

Sustainability Tracking Assessment & Rating System

Global Sustainability

12/8/10

Justin Altice and Sahand Dilmaghani

Table of Contents:

Page #:

3 : *Abstract*

4 : *Introduction*

5 : *Body*

9: *Conclusion*

10: Future Work

11: Lessons Learned

X: Appendices

Abstract:

Our focus has been to address the area of Sustainability on a university wide basis here at the University of Virginia (UVa). Our specific goals were to expose the day to day operations aspect of UVa to the idea of Sustainability through implementation of the Sustainability Tracking Assessment and Rating System (STARS). This was accomplished by identifying the key leaders located within the various aspects of operations here at UVa: dining, purchasing, facilities management, waste management, etc; we then met with them and discussed the benefits of STARS and how their participation in the system would facilitate a more Sustainable UVa. By discussing with them how STARS achieves a rating for UVa using data collected from them we have begun to open their minds up to the way in which everyday operations are running. The process involves compiling data that might normally not be seen as a whole in a particular context. In the end, the data will help shed new light on how to make UVa a leader in Sustainability and spur the innovation needed to achieve this goal.

Introduction:

Can an institution as immense in scale as the University of Virginia (UVa) ever become a shining beacon of Sustainability for other universities, local residents, and to

the students who walk these grounds as a stepping stone to the rest of their lives? We believe the answer to that question should be yes and would like to solve the problem of how this can be achieved. One of the biggest challenges with trying to implement Sustainability at UVa is figuring out where to start. How can UVa chart where they want to go without first knowing where they currently stand? A standardized baseline test that all institutions could use would provide a vehicle to not only see where they currently stand, but also allow for an easy comparison of an institution's standing with another institution to spur competition for new innovation. More importantly, it would allow for one school to readily identify other higher education institutions that were excelling where they might be falling short, and then reach out to them for guidance on how they have been so effective in that particular area. It is only once an institution knows where they stand, that they can finally start formulating a plan to make improvements through measurable means.

All members of the UVa community are accountable for doing their part to solve this problem; key stakeholders in the process will be the leaders in each facet of everyday operations at UVa: dining, facilities management, waste management, administration, deans of schools, technology, finance, etc. Identifying these leaders and getting them on board first, through their input in the process, will then motivate them to turn around and communicate to rest of their organization how to implement these goals. The goal ultimately being to create a Sustainable UVa that can be an example for the rest of the local community, other higher education intuitions, and the students that call the university home.

Body:

The criterion that we used to choose which approach would work best for us is multi-faceted; first the fact that we had a time constraint of this semester that would limit how much we could get accomplished. This constraint would make reinventing the wheel with a number of options available unviable during the semester. Another constraint would be the resources at our disposal to turn any option into a reality with the information we had thus far gathered from our mentor, various stakeholders, and literature reviewed from other universities trying to accomplish the same goal. Finally, the fact that there are only two of us working on this concern also limits the extent to which we can approach the issue.

There are several methods that could be utilized to address the problem; one option could be to work through different programs that are concentrated on specific issues. This sort of approach has a higher potential to collect more detailed data on a particular aspect of the school, which can rally people around a single issue by creating more of a force for the university to take action. In order to avoid inundating the school with an all-encompassing shift, a group can focus on one department or area at a time, and with an in depth analysis they can promote action to be taken by the university to fix it. This option would prove to take longer than the allowed time we have this semester due to having to come up with a way to address each sector of the university. If this was for instance a year to two-year project this might seem like a more feasible option for us.

Since the University of Virginia is a public university, there is a lot of politics behind the changes that are made to the University. Therefore, another way to approach the problem would be to do independent research on a topic and then send the information to state regulators who mandate changes within the university and collect

support to put pressure on them to take legislative action. This method would be far more politically oriented and depending on the specific topic researched, may be an indirect and lengthy process. However, this method would deal directly with legislatures that have the power to mandate changes to take place. This option again conflicts with the time constraints we have on this issue; also the fact that we are only a two-man team limits how much we could affect the political process.

Another option is to begin petitioning for a certain cause; this sort of grassroots movement can help bolster awareness at a university. After finding enough support for the cause we could send the petition to the university President. Upon receiving this petition, the pressure from the student body could spark the action to look into the issue and take action to improve the universities standing. For example, if we are to start a petition that promotes independence from fossil fuels and get everyone on campus behind the cause, it could warrant an investigation to see where does UVa stand in terms of fossil fuel consumption, and what can UVa do to improve. This option again would conflict with the time constraints of the semester as well as the resources that we are afforded.

These are all feasible options to help foster collection of information, and promote action at the university to address the problem. We have decided that the best way to solve the identified problem is through an all-encompassing approach that will look at UVa as a whole, and determine where the strengths and weaknesses lie in regards to becoming a Sustainable university. This approach involves working on the implementation of the Sustainability Tracking Assessment and Rating System (STARS), which was developed by the Association for the Advancement of Sustainability in Higher Education (AASHE); it essentially creates a structure in which higher education entities

can use a standard system to rate their performance in the area of Sustainability using a range of categories. The system was made by higher education intuitions for higher education institutions, and almost all major universities across the United States have signed on to take part; UVa signed on Fall of 2010 and have one year to implement the system.

STARS is similar to the LEED building system in that a variety of metrics are gauged in different categories and each is given a point value based on how each institution meets established criteria; these scores produce a total based on the cumulative score of all categories, which in turn gives a university a rating such as bronze, silver, gold, etc. Each category needs specific data from a university in order to compute the score; a technical manual is available that provides clarification as to what exact data is needed as well as how that data is used to formulate each score. All of the details of the breakdown of UVa's STARS rating will be published for the public to review; this makes the integrity of all data used to determine the rating to be of the utmost importance with the president having to sign off on the final product before it is published. All of the information we collect will be a part of the final product that is published.

We began the process of obtaining the data desired by first identifying the key stakeholders on campus that are most likely to have access to the data to provide an accurate assessment; we achieved this in conjunction with Andrew Green from the Office of the Architect ,who was are main point of contact throughout the project. After someone was identified for all credits within the operations category, we generated a formal and concise email to send out to everyone. This first correspondence contained preliminary information about STARS and how it relates to UVa; letting them know how

important their participation is in providing the best possible results for the program. Fortunately, most people who responded expressed interest in cooperating with us. Upon hearing back from them, we immediately organized meetings to clarify in more detail what we are doing and what their role would be. We discussed the technical aspects of the criteria they had been identified to be the stakeholder for, making sure they had access to the information needed, and in some cases finding out from them who did. Once it was determined that they have access to the data needed, then we provided a tutorial in using the online reporting tool used to collect the data. Any of the stakeholders that seemed comfortable using the online tool themselves were set up with access to fill in any and all applicable data through the STARS website's reporting tool. The fact that they are entering the data themselves lends itself to the validity of the data, which cannot be brought into question.

We will be measuring success of our project by our ability to obtain all the data needed from the stakeholders at UVa to determine a point value for the university in all metrics within the operations category, which makes up a substantial piece of STARS. This will allow us to also achieve our goal of informing the UVa community about STARS and how it will help the university become Sustainable. The more stakeholders we bring into the system by letting them know how important the information they have will assist in determining an accurate picture of where UVa is today, the more members of the UVa community will in turn be a part of painting the Sustainability portrait of UVa in the future.

Conclusion:

Achieving Sustainability here at a vast organization like UVa is not an overnight process, but obtaining an accurate picture of where the university currently is through an all-encompassing approach will go a long way in achieving that goal in the long-term. STARS will accurately paint this picture and bring all the key stakeholders on campus to the table in the process. Our focus has been on the operations category of STARS, which includes the purchasing, climate, buildings, transportation, dining service, water, and waste categories. We have contacted all stakeholders on campus that have the information needed to precisely formulate a score for each of these categories. These stakeholders have been informed of STARS at UVa, what is needed from them, and how it will be delivered. This will facilitate in UVa achieving their goal of completing all STARS categories by the end of Spring 2011.

Although we have not received all the necessary data for the operations portion of STARS, after meeting with the key stakeholders we obtained some interesting insight into the University's efforts to implement sustainability into daily operations. We learned that there are certain segments where UVa excels, for example recycling, and there are certain areas where it struggles, for example fossil fuel reduction. This sort of information is the key to figuring out where UVa needs to center its focus but there is a still a long way to go before the University can finally be rated.

The remaining data for the other three categories will still need to be collected in order to fully complete the assessment; coordinating these efforts will be a remaining obstacle that will need to be hurdled. The best practice methods to accomplish this have been felt out, but will still need to be fine-tuned; the operations category is the most

straight forward of the four and obtaining the data for the others will require a more coordinated effort of multiple parties.

All of work will ultimately appear in the final report that will be published once the assessment is complete, and signed off by the university's president. The incremental data that is collected is housed on the STARS website within the reporting tool rubric. A report will be given to Andrew at the end of the semester detailing all interactions we have had with stakeholders, and where each stakeholder stands in the process.

Future Work:

The STARS assessment is comprised of four major categories, and as of now, we have only focused on one of the four, operations. After the semester ends, a large portion of data has still yet to be obtained. Andrew will be continuing the work to obtain all data needed to accurately assess Sustainability here at UVa. He will accomplish this through his daily interactions with identified stakeholders through his role as Sustainability Coordinator with the Office of the Architect. He participates in a bi-monthly meeting, with an emphasis on Sustainability here at UVa, which will serve as an ongoing mechanism to keep STARS moving forward. Andrew has set a goal of the end of the Spring 2011 semester to have all the data collected for UVa; although the university has until August 2011 to finish the assessment if needed.

We plan to continue to obtain data for the STARS program to ensure that all necessary information is collected by at least one year time span allotted. This will be accomplished using the same methods that we have been using thus far. The project has proved to be really interesting, meeting with the various stakeholders opens your eyes to

all the initiatives that are already in place, and can also lead to actual new initiatives being created as a direct result of the meeting.

Lessons Learned:

Anytime you are adding tasks on top of an employee’s already job responsibilities you can never quite be sure how they will react. Luckily everyone we interacted with were willing to participate in the process. The fact that everyone is so busy also provided challenges as to how we would find time to meet with everyone on a one on one basis; being flexible is key in making sure all stakeholders are able to be met with. It is crucial to follow up with stakeholders in regards to participation in STARS because, as we have learned from this semester, it involves a lot of diligence to make sure that all parties follow through with inputting their respective information. The only real solution to a problem like this is to be persistent and ensure you are doing everything possible to work with the individual. Finding the right way to approach stakeholders about an essentially voluntary program required using the right amount of diligence while not coming off as badgering them. When we actually met with the stakeholders, our objective was to express the ideas of the STARS program in relation to their function here at UVa, but it was just as important to listen to what they had to say and make sure they felt as if they were being heard as well.

Category 2: Operations (OP)			
Credit Number	Credit Title	Contact	En
Buildings			
OP Credit 1	Building Operations and Maintenance	Andrew Greene	aig5k@vi
OP Credit 2	Building Design and Construction*	Andrew Greene	aig5k@vi

OP Credit 3	Indoor Air Quality	Kristy Davis	kad4t@vi
Climate			
OP Credit 4	Greenhouse Gas Emissions Inventory	Jess Wenger	jsw6d@vi
OP Credit 5	Greenhouse Gas Emissions Reduction	Jess Wenger	jsw6d@vi
<i>Tier Two</i>	<i>Climate Tier Two Credits</i>	Jess Wenger	jsw6d@vi
Dining Services			
OP Credit 6	Food Purchasing*	Kendall Singleton	Singl Kendall@a
<i>Tier Two</i>	<i>Dining Services Tier Two Credits</i>	Kendall Singleton	Singl Kendall@a
Energy			
OP Credit 7	Building Energy Consumption	Scott Martin	esm3e@v
OP Credit 8	Renewable Energy	Scott Martin	esm3e@v
<i>Tier Two</i>	<i>Energy Tier Two Credits</i>	Scott Martin	esm3e@v
Grounds			
OP Credit 9	Integrated Pest Management*	Rich Hopkins	rmh3f@v
<i>Tier Two</i>	<i>Grounds Tier Two Credits</i>	Rich Hopkins	rmh3f@v
Purchasing			
OP Credit 10	Computer Purchasing	Teresa Lockard	twl5b@vi
OP Credit 11	Cleaning Product Purchasing	Robert Carman	rhc@vir
OP Credit 12	Office Paper Purchasing	Lori Ponton	lp3s@vi
OP Credit 13	Vendor Code of Conduct	Lori Ponton	lp3s@vi
<i>Tier Two</i>	<i>Purchasing Tier Two Credits</i>	Lori Ponton	lp3s@vi
Transportation			
OP Credit 14	Campus Fleet	Jon Monceaux	
OP Credit 15	Student Commute Modal Split*	Andrew Greene	ajg5k@vi
OP Credit 16	Employee Commute Modal Split	Andrew Greene	ajg5k@vi
<i>Tier Two</i>	<i>Transportation Tier Two Credits</i>	Jon Monceaux	jcm9ec@v
Waste			
OP Credit 17	Waste Reduction	Sonny Beale	bcb8s@v:
OP Credit 18	Waste Diversion	Sonny Beale	bcb8s@v:
OP Credit 19	Construction and Demolition Waste Diversion*	Discuss	
OP Credit 20	Electronic Waste Recycling Program	Sonny Beale	bcb8s@v:
OP Credit 21	Hazardous Waste Management	Suzanne Arnette	smp5m@v
<i>Tier Two</i>	<i>Waste Tier Two Credits</i>	Sonny Beale	bcb8s@v:
Water			
OP Credit 22	Water Consumption	Armando de	ajd9c@vi

		Leon	
OP Credit 23	Stormwater Management	Kristin Carter	kma4z@v
<i>Tier Two</i>	<i>Water Tier Two Credits</i>	Armando de Leon	ajd9c@vi