is loosely applied to all activities that are more efficient, but by no means sustainable.

The term sustainability appears to be a “buzz” word, differing in definitions congruent to who you talk to. These different perspectives are apparent between the University and the student organizations. While UBC places more weight on the economics component, neglecting to equally address the social and environmental aspects, the student groups place more focus on the environmental and social components (a student). However, there is a lack of a unified definition of sustainability even among the student organizations. The flexibility of the concept hinders the ability for student groups and the University to work towards an overall goal.

Bureaucracy and Implementing Change

A common source of frustration when interviewing students, was the decision making process on campus and the inability of student voices to be heard. The capacity to implement change entails a long and tiresome process of trying to contact the right people and having your concerns noticed. Often students don’t know where to take their ideas, or how to become connected to the upper-level decision making on campus.

UBC is a large institution and although it’s primary purpose is seen as being for post-secondary education, the bureaucratic concerns extend further than the students and their curricular needs. The Board of Governors is the main body of the University that is responsible “for the management, administration and control of the property, revenue, business and affairs of the University.”(UBC website) Composed of 21 members, three are elected by the student body, and the rest by the province, staff, faculty and the board themselves. The role of the Board of Governors is mandated by the University Act, and their responsibilities lie with the “business” aspects of campus, whereas the Senate, a separate governing body, deals with academic issues.

Although the student body has three representatives in the Board, and 18 seats in the Senate, there is an overall feeling that students’ voices and concerns are not heard. There lacks a strong relationship between the student body and those in control. Although this is due in part to the structure of the overall bureaucracy, the lack of a relationship is also caused by the disorganization of the student groups themselves. A student working for UBC, acknowledged that student groups don’t take the necessary time to fully understand the institution and the board of governors. In order to implement change, you have to understand the formalities and processes of the board meetings. Nonetheless, perhaps the issue exists that this information isn’t readily available for students and that even when students know the process, it is by no means easy to follow.

Lack of Supportive Community

Time and time again, through discussions with students, staff and faculty, the issue of fragmentation has come up. Student groups within the environmental movement, rarely work together or with other organizations on campus. Apart from those few examples of collaboration between the Farm and Sprouts and similarly the Student Environment Centre and Ancient Forest Committee, there is a complete lack of a united front. Not only does this cause the movement to be much smaller than its full potential, it also creates competition for members and event resources. Numerous times events have been planned on the same day, whether it be on a small scale of students playing the same environmental education movie to increase awareness, or the large scale of the Sustainability Fair occurring at the same time as the Health and Wellness Fair. The effectiveness of the sustainability movement as a whole could be significantly stronger if the various groups on campus worked together.

As mentioned, the definition of sustainability stresses the incorporation of the ideas of economic, social and environmental sustainability in every decision making process. And yet, at UBC there is no collaboration between the student organizations which hold these ideals. Discussing “sustainability” is a debate, as was previously noted, and although there is a push for it from the Sustainability Office, one can argue that student groups do not fulfill their side of the issue. Without relationships between the groups that represent these three tenets, how can sustainability ever be achieved? Thus, fragmentation not only between groups within the environmental side of the sustainability movement but among all of the three aspects, social, economic and environmental, is a main reason why a strong sustainability movement does not exist.

Advertising

UBC is a large campus with many different communities, making advertising to the larger population extremely difficult. Since student environmental groups are often limited in their capacity (number of members and financial capabilities), this adds to the challenge of adequately spreading awareness about initiatives and events. There is no central location for advertising or for interested students to access information about what is occurring. Due to these factors, the advertising that does take place is often ineffective and a waste of both time and money (as stated by a staff member at UBC).

Student Apathy

Student apathy is a widespread issue across campus. Hand in hand, without a supportive community, students are not engaged in issues on campus or group initiatives. A student’s

priority is academics, and when 80% of the student population travels to campus strictly for classes, they often do not get immersed in what is occurring within the University.

In terms of the sustainability movement, there is both a general lack of awareness about the initiatives and issues at UBC, and an attitude of skepticism of what these initiatives accomplish. Many of the individuals interviewed expressed their frustration with trying to engage and spark the interest of the student population. When hosting an event, you will often see the same group of similarly minded individuals attending the same events. Reaching out to new members and creating enthusiasm over a certain issue is an arduous task on the UBC campus.

Time Availability and Organization

The lifestyle of a student is not one that is often filled with free time. Busy with classes, studying, and part-time jobs, a student is often unable to dedicate ample time to an organization or group on campus. This issue of time scarcity is amplified when student groups don't run efficient meetings, or have established goals and visions. A common issue that surfaced during interviews was the disorganization of student groups. Many of those on campus, such as the Student Environment Centre lack a mission statement and constitution (student). Without a general understanding of overall principles and goals, the meetings and initiatives proceed without direction. Similar to the campus-wide issue with the definition of sustainability, groups that lack a coherent mission statement cannot easily connect with other student groups or the University. This also poses problems with recruiting new members; students won't join a group where there is no underlying structure and organization, and if they feel their time is being wasted.

Although many groups operate around the idea of collaborative participation, some system of responsibility and structure needs to be implemented to ensure tasks are completed (student). If roles are defined, then members can hold each other accountable to their expectations. In a loose organization, where people don't know their responsibilities and tasks, little is accomplished quickly. This results in many groups being "all talk, no action".

Elitism

Student groups on UBC campus are always fighting for new members. They organize events, booth at conferences and try to advertise at any opportunity they can get, and yet when someone new tries to join, rarely do they feel welcome. Student groups are often composed of those who have both been working together for a long period of time, and who are friends. Thus, to try to join a group poses a challenge. Often, interested students will sit in on a meeting where they have no idea what is being discussed and few try to help out. Interviews solidified how much this issue exists. Two involved students both pointed out that having a persistent personality is a

necessity and one cannot join with the intention of being told what to do, but rather has to already have a vision. What was interesting about both of these two individuals, is that neither saw this as a problem. On the other hand another student criticized the groups, saying that they are exclusive, alienate those who want to join, think themselves superior and have a general lack of respect for volunteers. Whether the exclusive nature of these groups is viewed as a problem that hinders success or as natural to any student group, it is evident that it is present and ideally needs to be addressed.

Continuity and Knowledge Sharing

The nature of higher education is a system which cycles students through, year after year. This poses many issues with the continuity of student groups, since those often most heavily involved in organizations are in their 3rd and 4th year and heading for graduation. One interviewed staff member acknowledged that while the experience of learning how to run a group is valuable for the individual, the constant turnover of leadership hinders the group's ability to smoothly proceed forward. On top of this is the lack of knowledge of how to perpetuate a group. Students are not taught the skills of how to pass on their experiences and knowledge and there is no system in place where they can record and store this information.

This issue spreads to a larger scope than just the continuity of each group. There is also the general lack of knowledge sharing about past experiences, whether that be from a well established group to a newly formed one, or within a group. For example, organizing an event. This is a process that can be very challenging for someone who does not know the ins and outs of UBC and who does not have many connections. Without information sharing and collaboration, it seems that individuals often have to reinvent the wheel.

Discussion

As previously discussed, there are a variety of issues with the sustainability movement at UBC. All of the individuals interviewed have contributed in some way, to sustainability on campus. However, a majority have been involved in the environmental component, whether it be in the section overlapping with social, economic or all three (Appendix D). For the purpose of addressing the discussed issues, the next phase of this project will only be looking at groups that fall within any of these overlapping areas. The issues that have been uncovered in the areas of environmental-economic groups and environmental-social groups will be the basis for developing a system. Adding the social-economic area is too large of a division for further investigation; therefore we will assume that the issues present in the environmental groups are similar to those in the social and economic.

As can be seen by the extensive discussion in the *Findings* section, there are many issues that exist within the student side of the sustainability movement. In order to be as successful as possible, this project will only focus on a few. First and foremost, we will address the issue of fragmentation and the lack of community. Through creating a system that joins the campus groups together and alerts them of other group activities, a communicative network will be fostered. This is a fundamental issue that needs to be addressed to aid the success of the movement. The second issue that can be targeted is student awareness and a means for central advertising. We hope to design a system that will provide a way to learn about current projects and on campus events, as well as create a space for organizations to promote their initiatives. Finally, we will focus on the issue of continuity and the transfer of knowledge from year to year. By designing a system that will have the capacity to store information, the turnover of leadership will become a more efficient process.

The definition of sustainability is an issue that falls on the line. It is not something that this project can address at a campus wide level, namely in regards to the Institution itself. However, through creating a network that will ideally link all those student groups within the overlapping areas of the social, economic and environmental spheres, we will be promoting a more unified idea of what sustainability is.

There are numerous issues that have been previously discussed that are too complex and large for us to tackle. The frustration expressed towards the decision making process and the bureaucracy at UBC, is by far too large for us to even touch on. In addition, the issues of student apathy, time availability, organization and elitism require a behavioral change on campus that we cannot instill.

Conclusion

The student sustainability movement at the University of British Columbia is far from reaching its potential. The fundamental flaw lies at the definition of sustainability itself, or lack there of. Without a unified consensus of what sustainability entails, the student groups will continue to work independently towards similar goals, competing, rather than collaborating. Issues such as a lack of communication, central advertising and student awareness continue to hinder success.

In the next phase of our project we hope to address some of the issues identified above, in order to create a more unified movement. Through designing a system that will aim to facilitate communication, promote awareness and provide a means for information access, we aspire to help in the evolution of this movement.

Appendix B: Survey Results

* Represents each time someone said this point

Question 1: What prevents you from joining an online network (ie. myspace, facebook, any website)?

- don't want to get hooked on another website *
- time issues *****
 - o want to spend free time away from the computer
 - o too time consuming
- privacy issues **
- advertisements *
- difficult to use **
- not useful **
- too many networks already to be a part of, and does a new one provide something different? **
- needs to be used by many people and kept up to date *
- annoyed with getting email messages *
- poor layout *
- does not provide real communication *

Question 2: What would prevent you from continuing to use an online network that you had joined?

- privacy issues *
- volume of emails received *
- don't check unless get emails saying something is new *
- time *****
- not used by others *
- inconsiderate posts *
- lack of community *
- needs to provide something you can take away from it (facebook gives connections to old friends) *
- how used it is *
- useful **
- new information needed ***
- irrelevant messaging or lots of popups*

Question 3: What would you seek to gain by joining an online network that targets sustainability at UBC?

- nothing *
- event advertising (and what is going on) *****
- better understanding of the sustainability movement *
- learning where help is needed (volunteer opportunities) *****
- list of groups ***
- discussion ***
- connecting with people ****
- better communication **
- support *
- avoid overlapping initiatives *

- trips that are happening *
- information about how efforts are making change *

Question 4: If there was an online network for sustainability, what could you gain from it that you would not gain already from your existing groups on campus?

- nothing *
- knowing what else is going on *
- opportunities for collaboration *****
- space for sustainability issues – not bogged down with other stuff *
- idea sharing between groups **
- information access ***
- connection between what UBC and students are doing *
- detailed information about what UBC has done *
- event visibility *****
- central location *****

Question 5: Some of the features we are planning on having are personal and group logins, group profiles, event manager (to input data about all events, which will allow for future reference), toolkits to learn about how the UBC bureaucracy works, and a calendar for all sustainability events and initiatives on campus. What features would benefit you and can you think of others that are not in this list?

- like calendar *****
- like group profile ***
- like toolkit **
- information about how decisions are made at UBC ***
- forum ***
- search engine/ database *
- list of projects started that need to be carried on *
- information on sustainability issues *
- description of events *
- no personal profiles *
- all of the above *****

Question 6: Would your interest in joining this network be different whether or not it was hosted by UBC (a ubc.ca website)?

- ubc.ca gives credibility *****
- no *****
- yes *
- other *

Question 7: If there is a personal login (private, but that includes your email and the groups you are a member of), what features should be included and why?

- don't know *
- personal calendar *
- small personal profile – name and area of study **
- email address for contact *
- information privacy **
- just name **
- way to notify about events of specific groups *

Question 8: Profile Picture – would you feel comfortable if it is seen by others when you “join a group” and they look at the list of members?

- yes = 70.6%
- no = 29.4%

Question 9: Would a blog or forum as an additional feature be of interest to you?

- yes = 70.6%
- no = 29.4%

Question 10: Additional comments?

- I do not want to have a login or a profile
- Very excited about this initiative!
- Check out AMS Connect
- Talk to Alice Cassidy at TAG

Appendix C: Grey box diagrams

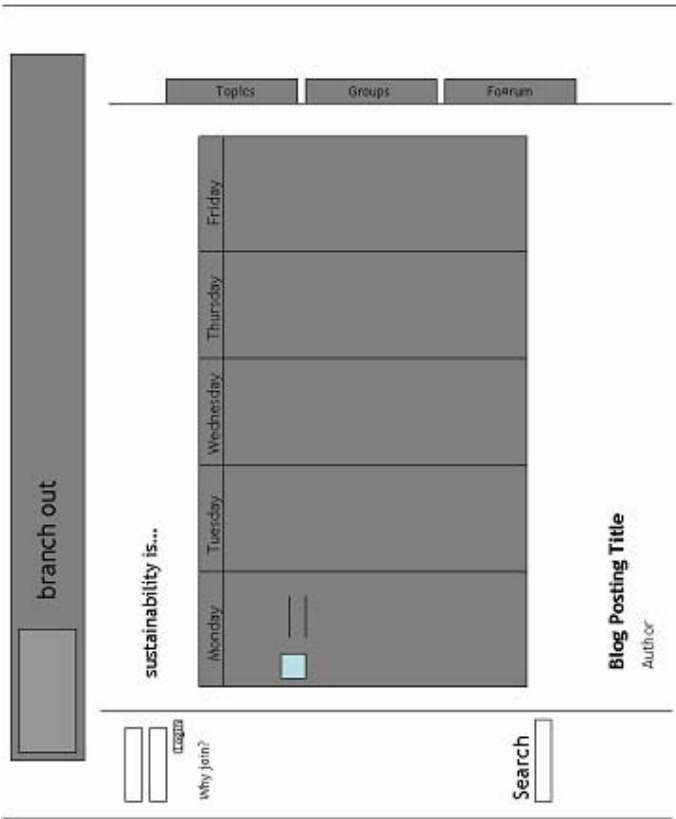


Figure 1: The General Template

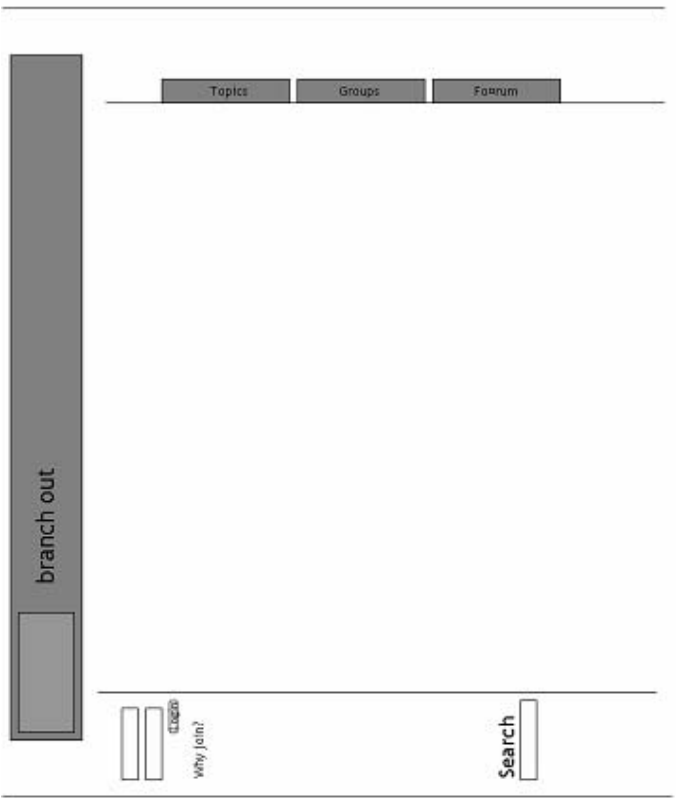


Figure 2: Main Page - User browsing the site

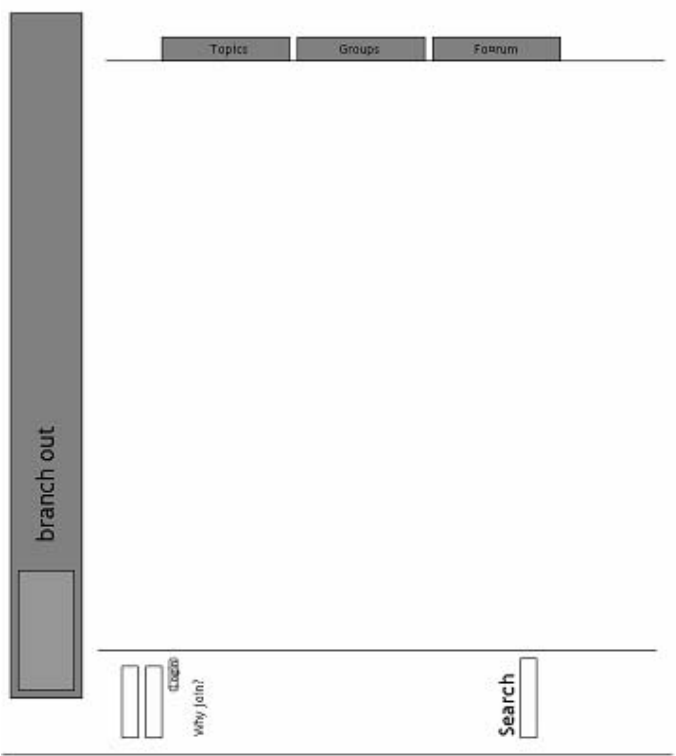


Figure 3: Event Page

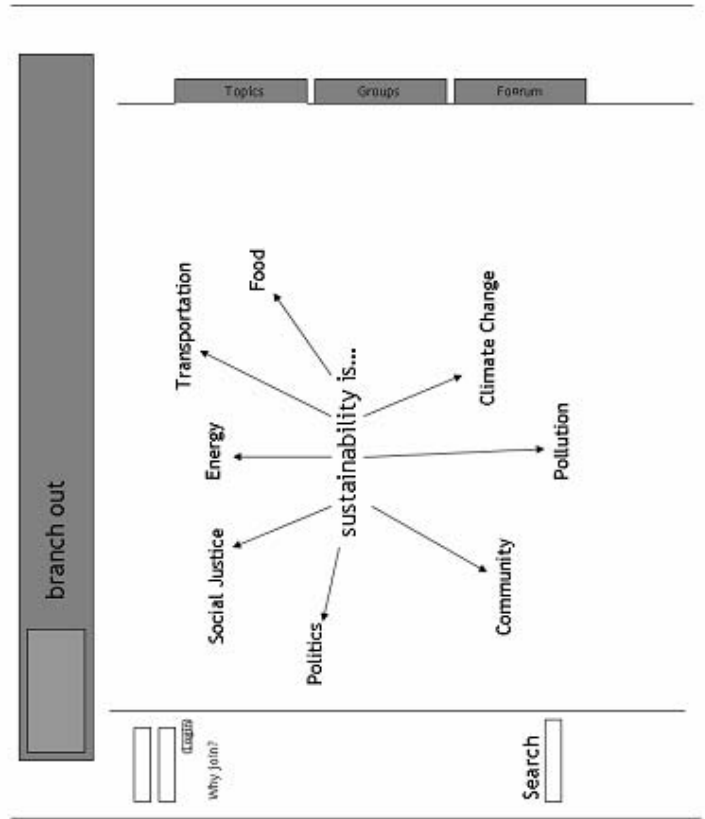


Figure 4: Topics Page

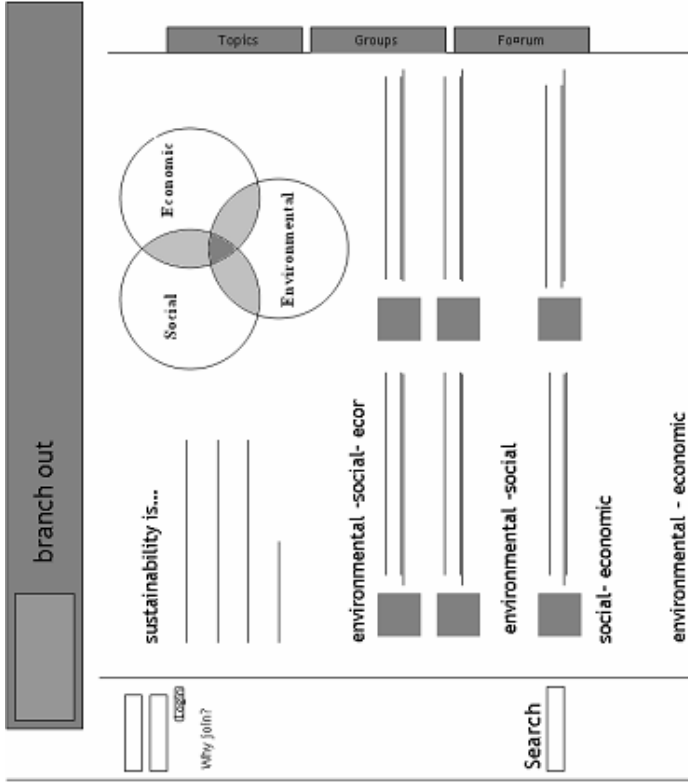


Figure 6: Group Page

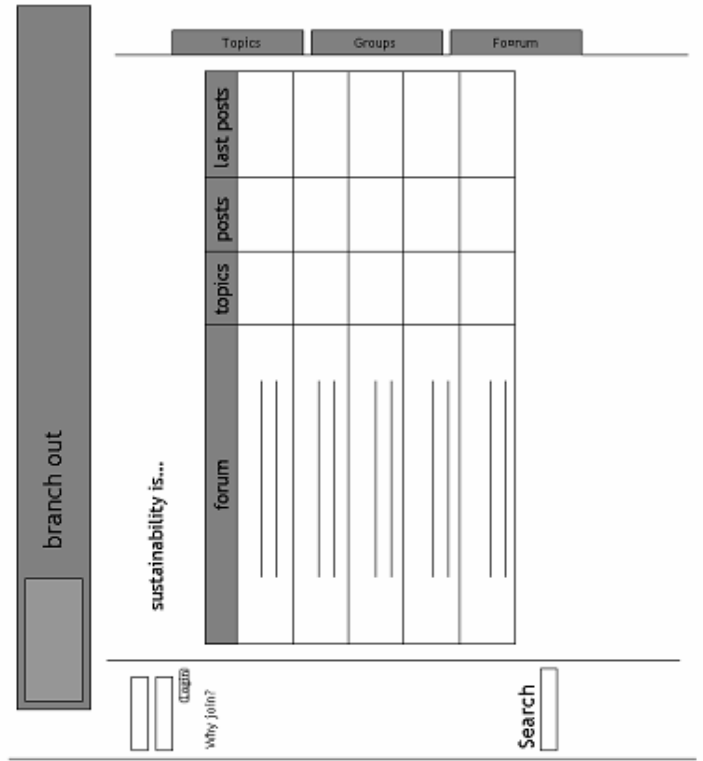


Figure 8: Main Forum

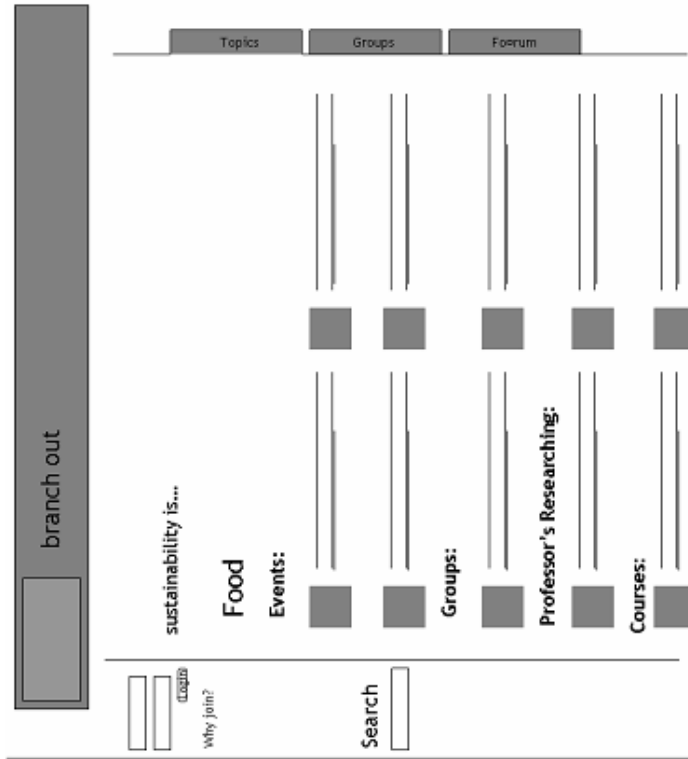


Figure 5: Sustainability Aggregator

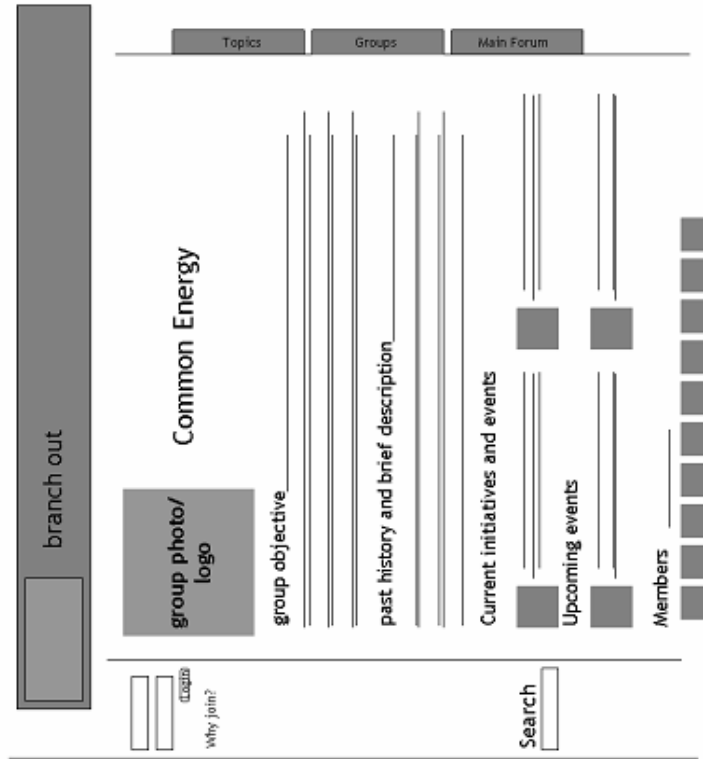


Figure 7: Group Profile

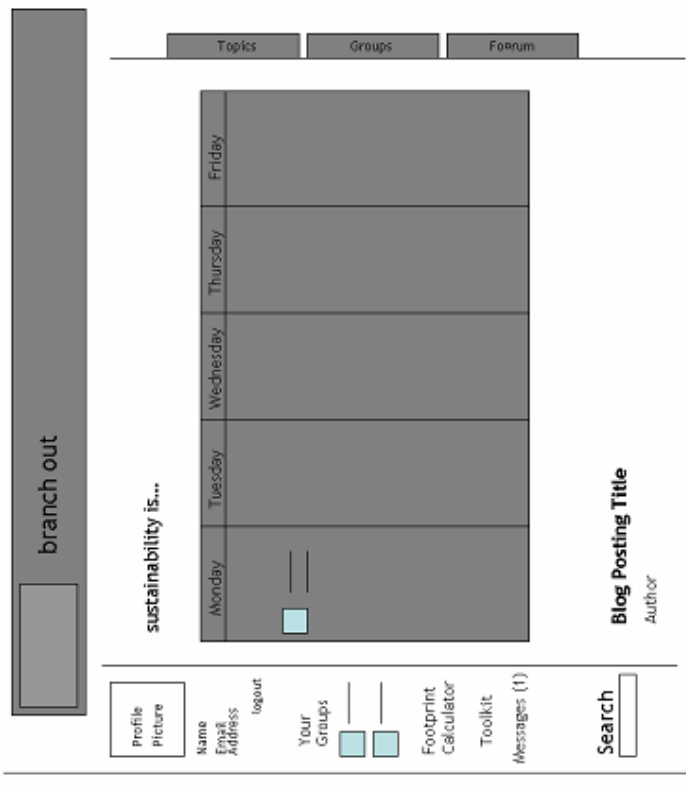


Figure 9: Main Page for a User with an Account

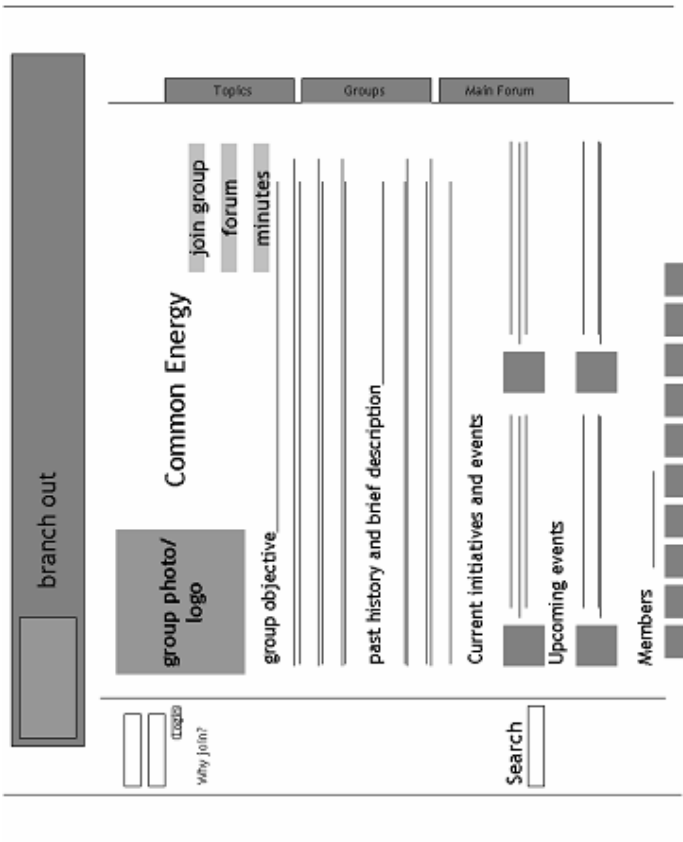


Figure 10: Group Page for a User with an Account

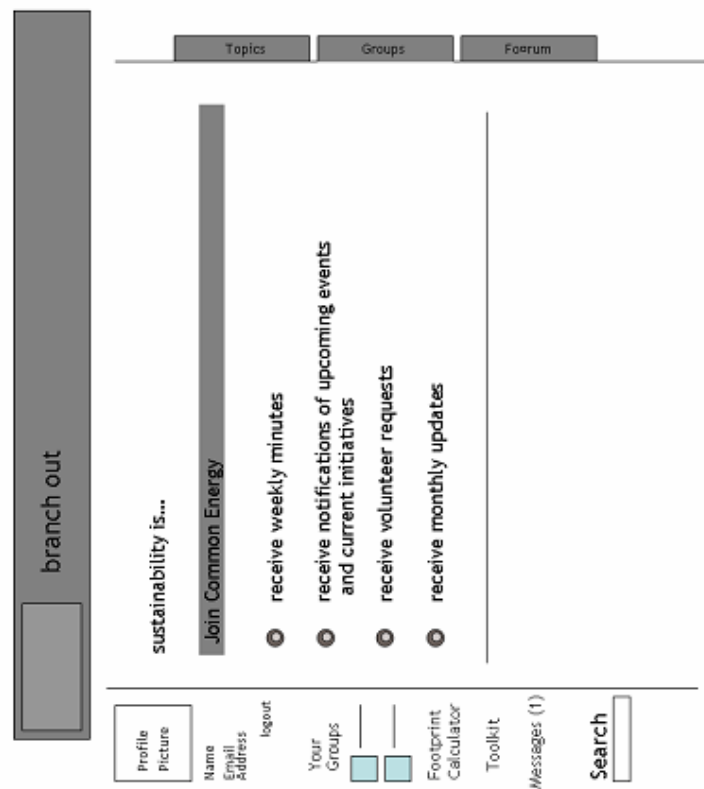


Figure 11: Join a Group- levels of commitment

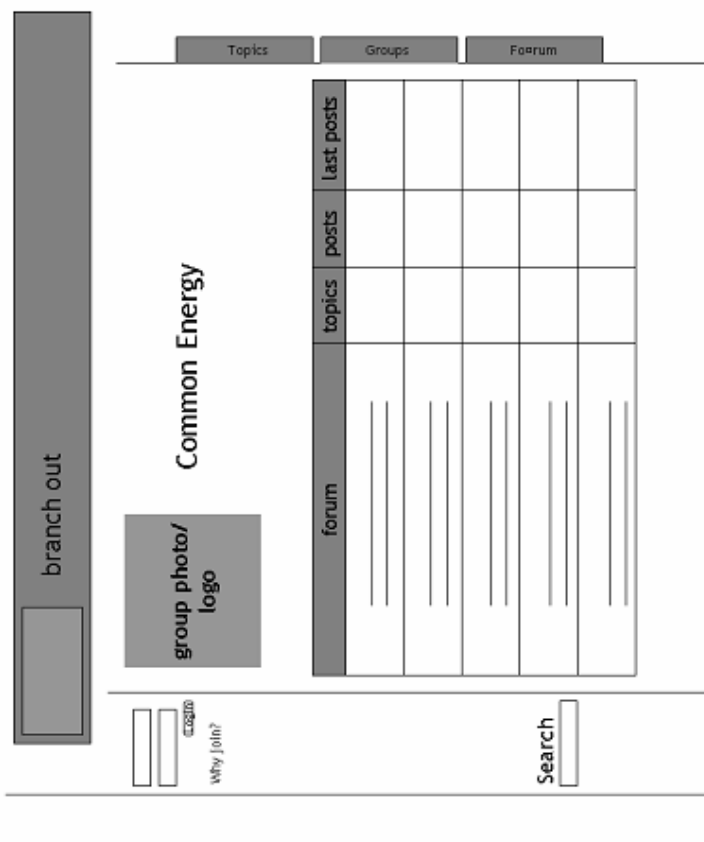


Figure 12: Group Forum

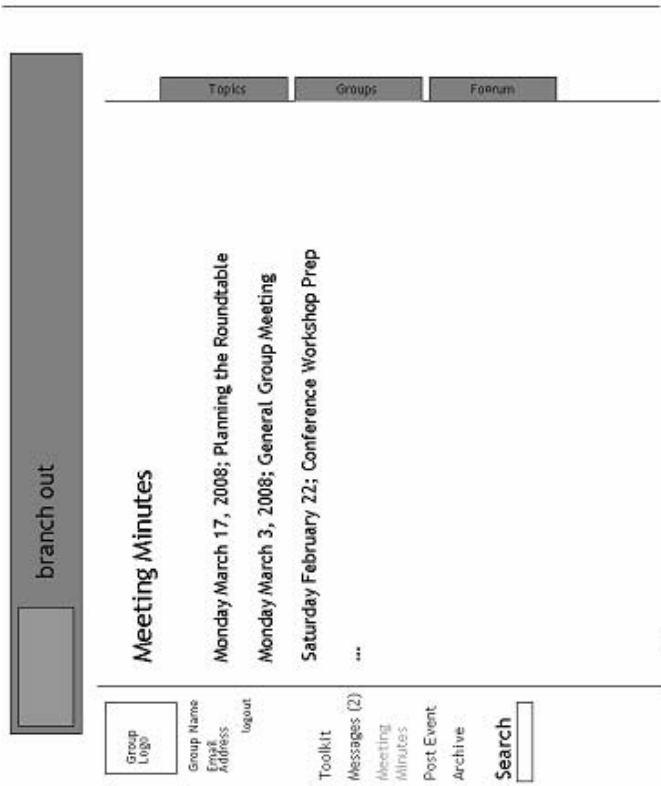


Figure 13: Group Meeting Minutes

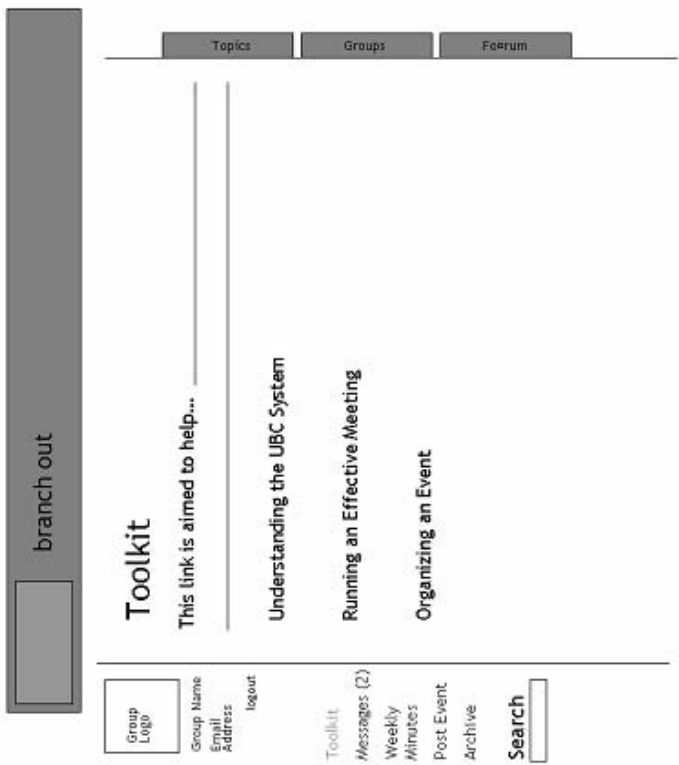


Figure 15: Toolkit

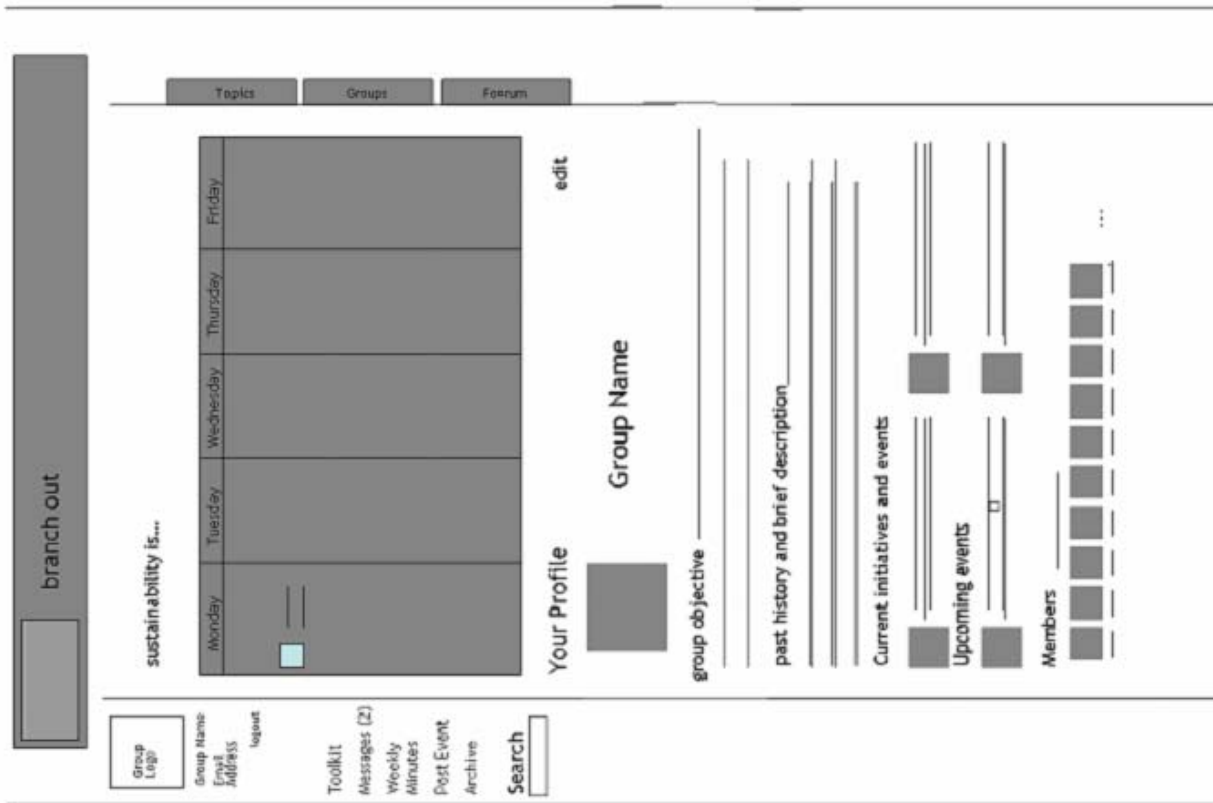


Figure 14: Main Page- Group User

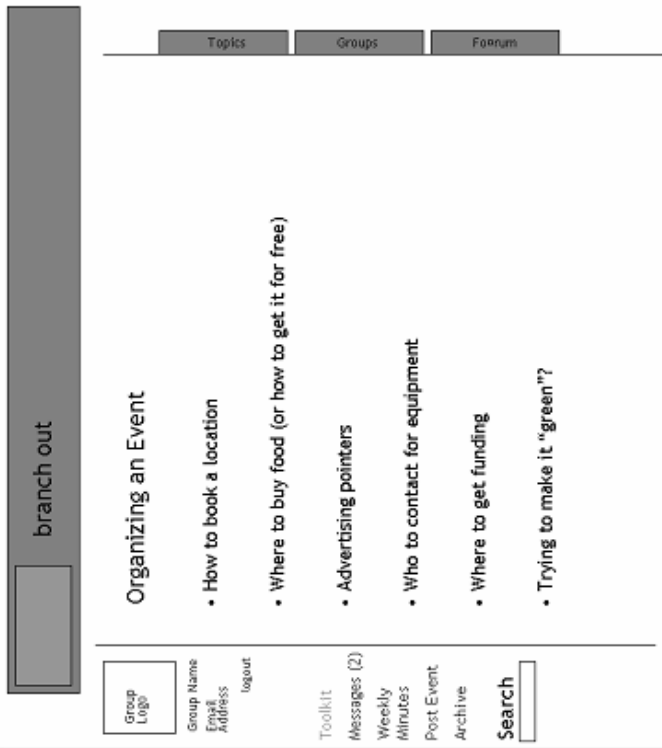


Figure 16: Organizing an Event

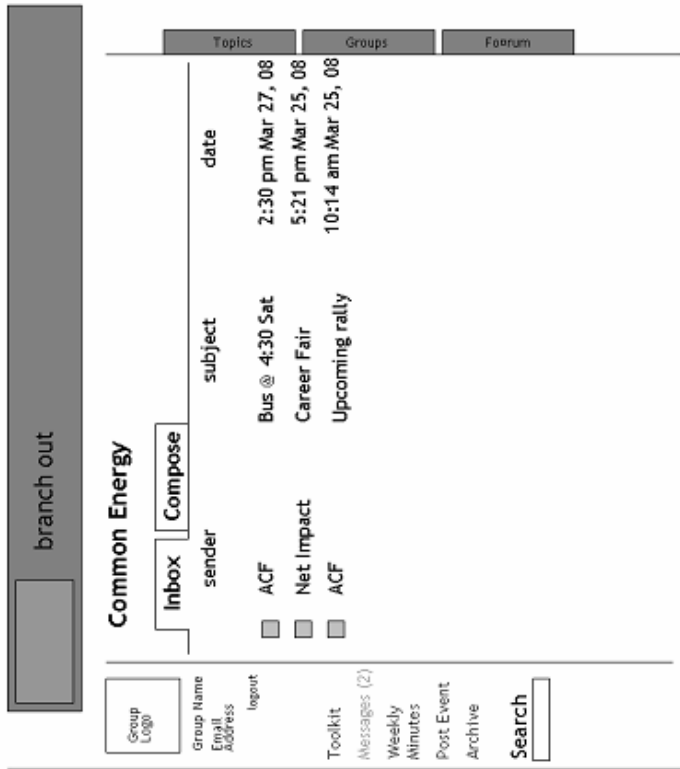


Figure 17: Messaging/Inbox

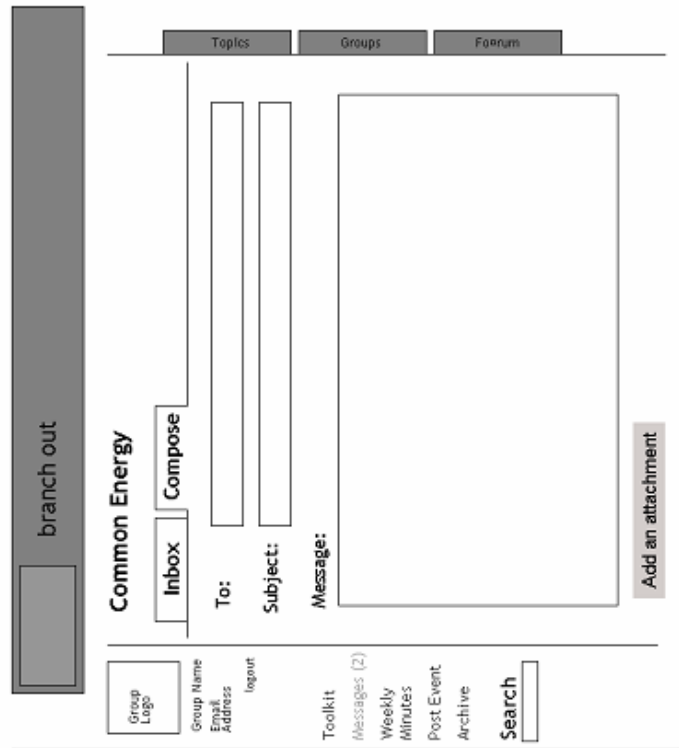


Figure 18: Compose a Message

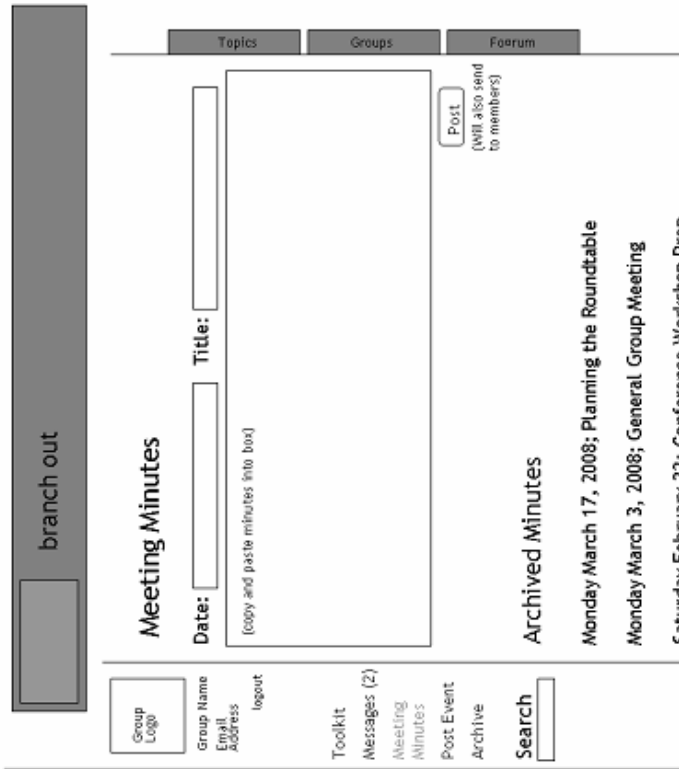


Figure 19: Posting Minutes

Welcome...

branch out

Current Issues Groups Forum

Create an Event

event photo/
group logo

Film and Art Festival

Event description

Date (DD/MM/YYYY):

Time:

Location:

Organizers + add

Thank you to:

Volunteers needed

The following information will be not be posted on the event page.
This is for archive access...

Contacts + add

Name

phone number

email

Title / how did they help you

Supplies

Comments / Recommendations for future events

Number attended:

Search

Figure 20: Post an Event

branch out

Main Archive

Common Energy Archived Events

Title of event/initiative

March 15th, 2008

March 01st, 2008

February 2008

Dance Dance Revolution- Sustainability Competition

Environmental Haiku Party

Get Evolved, Get Involved

showing 3 of 3

Group Logo

Group Name

Email Address

logout

Toolkit

Messages (2)

Weekly Minutes

Post Event Archive

Search

Topics Groups Forum

Figure 21: Archive



Branch Out

Login

Why join?

Sustainability is...

Week of March 17th - 21st

Monday	Tuesday	Wednesday	Thursday	Friday
 <p>Get Evolved Film Festival</p>			 <p>SEC Conference</p>	 <p>SEC Conference</p>  <p>Terry Speaker Series</p>

Search

Contact Us
About This Site

Lame excuses of the week (and a plea)

By: Joel Stephanson
posted: March 16th, 2008

www.terry.ubc.ca

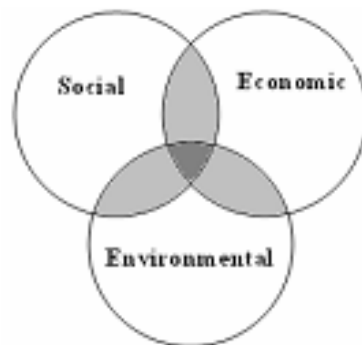
Current Issues

Groups

Forum

Figure 22: Coloured Version- Main Page

Appendix D: Venn diagram



Appendix E: Interview questions from first set of interviews

Students:

1. How would you define sustainability on UBC campus?
2. Do you think that it is an effective movement? (Why or why not?)
3. What may be limiting further success?
4. How long have you been involved in the sustainability movement?
5. What group(s) have you been involved with?
6. How did you hear about the group(s)?
7. How did you get involved?
8. Was it hard to work your way into the group?
9. Do you still have new members joining?/How do you promote your group?
10. Do you work with other groups? (If not, would you like to?)
11. What is most frustrating about organizing an event?
12. What do you think is preventing awareness about the different groups and the movement?
13. Do you see any additional issues with the sustainability movement?

Staff/Faculty:

1. How would you define sustainability at UBC?
2. What role do you play?
3. How have things changed since you started working in the sustainability movement?
4. Can you discuss the history of the movement a bit? Mainly in regards to student groups if you know that aspect.
5. What improvements have you seen? Any backward steps?
6. How has the structure of student involvement changed?
7. Have you seen any past efforts that have failed? Why did they?
8. Do you see any flaws in the communication within the movement?
9. What are the key issues within the sustainability movement that need to be addressed?

We are trying to address some of the issues and are trying to figure out the most effective format. Have you seen any groups that have tried to work together? What efforts have been successful? Do you think the internet could be useful?

Appendix F: Proposal

April 16th, 2008
Emma Hodgson and
Sarah Nyrose

Proposal
UBC Sustainability Social Online Network

1.0 Background:

Student groups within the sustainability movement at the University of British Columbia are continually facing issues that limit their success. These include:

- Lack of communication
- Low levels of collaboration
- Overlying sense of fragmentation.

As students involved in this movement, we recognized the need for a supportive structure. This proposal is for the implementation of a network designed to address some of these fundamental challenges.

2.0 Project Description:

This proposal seeks funding from the Sustainability Office for the implementation of a student sustainability social networking tool.

The projected costs for this project are \$10 000- \$ 30 000.

Other funding opportunities include:

- Innovative Project Funding from the AMS
- Funding from the Student Environment Centre
- Possible government grants

2.1. Objectives

The design of this social online network is envisioned to:

- Link together members of the UBC community
- Enable groups to display their goals and objectives
- Give students the ability to easily access information about the events, initiatives and groups working within the UBC sustainability movement.

This design will allow student groups to creating connections with other campus organizations, thereby creating a unified campus and providing a means for effective communication

2.2 Methodology:

The foundation of this site is built upon utilizing a social network, which will allow the various groups and the student population to form an online community. Taking into consideration elements of web design, techniques for fostering sustainable behavior and applications available through Web 2.0, we designed numerous features aimed at unifying key members of this movement. These main features include:

- An events calendar
- Group profiles
- Toolkits
- A forum for discussion and a
- A sustainability aggregator.

These will provide a location for central advertising, easily accessible information about the different groups, helpful pointers at running events and organizing meetings, a platform for discussion and a means to search through everything related to one area of sustainability (eg. Food). As well, the overall design is targeted at fostering a sense of community.

3.0 Request:

The list of features above is by far not exhaustive and simply provides a foundation for expansion. We would like to request funding for the development of this project as well as funding towards a more permanent position of a manager of the site. The first year of launch will require more time than the following years, with a goal of the site needing only 2 hours per week.

High cost scenario for development: \$20,000 – 30,000

This includes:

- Hiring a professional firm to develop the site in a more thorough and timely manner

Low cost scenario for development:

This includes: \$10,000 – 15,000

- Working with students through SEEDS projects, as well as hiring a student to develop the site

4.0 Conclusion:

In light of the Universities' commitment to become carbon neutral, we believe that unifying the student groups and student population would be beneficial to the University campus as a whole. By building upon the existing movement, the student groups can actively participate and collaborate with the University towards a common goal.