

# A Day in the Life

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## A Student's Average Day in a Sustainable Residence Hall

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## Executive Summary

This document is an attempt to identify what an average day in the life of a student would be like living in a Sustainable Residence Hall (SRH) at the University of Cincinnati. Far beyond building “green,” the aim is to adopt a sustainable way of living which involves examining choices made every day and how they relate to the triple bottom line of sustainability (community, ecology and economy). This narrative seeks to identify and focus on the social aspects of sustainability rather than focusing on which technology should be implemented or what materials should be used in a sustainable residence hall. The focus is not to give specifications of various building systems, so instead we try to emphasize how systems in the SRH impact students’ lives and thought processes as they live, work, and learn. Our attempt is to try something new, something never tried on a domestic college campus – keeping the user (the student) in mind through the planning, construction and operation of the SRH.

Our story follows a fictional student character, “Susie Q Sustainable,” through a normal day of classes, meetings and activities. Over the course of Susie's day, we offer numerous recommendations for technical feedback mechanisms that will provide student users with real-time data to make informed, and hopefully sustainable, decisions. Through this integration of building systems and conscious decision making, the SRH functions as a living laboratory for sustainability in the non-traditional sense: as a living laboratory for social and technological studies, unlike other colleges and universities and unlike traditional “green” buildings or residence halls.

Through our research we found no other college or university has approached the idea of a sustainable residence hall in such a manner. This gives UC the opportunity to leap forward in the arena of sustainable studies with other schools already considered leaders on the subject.

Numerous schools have built LEED (Leadership in Energy and Environmental Design) certified residence halls and mixed use buildings, deeming them Living-Learning centers and the like, yet we will focus where they have neglected to, on the social aspects of sustainability. Feedback from faculty, staff, administrators and students has influenced our view of what a day in the life would look like. We focus on the building systems and the social effects they have on students, or in other words, the communication between these systems and students.

Our student, “Susie,” has a typical day just like any other. She wakes up, goes to class, meets with her advisor, works on her homework, and even has some down time to hang out with her friends. It sounds like the average day for any student, right? The profound difference between Susie and the next student is that she lives in the SRH, a building that empowers her to make sustainably conscious decisions every day. Susie’s brother, “Joe Snoght Sustainable,” resides in a traditional residence hall at UC. He does not have the tools, knowledge, or conscious to make sustainable decisions as he goes about his daily routine. But, he is lucky enough to have a little sister who keeps him in the loop and in line.

The residents of the SRH consist of a mix of upperclassmen and freshmen. The SRH student life program is designed specifically to educate students to be more sustainable during their first two years at UC. Since students at a maximum can only live in the SRH for two years, the program is designed to teach students to employ more sustainable practices at traditional residence halls after their time in the SRH and in life after college. Combined with apartment-style faculty living; faculty and administrative offices; labs; study rooms; classrooms; alternative energy sources; a trade, cap and reward program; and a Café, the SRH creates a sense of place for sustainable studies at the University of Cincinnati.

# History of Sustainability at the University of Cincinnati

- 2002 – [Administrative Memo 135](#) Issued – Comprehensive Policy on Environmental Sustainability
- Nov. 2004 – [Process Guide: Applying Sustainability to UC Projects](#)
- 2006 – [Center for Sustainable Urban Engineering](#) formed
- Fall 2007 – President Nancy Zimpher and the Board of Trustees earmark \$40 million to build a Sustainable Residence Hall (SRH) in the UC Foundation capital campaign
- Nov. 2007 – 50 UC students travel to Washington, DC for the [Power Shift 07](#) Conference, to give students a voice on sustainability and solving global warming
- Jan. 2008 – [Focus the Nation](#) teach-in event held on UC's campus
- March 2008 – [Presidents Climate Commitment](#) kick-off event held
- 2008 – SUE becomes “The Oerther Center for Sustainable Studies,” a trans-disciplinary center for teaching sustainability, SUE continues within the Oerther Center
- 2008 – UC Sustainability web site launch in coordination with the Oerther Center
- Fall 2008 – Planning and design begins for the SRH
- Spring 2009 – Students vote for creation of a permanent Sustainability Coordinator to oversee university-wide sustainability efforts
- March 2010 – Ground breaking ceremony held for the SRH
- Dec. 2011 – Construction of the SRH is complete
- Jan. 2012 – First residents move into the SRH

## Our Student's Profile

Name: Susie Q Sustainable

Age: 20

Year living in the SRH: Second

Major: Psychology

Hometown: Anderson Township (eastern suburb of Cincinnati)

Interests: Playing sports, movies, going to concerts, reading, and hanging out with friends.

# A Day in the Life – Hourly Break Down

The following outline is an hour-by-hour break down of a day in the life of an average student living in the University of Cincinnati's Sustainable Residence Hall (SRH), in our case, Susie. This story details social systems, building systems, and interaction between the two. This is not all-encompassing, but a fairly detailed description of what a day might look like. This narrative will also include alternatives to some of the systems we suggest and more detailed descriptions of concepts and ideas in a side-bar when necessary. The story takes place on Wednesday, September 25, 2013.

## 7:00 AM - Wake-up Call

Susie wakes up in her two-person, traditional-style dorm room and begins to get ready for her day.<sup>1</sup> She exits her room and walks around the corner to the floor's semi-private bathroom to shower and brush her teeth. In order to turn on the water, she swipes (and leaves in place) her Bearcat Campus Card (BCC) to register her as the user of the shower and to track her water usage.<sup>2</sup> When she is ready to turn the water off, she removes the card from the swipe-machine.

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<sup>1</sup> Surveys have shown that incoming college students prefer “apartment style” dorms defined as single occupancy, self contained units. However, this arrangement does not allow for much social interaction and results in lower chances of academic success and higher rates of dropping out after the first year of studies. As students are required to share more space with other students, social interaction naturally increases and students are much more likely to excel academically and also more likely to finish their course of study. Optimum social interaction is determinate on the physical layout and scale of a given residence hall. If building densely, social organization is likely to be focused on shared spaces per floor. If building less densely, a communal arrangement of 10-20 students per structure offers maximum social interaction.

<sup>2</sup> The Bearcat Card system (BCC) is a powerful tool already built into UC's campus infrastructure. Tracking options through Blackboard (BB) allows data to be stored, shared and mined. Furthermore, BB allows some information to remain private such as cash balances and other information to collect at the aggregate level to allow averaging without a trace back to the individuals account.

If a resource management system is used to control overall water and or electricity consumption, BB could be used as the medium to buy, trade, and or sell utility credits to all the residents of the SRH. Another possibility for the appropriate way to reward or punish students for utility savings or abuse could come in the form as a credit or

Not to mention, she uses soap and a shampoo/conditioner that was made from all natural, organic materials and purchased from a local farmer's market. Water faucets throughout the SRH work in the same manner and the low-flow toilets, equipped with a two-flush system, have the same mechanism as well.<sup>3</sup> The water usage is tracked so that the consumption information is available to view on a web site or on a computer in the lobby of the SRH.

After she showers and brushes her teeth, Susie gets dressed. She even lets her hair air-dry to save on energy costs. Her clothes are not all the most sustainable options available, but she has made an honest effort to be more sustainable than most. Some of the highlights include a pair of jeans made from organic cotton and earth-friendly dye and her shoes which are made from hemp and recycled tires. She loads up her textbooks for the day and her Energy Star laptop into a locally made, eco- and animal-friendly, over-sized handbag and heads downstairs to the SRH Café. The Café serves fair-trade, shade-grown, organic coffee and other organic pastries and food items. Susie gets a cup of coffee in her reusable coffee mug and a cup of strawberries, grown by a local farmer, for breakfast. She finishes her breakfast and mindfully scrapes compostable material into the designated receptacle and heads off to her first class.<sup>4</sup>

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charge from UC housing. Giving or charging students for their savings or over consumption would be a fair method of quantifying the collected data with a financial outlook.

<sup>3</sup> If appropriate to scale, some toilets may be connected to a living machine which may appeal to students studying biology and could even serve as a small model to study for green urban infrastructure, which may interest urban planning, civil engineering and other students. If a greenhouse or outdoor gardens are part of the overall scope of this residence hall, composting toilets should also be implemented to help complete the waste to nutrient cycle. Composting toilets can be organized as stand alone units located close to the growing areas or they can be combined into a larger system with one composting chamber serving multiple toilets. Both configurations have their advantages and the final consideration of organization should be based on the intended scope of the composting operations as well as scaled to the overall development.

<sup>4</sup> Compostable organic material accounts for 20-25% (volume) of typical residential waste and about 60% of the volume of total trash generated by food service operations. Regardless of the type of sustainable dorm ultimately conceived, a great deal of waste can be reduced by composting. Ideally, the composted material will be used to grow crops locally but the material can also be used on UC's grounds to increase soil nutrition and reduce the need to use chemical fertilizers campus wide.

## **The SRH Trade, Cap & Reward Program**

Susie and her roommate each monitor their electricity use separately. The room is laid out so Susie has the left side and her roommate has the right. The girls only use electrical outlets on their side of the room, so they can each see how much electricity they are using at any given time. They even have a floor lamp and a desk lamp on each side of the room for the times when one roommate is there and the other is away. Each side of the room has a small, LCD display unit showing average electricity usage in kWh (kilowatt hours) over different time frames (day/week/month/year), so the girls can keep tabs on how much energy they are using.

All of this information is tracked on UC's Blackboard web site, as the monitors relay the information directly to the web site tracking system. This allows all of the SRH residents to view and track their usage and compare it with the other residents. Water and electricity are not the only thing that is tracked. Each student has their own trash can and recycling bin in their room, and there are no trash cans or recycling containers in the hallways or common areas (except on the first floor) so students can track all of their waste and recycling. Every Monday, the trash and recycling is picked up and weighed, allowing students to view on Blackboard how much they use and recycle compared to the rest of the SRH residents.

The Trade, Cap & Reward program in the SRH is unlike any other at a college or university and comes in multiple parts. Students are allocated a certain amount of credits for water, energy, and waste at the beginning of every semester. This is not an unlivable number of credits, but is slightly above average, making the SRH a place for students who want to learn how to reduce, reuse and recycle – not for student who must take 30 minute long showers or leave every electronic device they own powered on 24/7. If students over-use their resources and run out of credits, they can purchase or trade more on Blackboard. So, a student who likes to take

long showers but doesn't use much electricity can trade some of their electric credits for more water credits. If students are entirely out of credits, that can purchase more of any kind. This gives students a real sense that these are limited resources. And what better to motivate students to conserve than a monetary reward. For the top five students in a number of different categories, each of the winners receives a gift-card to the UC Bookstore. The amount of the gift-card varies from category to category and semester to semester, and is relative to the amount conserved or recycled compared with the other residence halls.

### **8:00 AM - Sustainability 101**

Susie doesn't have to go far to get to her first class, which is in one of the 25-person classrooms in the SRH. Her first class of the day is Sustainability 101, an introductory course on the principles of sustainability and the idea of working toward the triple bottom line in all aspects of life.<sup>5</sup> In the class there are mostly freshmen with a few upperclassmen. As the course is required of all students per the university's Breadth of Knowledge requirement, students of all different majors are in Susie's class. The class is taught by an Environmental Studies faculty member and also is a required course for the Sustainability Certificate, which is available to any undergraduate student. Today in class the students are having a discussion on the principle of buying local goods versus those from other parts of the country or world. On its face, the principle of buying locally produced items is reasonably a good one, Susie learns. But, after some investigation, it might not always be the best option. For example, it would be better to buy

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<sup>5</sup> Class credit could include a wide range of activities needed to maintain the sustainable practices themselves. Students should be able to tailor activity to complement their major through the administrators of the sustainability studies department. For example, a political science major could get credit for running a community outreach program teaching area residents about implementing sustainability practices at home. A biology or horticulture major may get credit for helping out in the greenhouse. A civil engineering major may get credit by monitoring the effectiveness of a living machine.

organic, free-range chicken that was shipped 100 miles to Cincinnati versus chicken that ate feed laced with herbicides and pesticides, were treated poorly (eg. locked up in a tiny coup) and was only shipped 25 miles to Cincinnati. The discussion gives Susie and her fellow students some good insights into determining the best choice to make when faced with such a dilemma.

The classrooms in the SRH have their own uniquely sustainable features. Every classroom is on the ground floor so it can be accessed by students who are not residents of the SRH, unlike the private, upper floors where student rooms are located. Each classroom is nearly fully illuminated by natural light. In fact, 98 percent of the “livable space” in the SRH is significantly lit by natural light. The ergonomic chairs and desks in the room were locally manufactured by Proctor & Gamble and designed especially for the SRH by a studio of industrial design students in the College of Design, Architecture, Art and Planning. Each classroom has a variety of indoor plants native to Cincinnati and a small, flowing stream that is part of the SRH’s Water Management and Retainment System (WMRS).<sup>6</sup> The plants improve indoor air quality and, combined with the stream, provide for a way of integrating the built environment with the natural environment. Although some students tease Susie because the sound of running water increases the number of trips she takes to the restroom, she enjoys having a piece of nature in the classroom.

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<sup>6</sup> Storm water management is an area often overlooked in large scale building systems and should be addressed. During thunderstorms and periods of significant rainfall, the combined sewers in the older parts of Cincinnati often bypass treatment as the sudden surge of water is too great and therefore untreated sewage and industrial wastewater flow directly to open bodies of water. One way to compensate for this is to include water features inside and outside a building and/or collecting the water for re-use as grey water. Grey water is any water that is not clean enough to drink but contains no serious contaminants that prevent it from being reused. Typical plumbing systems use purified water to flush toilets when rainwater or water from a sink would serve just as well. Water purification involves chemicals, electricity and delivery so there is no need to waste these resources if the water is not to be consumed. Grey water storage can be as simple as storage tanks in the upper levels of a building to collect rain water from gutters and gravity feed down to toilets for flushing or a more complex system could store water in interior water features (fresh water fish and aquatic plant tanks, waterfalls, small streams, etc.).

## **The WMRS – Reducing, Reusing, and Recycling Water in Every Possible Way**

The SRH at UC features one of the most advanced and extensive gray and waste water treatment systems on the planet, the Water Management & Retainment System (WMRS). What makes the system so unique is how visible it is in most parts of the building. Three smaller systems (grey water, black water, and fresh water) make up the WMRS and function independently, but both result in water being recycled numerous times throughout the SRH before it exits the building. Water enters the system in one of two ways – through captured rainfall or through pipes from the city water supply. The fresh water from the city is only used in the sinks. Grey water is used in the showers and to water the plants surrounding the SRH and the green roof. Black water is put through an intensive filtering process using live plants and stones, and the black water is eventually clean enough to flow in the streams throughout the SRH and the fountain on the green roof. Waste water from showers, bathroom sinks, washing machines, kitchen sinks and even dishwashers is reused and recycled in the WMRS.

### **9:00 AM - Study Time**

During a break between her classes, Susie meets up with a few classmates at one of the study lounges in the SRH. They are working on a group report for one of her other classes. As all of her group mates are residents of the SRH, they meet in one of the private, resident-only lounges on the second floor (as opposed to public study spaces and common areas on the main floor). Before they sit down and get to work, Susie grabs a drink from the Energy Star rated vending machine in the hallway (which she holds on to so she can recycle it in her room). Although the project Susie's group is working on isn't sustainability related, a number of professors university-wide had implemented sustainability principles into their courses. This

came about as a fundamental interest in advocating the Social Responsibility Breadth of Knowledge requirement mandated by UC's commitment to general education for all students.

### **Common Areas, Labs, and Study Rooms**

A variety of different furniture is found in the study area. Many of the tables and chairs were hand-me-downs of sorts. Either UC was going to throw them away or they were donated from various community organizations, but since they were fixed up, they are being reused and diverted from the landfill. The chairs are made from recycled materials and were designed by students in the Interior Design program at DAAP. Other wood tables are made from Forest Stewardship Council certified wood and the room takes advantage of natural light and eco-friendly, non-toxic carpet.

### **11:00 AM - Adviser Meeting**

After getting a good deal of work done on with her group mates from her other class, Susie heads back downstairs to meet with her faculty adviser. The SRH has a number of offices on the ground floor available for faculty members and the Sustainability Coordinator. Faculty can enter into a drawing to get an office in the SRH for a two-year period, so numerous faculty members from different departments have the opportunity to spend time working in the SRH. Since Susie is a Psychology major, her adviser was one of the lucky ones to get an office in the hall. They talk about her degree plan and how two of the courses she is taking this semester fit into the requirements for the sustainability certificate. Similarly lucky, her adviser resides in one of the professional apartments in the SRH. The SRH also houses the office of the Sustainability Coordinator.

## **Faculty Housing**

A unique feature of the SRH is its faculty housing option. The residence hall was built not only to appeal to students interested in sustainability, but faculty and administrators as well. On the third-story, private level of the SRH, six apartment-style units for professional members of the UC community were placed intermixed with the student rooms. This new idea of co-housing in a Sustainable Residence Hall is unique to UC. With the co-housing option available, students, faculty, and administrators can live, work, and learn side-by-side all in one building. The apartments come furnished with similar items as the student rooms, including reused or recycled furniture items. And each apartment has a stream (part of the WMRS) with live plants similar to those mentioned in the classrooms. Residents of the SRH apartments participate in the trade and cap program as well as the recycling and waste monitoring program. (It has been rumored that still UC President Nancy Zimpher was considering moving into the SRH.)

## **12:00 PM - Dining-in: Lunch in the SRH**

Once Susie finishes her adviser meeting and planning her course of study, she takes the central staircase back up to her room. There is a desk staffed by a SRH student staff member at the foot of the central staircase in order to protect the privacy of the residents of the upper floors. After providing the student staff member her BCC, Susie ascends the staircase which wraps around the SRH atrium, which utilizes natural light and natural air flow patterns. Once she gets to the second story, she walks down the hall past a few of the study rooms to a shared kitchen. Approximately 20 students from the West wing of the SRH share the kitchen and are responsible

for its cleanliness and upkeep. The kitchen is equipped with Energy Star appliances, including a large refrigerator, an electric stove/oven, and a microwave.<sup>7</sup>

Susie grabs a large hemp bag she uses to keep her food separate in the refrigerator (marked with her initials - SQS - so nobody else mistakenly takes it) that has some produce from a local farmer's market. She makes a turkey sandwich on wheat bread with some veggies and lettuce. She then grabs an over-sized, water bottle from her handbag and fills it up from the water faucet in the kitchen and puts some ice cubes in it from the freezer. Susie bought her water bottle from the Café downstairs after the university decided it would dramatically scale back its usage of traditional vending machines that dispense pop, juice and water in one-time-use water bottles. Now, the university sells students the water bottle that Susie has for an inexpensive price (which literally saves tons of plastic that would need to be recycled) and has fountain drink machines for pop and juice located conveniently around campus. Students who want water can get it from the tap or drinking fountains. With lunch prepared and in-hand, she heads back out into the hall and over to her room to check her email over lunch.

After a short walk down the hall, Susie gets back to her room, pulls her laptop out of her bag, sets it on her desk, and plugs it in to charge. As she begins to eat her delicious lunch, Susie logs-in to check her Bearcat On-Line Email account. Aside from an email from her adviser and a few others from professors, she notices the weekly “SRH Update” is unread in her inbox. Like most other residence halls, the SRH has a student governance association, which Susie is a part of. The brief newsletter comes out once a week and is published by the a few students in the SRH-SGA, who alternate positions with the change of semesters. As Susie reads over this

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<sup>7</sup> It is much more efficient to have students share an industrial-sized refrigerator than each have their own Energy Star mini-fridge in their own rooms. Additionally, the shared kitchen promotes social interaction and community building

week's installment, she notices the weekly "Sustainability Tip," which is a reminder that residents can recycle non-traditional items in the SRH like batteries, DVD's, cell phones, and even foam packaging on top of the plastics and glass items more commonly recycled. The "SRH Update" also has news updates regarding sustainability at UC, local, national and international levels. Periodically, the newsletter has a "Cool New Product" section that highlights sustainable products and where to get them. This week's "Cool New Product" is an eco-friendly backpack that is made from 98 percent recycled plastic bottles. Susie enjoys reading the newsletter and reads it regularly. She even used to help produce it for the SRH-SGA, but now has a different role within the organization. Today, Susie had no waste left over from her lunch – she was hungry and finished her entire sandwich. After responding to a few other emails she packs her computer up and swaps out her morning books for her afternoon classes, and heads back out.

### **Susie's Room**

Susie's room is furnished with the most sustainable materials possible. It isn't perfect, but it is more sustainable by leaps and bounds than the average students' room. Her room came equipped with a compact fluorescent light bulb in every fixture. She and her roommate both purchased Energy Star laptop computers per the university's recommendation. The mattress and box spring of Susie's bed are locally made from natural, organic, renewable resources, as are her sheets. The recycling container and garbage can are even made from 100 percent recycled plastic. And the dressers and desks were refurbished from ones that would have otherwise been thrown away.

### **1:00 PM - Bathroom Break and Back to Class**

Susie knows she needs to conserve the resources she uses personally. So, after she locks her room and heads downstairs, she elects to use one of the four composting toilets (two in the men's and two in the women's bathrooms) in the restroom adjacent to the lobby of the SRH. She knows it will cost her at least 1.5 gallons of water to flush the low-flow, dual flush (one for solids, one for liquids) toilet in the bathroom upstairs, so she decides to use the composting toilet downstairs. The stalls and tiles in the bathroom are made from a mix of organic and recycled materials, and they are clearly labeled so everyone can read about it when they use the bathroom. There is also a plaque on the stall of the composting toilet that explains how it works. So, as residents, other students and visitors use the toilet they can learn about the technology while listening to the funny fizzing noises the toilet makes. Plus, Susie knows her professor for her 1:00 class is always at least five or ten minutes late.

Susie's professor for her 1:00 class hasn't yet incorporated sustainability into the curriculum, but he decides he wants to hold class in the courtyard today. The 35 students in her class file out the door, through the lobby and to the courtyard's small amphitheater for class. The courtyard of the SRH is primarily natural and not built environment, except for the walkways and amphitheater. Her professor gives a lecture while the students enjoy the pleasant 75 degree, sunny day and the beautiful natural scenery of the courtyard. Rather than have the well-trimmed, well-watered, pristine looking yard of grass, the courtyard is heavily-dotted with native trees and shrubs. Susie likes to take notes on traditional notebooks, but she found it more sustainable to use her laptop instead. As class is wrapping up, she puts her laptop "to sleep" by pressing the hibernate button and packs up her things.

## **2:00 PM - Community Service Hours**

In between her 1:00 and 3:00 classes one day a week, Susie volunteers an hour of her time to earn some community service hours. There are a number of things students do around the SRH to contribute to the community. Today, Susie is cleaning off the photovoltaic solar array on the roof of the SRH to maximize their efficiency. To clean the panels, the students use an eco-friendly cleaning solution. Some of the other service opportunities Susie takes part in are maintaining the greenhouse and garden; picking up litter and recyclable items on or around campus; working in a soup kitchen to feed women and children; giving tours of the SRH to UC visitors and prospective future students and parents; and holding workshops to educate fellow members of the community on how to be more sustainable. All of the community service projects are managed by the Community Service Committee made up of student members of the SRH-SGA.

As monotonous as cleaning an extremely large solar array might be for some students, Susie finds it more fun and relaxing because the students do it in a group. Susie and about five other students work together to clean the photovoltaics as a team instead of just individually. They usually only do this specific task once a month, but in the winters, after the rare but substantial snow storm, students volunteer to sweep the snow off of the panels when necessary. One of Susie's favorite activities is to go to a local school and give a presentation about sustainability and the SRH to younger students. Through these efforts, students are able to accumulate volunteer hours for scholarships, honorary societies, and most importantly, they are able to give back to the community. When the students finish cleaning the 150 kW photovoltaic array, they replace their cleaning supplies in a “janitor’s” closet near the entrance to the roof. The students then go on their separate ways and Susie heads off to her last class of the day.

### **3:00 - Last Class of the Day**

Although it's rather an anomaly, Susie has all three classes in the SRH today – the two other classes she has on Tuesday and Thursday aren't in the SRH and last quarter she only had one class there. After she goes downstairs from the roof entrance, she heads down the hall and into one of the smaller sized classrooms, more like a conference room, for her Creative Writing class. She signed up for the class not because she particularly enjoys writing, but that she heard the professor was an avid environmentalist (hence his class being held in the SRH).

For the first half of the class they have a free writing exercise. The professor tells them to write on the following topic: “If you could only do one thing to make the earth a better place what would it be?” Susie isn't the biggest activist, but she has come to learn a lot by living in the SRH and her mind immediately fills with ideas. “Try to abolish coal power plants, completely,” she writes. “No, try to stop corporations and factories from polluting water... no. I should use the framework that already exists to make a difference here, in Cincinnati. I should teach people, tell and show them how to make the earth a better place and how to protect the environment while living in an urban setting.” Following the old paradigm “think global, act local,” she determines this is her best shot and she should run with it. She goes on for about 15 more minutes about how exactly she could do such a thing.

After their initial creative writing session, the dozen or so students share their thoughts and their professor discusses how creative writing principles play into their ideas. The students' answers ranged from creating world peace, ending world hunger, and the list goes on. Almost all of the students had a plan to combat a problem on a global scale, but they had no means to do so locally. Susie learned something about the “think global, act local” and the “tragedy of the

commons” problem (the thought that everyone should do something to make a difference, but no one does because they think they should be exempt. eg. Nobody should drive because it’s bad for the environment, but I need to drive to get where I need to go, so I should be exempt) by living and learning in the SRH. It has empowered her to actually do something rather than sit around and assume everyone else will be the catalyst for change. After exploring the possibility of becoming a community organizer/leader, Susie packs up her things and is glad to be done with class for the day.

#### **4:00 - Time for Homework and Laundry**

After Susie leaves her class, she makes a quick stop in her room to pick up her dirty laundry and her all natural laundry detergent. The SRH has two laundry facilities for resident use on the second floor, private level of the building, so she heads right down the hall to the one in the west wing. She puts a load into the Energy Star rated washer and sits down to do some reading from her Sustainability 101 textbook. She then realizes that she should be outside taking full advantage of the beautiful day, so she heads out of the laundry room and around the corner to the exit on the second level.

Each wing of the SRH has its own unique green roof common area. The west wing of the building closest to Susie's room has a green roof that features small trees, shrubs, and other plants as well as a few benches and picnic tables. A small water fountain that’s incorporated into the WMRS sits in the middle of the roof and runs during the warmer months. Susie pulls up a seat on a bench by the fountain and continues her reading. Midway through the chapter, she goes back into the laundry room to get her freshly washed clothes and brings them outside with her. She then uses an age-old laundry drying technique – hanging the clothes up to dry on a clothes

line instead of using one of the Energy Star drying machines. “Why use any more of my energy credits if I don't have to,” she thinks to herself and smiles. After hanging up her clothes she sits back down and gets back into her reading. She nearly reaches the end of the chapter when she realizes it is time for dinner, which she can go make while her clothes finish drying.

### **5:00 - Dinner in a SRH Kitchen**

For dinner, Susie goes back to her SQS hemp sack in the refrigerator in the west wing kitchen. Susie is lucky enough that her roommate enjoys gardening and gave her a few organic vegetables to include in her dinner. Susie is going to make some stir-fry with organic chicken bought at the local market and the vegetables. She takes out a sauté pan and begins to cook the veggies and chicken on the electric, Energy Star rated stove. When she is nearly done cooking, one of her friends comes in and starts to get their dinner together. When her food is done, Susie puts it onto a plate and takes a seat at the table. She and her friend enjoy each other's company while they eat their meals and chat about what's been going on. Susie made a little too much food and couldn't finish it all, so when she is done she puts it into a Tupperware container for lunch tomorrow. Her friend can't finish his dinner either, but doesn't have enough left that is worth saving, so he scrapes his plate clean into one of the compost receptacles. After that they help each other clean the few dishes they used and tidy up the kitchen.

### **6:00 - A Few More Meetings**

Susie has only a few more obligations before her day is done. Two of them are meetings for the SRH-SGA, the student governing body of the SRH. The first is a full meeting of the group. They convene about once every two weeks to discuss matters of importance to student

residents and to give reports on what the various committees have been up to. During today's meeting, they are discussing the upcoming "Innovative Idea Competition," where students work a few hours a week on developing an innovative idea and get credit as an independent study. For the competition the students have to report in every week in a brief journal entry on a blog posted on SRH web site. The committee also deliberates on five faculty members to nominate to judge the competition and serve as mentors. After they nominate five professors and two as back-ups, they move on to other matters.

Now it is time for committee leaders to give short presentations on what they have been up to. Susie is a member and vice-chair of the Ecological Sustainability Committee, and she will not be giving the groups presentation tonight as the chairman is there. Some of the other committees giving presentations include the Engineering Sustainability Committee, the Community Sustainability Committee, the Planning and Events Committee, and the SRH Update Committee. There are a few others, and a few that are more of loose group organizations. Ever since last year when Susie got involved with the SRH-SGA, she has thoroughly enjoyed the experience. She likes to be seen as a student leader and she enjoys all the activities they put on for the residents of the SRH. After the few short presentations, Susie is glad to be done with the day. Now it is time for her to have some fun.

### **7:00 PM - Down Time: Hanging Out With Friends**

It doesn't take giving up your personal life to live sustainably. Susie and a few of her friends decide to go on a bike ride on the trail the City built along the Ohio River. The group gathers outside of the SRH at the adjacent bicycle parking lot. The lot is sheltered by a bicycle parking pavilion complete with a 40 kW solar photovoltaic array and includes parking for every

resident of the SRH and extra spaces for other students, faculty, staff, and community members. The group gets their helmets on and heads out for their ride. When they arrive back at the SRH, they decide to spend the rest of the night relaxing in the lounge. Susie goes back into the SRH and to her room to change. After she changes she grabs a book, her laptop, and her water bottle and heads out to meet up with her friends in the lounge.

The lounge has a big screen, Organic Liquid Crystal Display Television; a few couches and arm chairs; a pool table; two dart boards; and two Cornhole sets made from recycled materials. The lounge is located in the center of the two wings on the second level to promote social interaction among students. Susie likes to hang out in the lounge especially because her roommate tends to take over the room for herself occasionally by playing loud music and watching strange television shows that Susie doesn't find interesting. Sometimes Susie can't stand doing work or reading in complete silence as she would in one of the SRH's study rooms, so she goes to the lounge where she can relax in a social setting and have a little background noise while she studies.

### **10:00 PM - Goodnight**

After working for a few hours littered with short breaks here and there, Susie decides it's time to go to bed. She gathers her things from the lounge and heads back up to her room. When she gets back, her roommate is already asleep, so she has to be extra quiet. Susie gets her toothbrush and all-natural toothpaste and face wash, and heads over to the bathroom. After a the quick routine is complete, she goes back to her room, gets in bed, and falls directly asleep after a good, long day in the SRH.

## **Sustainability – Definition and Principles**

Basically, sustainability is a model or pattern of maintaining resources in an indefinite manner. In other words, living in a sustainable manner is the practice of meeting the needs of today without impacting the future generations from meeting their own needs.

What is the difference between “green” and “sustainable?” Sustainability was born out of the green movement and green practices outline the base of basic sustainable principals so simply being green is not always sustainable. Green is a term that can be applied to each level of a sustainable existence which is reached through sustainable development. Much of the time “green” is used to describe a way to be “less bad” instead of “more good.” For example, it would be “green” to use recycled plastic fibers in seating surfaces. On the other hand however, when the recycled fibers off-gas and still retain caustic chemical compounds, the decision to use them is far from sustainable.

Development is the action that separates humans from most of the natural world we rely upon to sustain civilization as we have come to know it. Humans and viruses are the only organisms on the planet that do not adapt to their surroundings; they change their surroundings to fit their needs. Sustainable development occurs where the three considerations for the environment, community and economy overlap. These three considerations are also known as the three P's: Planet, People and Profit-or-the “triple bottom line.” It is in this light we see the concept of green building is only part of the sustainability portrait.

Conceptual areas of sustainability:

Outcome based focus: By paying attention to outcomes of events and actions on a comprehensive level, future outcomes can be anticipated. Known as “environmental auditing” or

“environmental accounting,” assumptions are made that all points of the natural world are quantifiable and this focus is limited by technology and knowledge at a single point in time.

When applied to growth and modern living conditions, the Triple Bottom Line, encompasses two areas of study to find quantifiable results: ecology and sociology. With the introduction of social factors, sustainable existence is better understood yet the added complexity of social systems can yield much debate. Overall, the intent of sustainability in general, embodies the notion of guiding civilization and all associated human constructs so that society will evolve, and be able to do so, into the very long term. To realize this, biodiversity and natural patterns need to be preserved as sustainability has connections to every local organism, which ultimately connect to the entire planet. Because of this, sustainability is often best understood through ecology; the study of worldwide patterns, ecosystems and man's place among them. Thus, sustainability is a positive process of providing healthy environments for humans and all life on earth rather than simply attempting to mitigate the negative impacts of society.

Common principles of sustainability:

Agenda 21: The worldwide sustainability bible. Released in 1992 by the UN, the report is more than 900 pages divided into four main sections. 21 indicate the 21st century as seen as the era to implement change around the globe as the effects of 20th century are now clear. The four main points are as follows:

- Section I: Social and Economic Dimensions – Including combating poverty, changing consumption patterns, population and demographic dynamics, promoting health, promoting sustainable settlement patterns and integrating environment and development into decision-making.

- Section II: Conservation and Management of Resources for Development – Including atmospheric protection, combating deforestation, protecting fragile environments, conservation of biological diversity, and control of pollution.
- Section III: Strengthening the Role of Major Groups – Including the roles of children and youth, women, NGOs, local authorities, business and workers.
- Section IV: Means of Implementation – Including science, technology transfer, education, international institutions and mechanisms and financial mechanisms.

The Hannover Principles: Also drafted in 1992, William McDonough, FAIA, and Michael Braugart where commissioned by the city of Hannover, Germany to serve as a sustainable guide:

1. Insist on rights of humanity and nature to co-exist in a healthy, supportive, diverse and sustainable condition.
2. Recognize interdependence. The elements of human design interact with and depend upon the natural world, with broad and diverse implications at every scale. Expand design considerations to recognizing even distant effects.
3. Respect relationships between spirit and matter. Consider all aspects of human settlement including community, dwelling, industry and trade in terms of existing and evolving connections between spiritual and material consciousness.
4. Accept responsibility for the consequences of design decisions upon human well being, the viability of natural systems and their right to co-exist.

5. Create safe objects of long-term value. Do not burden future generations with requirements for maintenance or vigilant administration of potential danger due to the careless creation of products, processes or standards.
6. Eliminate the concept of waste. Evaluate and optimize the full life-cycle of products and processes, to approach the state of natural systems, in which there is no waste.
7. Rely on natural energy flows. Human designs should, like the living world, derive their creative forces from perpetual solar income. Incorporate this energy efficiently and safely for responsible use.
8. Understand the limitations of design. No human creation lasts forever and design does not solve all problems. Those who create and plan should practice humility in the face of nature. Treat nature as a model and mentor, not as an inconvenience to be evaded or controlled.
9. Seek constant improvement by the sharing of knowledge. Encourage direct and open communication between colleagues, patrons, manufacturers and users to link long term sustainable considerations with ethical responsibility, and re-establish the integral relationship between natural processes and human activity.

In summary, and no particular order, principles of sustainable development are outlined as:

- Recognizing the global integration of local activities.
- Ensuring valuation, restoration and appreciation of nature.
- Commitment to continuous improvement.
- Conservation of biodiversity and ecological integrity.
- No net loss of human or natural capital.

- Commitment to best practices.
- Uncertainty and risk occur but remain paths to learning.
- Integration of the "triple bottom line". (People, Planet, Profit)
- Equal opportunity and community participation.
- The need for good governance.
- Ensure inter-generational equality.

### **Types of sustainability:**

- Institutional sustainability – Strengthened institutional structure must deliver the results of technical cooperation to end users. The results may not be sustainable if, for example, the planning authority that depends on the technical cooperation loses access to top management, or is not provided with adequate resources after the technical cooperation ends. Institutional sustainability can also be linked to the concept of social sustainability, which asks how the interventions can be sustained by social structures and institutions.
- Economic and financial sustainability – For example, the benefits from the introduction of new crops may not be sustained if the constraints to marketing the crops are not resolved. Similarly, economic, as distinct from financial, sustainability may be at risk if the end users continue to depend on heavily subsidized activities and inputs.
- Ecological sustainability – Ensure the benefits generated by technical cooperation do not lead to deterioration in the physical environment, thus indirectly contributing to a fall in production, or well-being of the groups targeted and their society.

Energetic sustainability –This type of sustainability is often concerned with the production of energy and mineral resources. Some researchers have pointed to trends

which document the limits of production. Active sectors teams have formed for youth, higher education, business, religion, the arts, and more. Organizations and individuals can join in sharing resources and success stories, and creating a sustainable future.

- Development sustainability – Sustainability is relevant to development projects. A definition of development sustainability is “the continuation of benefits after major assistance from the donor has been completed” (Australian Agency for International Development 2000). Ensuring that development projects are sustainable can reduce the likelihood of them collapsing after they have just finished; it also reduces the financial cost of development projects and the subsequent social problems, such as dependence of the stakeholders on external donors and their resources. All development assistance, apart from temporary emergency and humanitarian relief efforts, should be designed and implemented with the aim of achieving sustainable benefits. There are ten key factors that influence development sustainability:
  1. Participation and ownership. Get the stakeholders (men and women) to genuinely participate in design and implementation. Build on their initiatives and demands. Get them to monitor the project and periodically evaluate it for results.
  2. Capacity building and training. Training stakeholders to take over should begin from the start of any project and continue throughout. The right approach should both motivate and transfer skills to people.
  3. Government policies. Development projects should be aligned with local government policies.

4. Financial. In some countries and sectors, financial sustainability is difficult in the medium term. Training in local fundraising is a possibility, as is identifying links with the private sector, charging for use, and encouraging policy reforms.
5. Management and organization. Activities that integrate with or add to local structures may have better prospects for sustainability than those which establish new or parallel structures.
6. Social, gender and culture. The introduction of new ideas, technologies and skills requires an understanding of local decision-making systems, gender divisions and cultural preferences.
7. Technology. All outside equipment must be selected with careful consideration given to the local finance available for maintenance and replacement. Cultural acceptability and the local capacity to maintain equipment and buy spare parts are vital.
8. Environment. Poor rural communities that depend on natural resources should be involved in identifying and managing environmental risks. Urban communities should identify and manage waste disposal and pollution risks.
9. External political and economic factors. In a weak economy, projects should not be too complicated, ambitious or expensive.
10. Realistic duration. A short project may be inadequate for solving entrenched problems in a sustainable way, particularly when behavioral and institutional changes are intended. A long project, may on the other hand, promote dependence.

Sustainability and business – It is not a new concept for businesses to plan their future growth and maintain a sustainable financial model to ensure their profitability and continued

existence. As firms need continued access to employees and materials to produce a profitable product, financial models are beginning to look towards general sustainability principles to ensure their future.

The World Business Council for Sustainable Development, founded in 1995, has formulated the business case for sustainable development and argues that “sustainable development is good for business and business is good for sustainable development.” Proponents of the concept of Industrial ecology also maintain this view. The theory of Industrial Ecology declares that industry should be viewed as a series of interlocking man-made eco-systems interfacing with the natural global eco-system.

According to some economists, it is possible for the concepts of sustainable development and competitiveness to merge if enacted wisely, so that there is not an inevitable trade-off. This merger is being motivated by the following six facts (Hargroves & Smith 2005):

1. Throughout the economy there are widespread untapped potential resource productivity improvements to be made to be coupled with effective design.
2. There has been a significant shift in understanding over the last three decades of what creates lasting competitiveness of a firm.
3. There is now a critical mass of enabling technologies in eco-innovations that make integrated approaches to sustainable development economically viable.
4. Since many of the costs of what economists call “environmental externalities” are passed on to governments, in the long-term sustainable development strategies can provide multiple benefits to the taxpayer.

5. There is a growing understanding of the multiple benefits of valuing social and natural capital, for both moral and economic reasons, and including them in measures of national well being.
6. There is mounting evidence to show that a transition to a sustainable economy, if done wisely, may not harm economic growth significantly, in fact it could even help it. Recent research by ex-Wuppertal Institute member Joachim Spangenberg, working with neo-classical economists, shows that the transition, if focused on improving resource productivity, will lead to higher economic growth than business as usual, while at the same time reducing pressures on the environment and enhancing employment.

Barriers to a sustainability culture – A new sustainability paradigm is possible if progressive elements of civil society, government, business, and an engaged citizenry work together to create an alternative vision of globalization centered on the quality of life, human solidarity, environmental resilience, and shared information.

Change resistance – The above concepts focus primarily on the proper practices required to live sustainably. However, there is also the need to consider why there is such strong resistance to adopting sustainable practices. Numerous barriers to sustainability arise because today's technological systems and governing institutions were designed and built for permanence and reliability, not change. In the case of fossil fuel-based systems this is termed "carbon lock-in" and inhibits many change efforts.

Thwink.org argues that if enough members of the environmental movement adopted a problem solving process that fit the problem, the movement would make the astonishing discovery that the crux of the problem is not what it thought it was. It is not a proper practice and

does not address the technical side of the problem. Any number of these practices would be adequate. Instead the real issue is why is it so difficult to persuade social agents (such as people, corporations, and nations) to adopt the proper practices needed to live sustainably? Thus the heart of the matter is the change resistance or social side of the problem.

In Conclusion, sustainability is by no means a new concept. Throughout human history all societies were born from sustainable roots. Without the benefits of society as we know it (without specialization, formal education, industry, technology or even an economy) humans have no choice but to exist within nature's patterns – as a pattern of nature. In contemporary context, we call these societies nomadic or hunters and gatherers. We see these people as underdeveloped, unrefined and deficient in quantifiable terms we understand. Such “underdeveloped” societies have qualitative similarities to our own. History and traditions are passed down orally instead of recorded on analog / digital / optical devices. Technical innovations result from hardships and suffering instead of market driven profit models. Education is the passing on of information learned by previous generations to survive instead of being thought advanced concepts before possessing the knowledge needed to sustain our personal existence. Nomadic cultures barely exist today as contemporary society imposes upon them and the future will hold their fate as well as ours but the past holds some startling facts... Cultures that extend themselves past their resources will not survive.

Today, we have advanced to an amazing state of technological achievement and education yet we face an uncertain future as we stand on the cusp of a revolution. From the time man kind first settled, it took 10,000 years or so to reach the agricultural revolution. Four hundred years later, the scientific revolution. One hundred and fifty years more: the industrial revolution. This telescoping effect of the time between quantum leaps of man kind would seem

to put us at the appropriate time to be a part of the next major leap. The results of the next leap will come from information, both digital and analog. The digital side: microprocessors and electronic devices that will soon have “intelligence” themselves. The analog side: our new understanding of the organism and our ability to clone and create species at the genetic level. As we gain analog intelligence and create digital intelligence the possibility of creating a new direction for society becomes clear. Using appropriate technology to live in comfort without destruction is up to us to find so we start with this. Each of us can lead by example and one at a time, our actions add up. If we all act in a destructive manner, we will destroy each other the same as if we all act in a just manner, we will all benefit.

The next revolution will not be known until it can not be stopped but it is certainly up to you and I to think of ourselves not as the current owners of the earth but only the current users; simple stewards using it until we pass it along to the next generation. We should base our work, ideals, customs and laws around this for we have not inherited this earth from our parents... we are borrowing it from our children.

### **Some quotes because someone has already said it before**

“How long can men thrive between walls of brick, walking on asphalt pavements, breathing the fumes of coal and of oil, growing, working, dying, with hardly a thought of wind, and sky, and fields of grain, seeing only machine-made beauty, the mineral-like quality of life?”

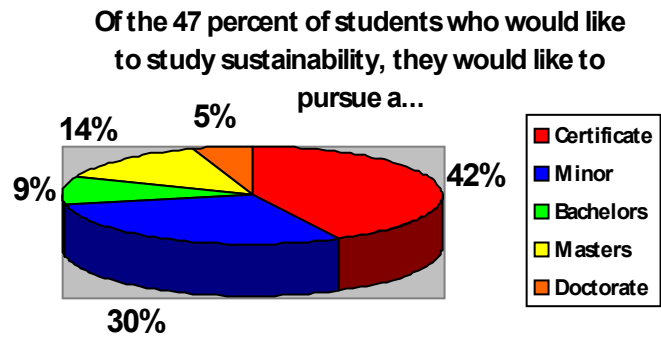
– Charles Lindbergh

“The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased, and not impaired in value.” – President Theodore

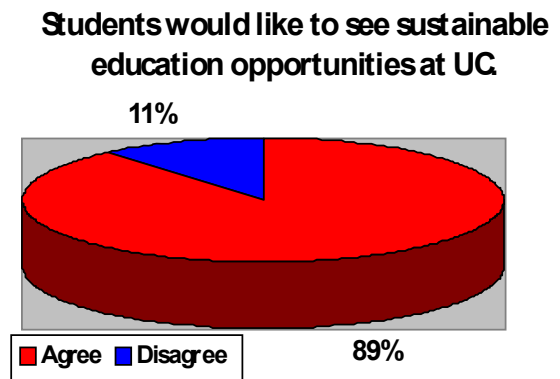
Roosevelt

# SUE Student Survey – Summary of Findings

University of Cincinnati students have broad based support for increased sustainability at the university through a number of avenues. Of the nearly 1,500 student respondents to a sustainability survey, 40 percent think UC should build a new, ecologically sensitive residence hall and 69 percent think UC should overhaul a current residence hall to be more ecologically sensitive. Of student respondents, 30 percent said they would pay more to live in a sustainable residence hall and 23 percent would make a financial contribution to a capital campaign designed to raise money for such an endeavor.



Students also expressed a willingness to live more sustainably – 84 percent of students said they are willing to deviate from their normal routine in order to live more sustainably [somewhat (54%), significantly (19%), and as much as they can (11%)]. A significant number, 42 percent, said they would dedicate some of their time toward growing their own food in a greenhouse, 69 percent would have a greenhouse in the SRH, and 75 percent would include a garden.



Students indicate they would conserve more resources if they were rewarded financially as opposed to having to pay a fee for overconsumption (73% to 27%). Only 46 percent of

students indicated they were familiar with the concept of sustainability prior to the survey, but, however, 89 percent, a large majority, said they would like to see sustainable education opportunities at UC. Of 47 percent of students who indicated they were interested in studying sustainability, 42 percent would pursue a certificate, 30 percent a minor, nine percent a bachelors degree, 14 percent a masters degree, and five percent a doctoral degree.

Furthermore, our survey had a fairly accurate break down of demographics representative to the university student body as a whole. When analyzing the race and college of respondents, a fairly reasonable sample was found.

# Meeting Minutes – Interested Parties at the University

The following notes are from meetings held with interested students, faculty, and administrators around campus held throughout the summer of 2007. They include: Carl Sterner, Architecture MS student; Joe McGovern, MS Architecture student; Elizabeth Dixon, BS Biomedical Engineering student and former Residence Hall Advisor; Dr. Anthony Perzigian, Provost, University of Cincinnati; Joe Harrell, Director of Facilities and Utilities; and Beth McGrew, Associate Vice President of Campus Planning and Design.

## Carl Sterner, MS Architecture Student

- Go to the extreme, but don't make everything mandatory, just make the option available
- Make air-drying lines available to dry clothes instead of just dryers
- People should get back a share of the savings
- Individual measures can always be aggregated, better to have a system to measure each person individually instead of one measure for a quad
- Biodigesters - [www.biodigesters.com](http://www.biodigesters.com)
- Creating a sense of ownership
- Bring transparency to the whole system, make it so people can see everything
- Solar decathlon project manifested like ours did, and look at it now
  - They are going to have to do something with what they built when the project is over, they can't just throw it away
- Likes idea of mixed-residence of faculty/staff/students
- Important to make a flexibly designed building that can adapt easily

## Dr. Anthony Perzigian, Provost, University of Cincinnati

- Bottoms-up approach
- Curriculum needs to be a living, breathing reflection of society's needs
- Responsibility to society while maintaining a competitive edge
- Just a matter of time until this is elevated to a matter of high priority

## Elizabeth "Ely" Dixon, BS Biomedical Engineering Student

- Core elements of housing conservation challenge:
  - Online posting of results every month with weekly updates
  - Good advertising by UC Housing in residence halls and around campus
- Different community floors = DAAP, CCM, Honors, etc.
- Community-building aspect in form of competition

- Added benefits or quirks to holding classes in the residence halls

### **Mike Benkert, BS Architecture Student**

- Debate of adding education to the triple bottom line (technology has been added as well)
- Your mailbox as a new garbage can
  - When your computer breaks and is done, send it back to Mac and get a new one, don't throw it out. This goes for everything
- Totally eliminate the concept of waste
- Grow your own food and whatever you don't use sell or give away
- Eco-effective vs. eco-efficient
- Get kids hooked on sustainability growing up
  - Like pop machines in schools, parents let their kids drink it, the kids get hooked
- Thinking about the embodied energy of everything
- Community outreach
  - Students could teach members of the community to be more sustainable by holding workshops or classes
- Flexibility is huge for building systems

### **Joe McGovern & Elizabeth Rajala, BS Architecture Students**

- Key to social systems is found in interactive technology
- A shared kitchen would be a great community building if properly maintained, could also tie into a living machine
- Groups of 10 – 30 are the best (E). Groups of 20 – 30 are the best (J).
  - Groups would share a communal space, kitchen, bathrooms
- Cohousing – Community Housing – singly family homes with a community center
- More low-tech strategies, not to diminish high-tech, but to keep it simple if effective
- Course could involve the upkeep of the residence hall
- Exterior blinds
- Must begin community/team building from the start, immediately – at orientation
- Primarily freshmen, but there would be some upperclassmen
- Dividends – performance based incentives for students to be sustainable
- Market the hell out of the residence hall
- Try to integrate students instead of relying on even the simplest technology – eg. Have students water the garden instead of a sprinkler. Good to have these things so students visibly see the systems, but they can't be too time consuming
  - Could count toward community service hours
- Architecture and Engineering summer camps => Sustainability camps
- It is education, not the building/technology, that will move for social change

**John Lagow, Director of Development, UC Foundation College of Engineering; and Janet Ransom, Associate Director of Development, UC Foundation, College of Engineering**

- Project has to be real in order to sell it
- Follow up to engineers capstone with comparison of sustainable residence hall vs. regular residence hall
- John thinks we should go to schools who have done this and find out what they would have done differently and what they think of our plan
- Student involvement makes anything very marketable
- Capital Campaign to begin in the fall of 2008, giving us a pretty small time frame
- Since President and Board of Trustees tell UC Foundation what to raise money for, someone would have to sway them to get the project on board for the campaign

**Mary Beth McGrew, Associate Vice President of Campus Planning and Design**

- While working on U Dayton Master Plan she wanted to use a few of the old homes in the neighborhood the university owned as teaching tools for students – they would become a living-learning lab and social network (even the UD President lived in this neighborhood)
- Need the flexibility to take out and put in new systems over the years in sustainable residence hall
- Make it a laboratory for practicing independent living (self-responsibility)
- Research shows students say they prefer apartment style living, but retention rate is much higher in traditional style residence halls – after you shower and brush your teeth next to the same people for so long it really builds a sense of community
- The idea of MainStreet was conceived from tons of meetings with parents/faculty/students with a very strong design hand
- LEED Basic or Silver doesn't cost any more than regular building
- More police officers vs. more front porches – really building a sense of community