

# **Interactive Memory: Chronicling Sustainability Efforts at Southwestern University**

**Brandee Knight  
Southwestern University  
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## **Abstract/Intro**

Online access to information has reshaped the way information is passed. This is no different in the scope of higher education. Faculty and staff are hired and retire from positions and students turn over every four years creating an ever changing landscape. Each time this happens valuable knowledge is lost. To recover such information takes trial and error, using valuable time that could be more efficiently spent on furthering initiatives. To combat the loss of intuitional knowledge at Southwestern University an interactive map was created to chronicle the past and present efforts of students, staff, and faculty. It will serve as a tool for future projects as well as a helping alleviate the inefficiencies that occur within sustainability efforts at Southwestern. Furthermore, it will serve as a recruitment tool for perspective students who consider sustainability a factor when making their college decision. It also leaves open future opportunities for expansion on tracking sustainability at Southwestern.

## **Lit Review**

“Turnover of faculty, staff, and institutional leaders is to be expected in the life of an institution. Unfortunately, it can hamper ongoing efforts to strengthen student learning and success” (DQP). As Andrew Pena found in his 2012 human resources study for a southwestern Texas public university, “employees who leave do so with a substantial amount of ... knowledge

that'll be difficult to replace or duplicate if internal systems to retain or document this type of knowledge are nonexistent" making projects more difficult (1). Creating visual "technology can further help by making it easy to construct and modify these representation, to manage large representations for complex domains, to integrate knowledge ..." (210, Canas, et al.).

Recording practices are held in all disciplines in different forms: verbal, written, visual, and many more. "Archiving materials with explanations of what, how, and why work was undertaken provides a repository of information that contextualizes activities, including successes and failures, and that can continue to guide future work" (DQP). Without a defined archive or formal custodians the lessons of the past are left to decay (Duncan 1999; Kurtz 2001 and Ogborn 2004 cited in Johnston 2007). "Knowledge visualization techniques bring new approaches to an already mature field of information visualization" (Canas, et al. 216)

To archive the information a map was chosen due to their "highly efficient and effective means of representing data and information that cannot be readily comprehended verbally" (Kemp 2008). Maps are able to assist in "our limited capacity to remember unprocessed information" (Philips 1989). So by keeping the information in a cartographic form, connections that weren't able to be formed prior to the map will emerge and bring about new projects that can benefit all and "embed changes into institutional culture" (DQP).

To establish what problems an archive might have, I looked to Peter Woelert's discussion in his work "The 'Economy of Memory': Publications, Citations, and the Paradox of Effective Research Governance" which discusses the formal nature of a record in the sciences. He established that the archive must be publicly accessible to endure beyond the confines

individuals and groups which is difficult in higher education (Woelert 2013). So moving forward it must be recognized for future use that the information it holds is inseparable from the fact that the information contained are merely “representations of objects, actions, and knowledge” (Brazerman 1981: 362).

## **Justification**

Universities are the think tanks that produce the future leaders and decision makers. They shape the minds of the generation that will find solutions for the current economic, social, and environmental disparities that plague today and future societies (Colgate, 2012). By attending a university that is sustainably conscious, students leave with a sense of anthropogenic change on the earth and mitigation techniques to propose and implement as they emerge into the post-education world. Sustainable projects that were done allow the practical application of skills and knowledge through research, policy development, and application (Merkel & Litten, 2007). This is directly in line with Southwestern’s mission statement of “cultivating those qualities and skills which make for personal and professional effectiveness” (2015). Yet, by keeping a record of the projects that have been implemented students have a repository of useful knowledge and examples of projects that have been successfully completed. Allowing for a much more comprehensive knowledge of techniques that can serve to foster community building, disseminate information for informed decisions and encourage environmentally just choices.

This source can serve as the foundation for idea generation and models for future initiatives. By creating access to the past projects, failed and successful, future and current

students can garner what maybe more viable to pursue or implement at SU and beyond. It also creates a space to foster awareness of disadvantaged communities. In taking into consideration the impacts of the decisions that are made, affected communities can be more wholly considered. Expansion and alteration of existing projects will result from access. Offering a single source for students to visit to garner ideas will create more opportunity for projects and initiatives.

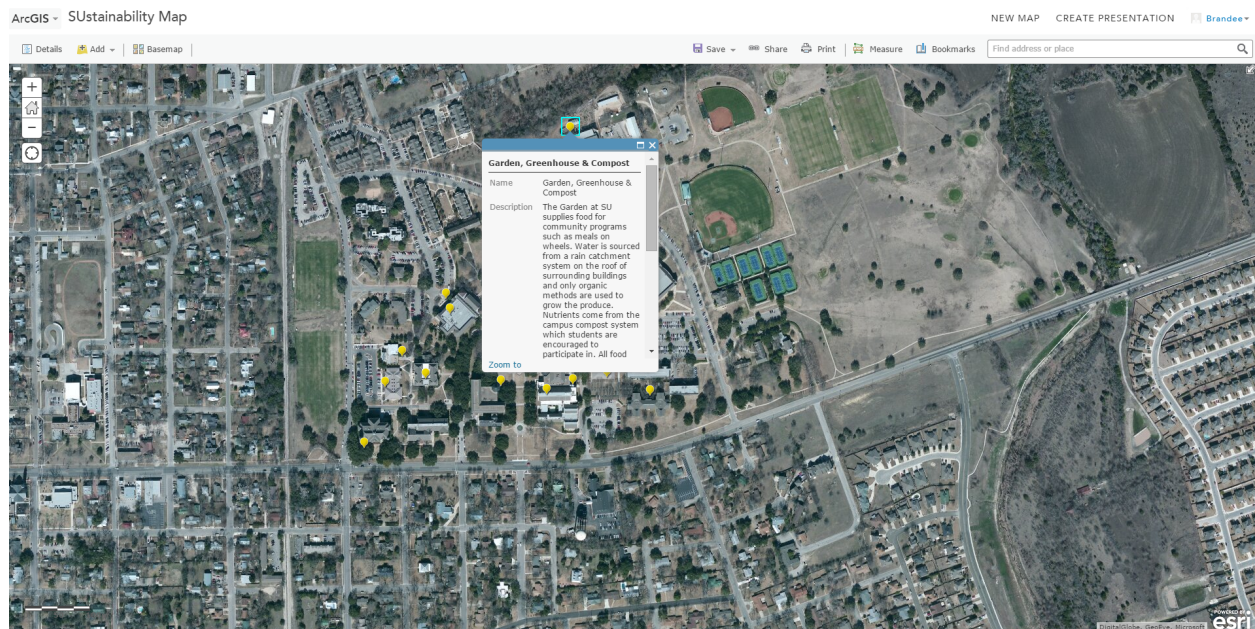
Furthermore, perspective students that are looking at colleges have begun to examine the sustainability of the institutions they are considering. The map will serve as a recruitment tool for the 61% of students and parents who consider sustainability when making an informed college decision (Princeton Review, 2014). By offering information about the initiatives past and present that occur at SU students are able to make more informed decisions about the sustainability of Southwestern.

The map will offer opportunities for more community involvement on campus. The map will serve as a tool for the Office of Civic Engagement to demonstrate the innovation that is and has occurred on the campus to encourage projects that include the community such as the Boys and Girls Club garden creation that is closely modeled to the SU Garden. The memory that is available will allow for the inclusion and assistance of the community in on-campus initiatives as well as offering an untapped resource to the community.

## **Methodology**

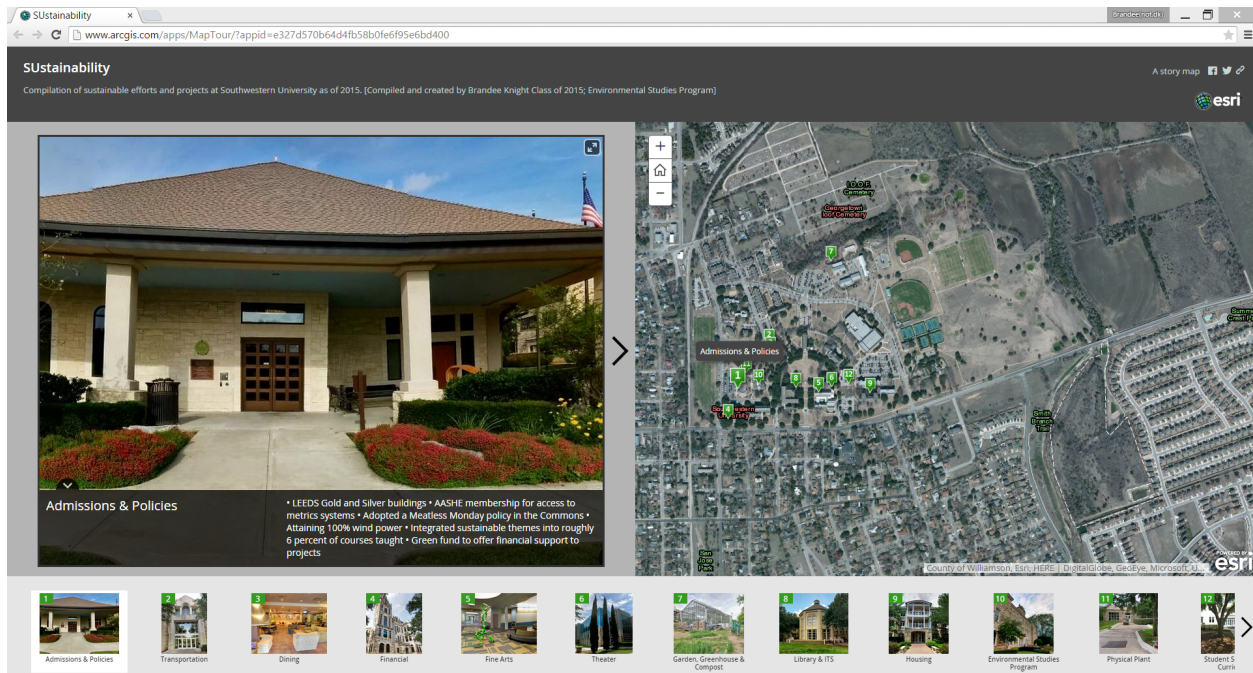
An e-mail was sent to members of campus to help compile a comprehensive list of sustainable initiatives and projects that have been taken on at Southwestern University. This list

included the memory of environmentally minded students, faculty that are active with the Environmental Studies Department, as well as staff from physical plant and student life. Projects included are completed or underway. This list was then assigned geographic points and georeferenced using ArcGIS Online. Photos were taken and added to a third party site to reference in the final product. After creating points and compiling the projects that are included at each location, information was added along with a picture to each pop out. Using the provided template. The simple CSV was created and stored online which allowed the data to be readily accessed. Once the simple version was finished the complex display began.



Then using the storymap interface software the map and CSV file were formatted to work with the correct template. Using the ESRI software the information was added and displayed to show the final product. The tabs were changed from yellow, the school color, to the green shown below to fit the theme of sustainability. The new display option allows the user to click the tabs, scroll through the photos to choose or to open the information in a larger formatted

window. This will allow for the information to be a quick read, not too time consuming and with only 12 tabs there is not an overload of information, which usually makes the user uninterested or overwhelmed. This is what the window looks like for the final product:



By simply embedding the short URL (<http://arcg.is/1zuRsWW>)\* into any web page the map can be accessed. It was added to the Environmental Studies Program page and will hopefully be of interest to the admissions office as well.

\*If any information is changed in the map a new URL will be assigned.

## Sustainability at SU

### Garden Improvements

- Aquaponics growing system in the greenhouse
- Maintaining a Chimney Swift tower habitat near the campus garden
- Operating an on-campus greenhouse
- Rainwater collection for watering the garden
- Running community garden that supplies food to community organizations

### Infrastructure

- Electric car charging station
- Implemented single stream recycling
- Installed two Dyson Airblades in McCombs
- LEEDs certified buildings

- LED lights are in outdoor lamp posts and the black box theater
- Low-flush toilets and urinals in several buildings
- Low flow showerheads in residence halls
- Solar panels for heather hall
- Solar recreational chairs around campus
- Solar water heater at the Phi Delta Theta fraternity house
- Water bottle refill stations to reduce plastic water bottle consumption

#### Policies and administration

- AASHE membership for access to metrics systems
- Adopted a Meatless Monday policy in the Commons
- Attaining 100% wind power
- Integrated sustainable themes into roughly 6 percent of courses taught
- Green fund to offer financial support to projects
- Trayless dining services

#### Practices

- All printer paper is 100% post consumer
- Collecting plastic bags for responsible disposal

- Composting 100% of food waste industrially or on site
- Green cleaning supplies are used by maintenance
- Native plant species and xeriscaping
- Reuse, trade and recycle theater costumes
- The SU shuttle provides a free carpooling opportunity
- The use of electric golf carts and two electric car charging stations

#### Ongoing Projects

- Construction of the GeoDome in the SU Garden
- Encouraging a FreeCycle event to reuse furnishings
- Filling out the STARS application to receive recognition
- Increasing the amount of sustainable food in the Commons
- Installing Solar panels on the top of the Greenhouse
- Retrofitting Robertson to consume less energy
- Stopping all university purchasing of plastic non reusable water bottles
- Travel Study Abroad Analysis\*

## **Conclusion**

This interactive map will serve as a history that can be added to and kept up to-date with campus initiatives. The function of the map will encourage community and campus engagement as well as helping to see areas of campus that can be more sustainably changed in the future. It also serves as a recruiting tool for the 61% of future students and parents who will consider sustainability in making their decision. By keeping an electronic intuitional memory can serve the campus community by building and disseminating information more readily than other methods therefore fostering further sustainability projects.

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