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Kiosk Welcome Center

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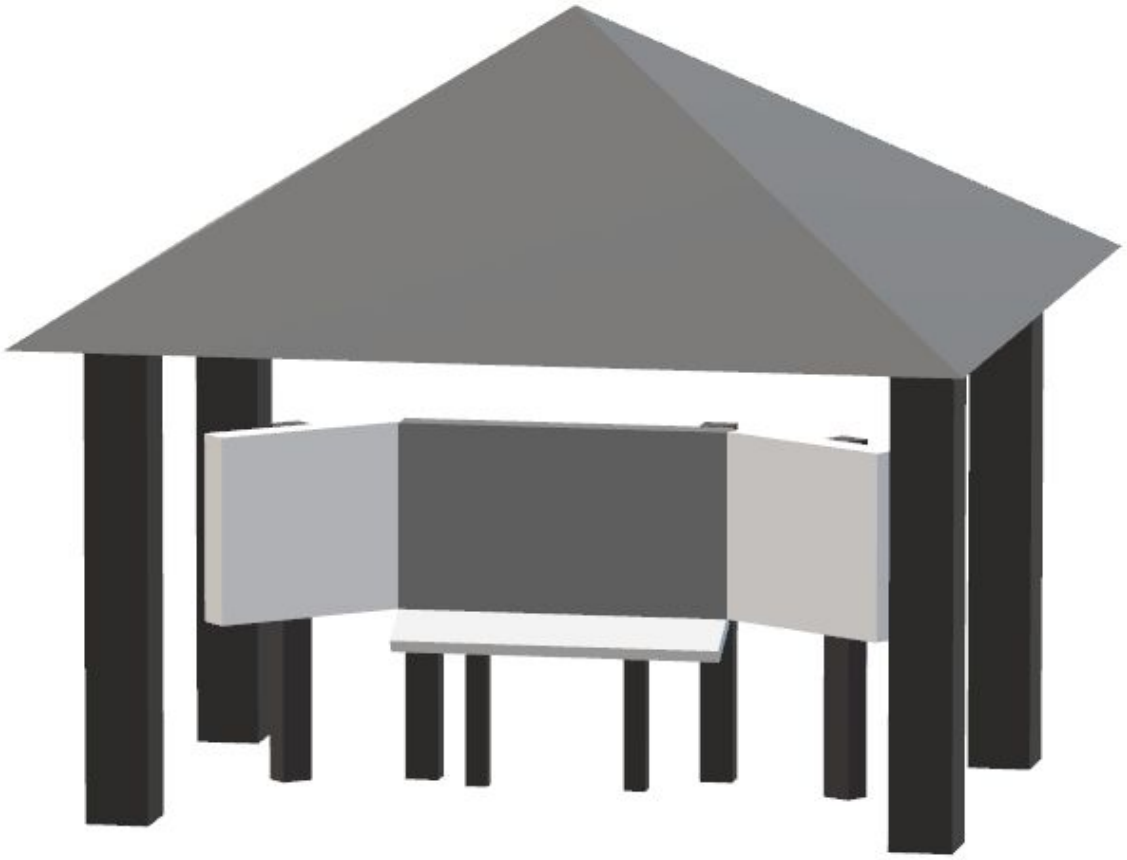
Kiosk Welcome Center

Authors: Avery Moore, Kristyn Reinecke, Megan Plekker

Environmental Problem Solving

Grand Valley State University

April 23, 2018



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Time for action

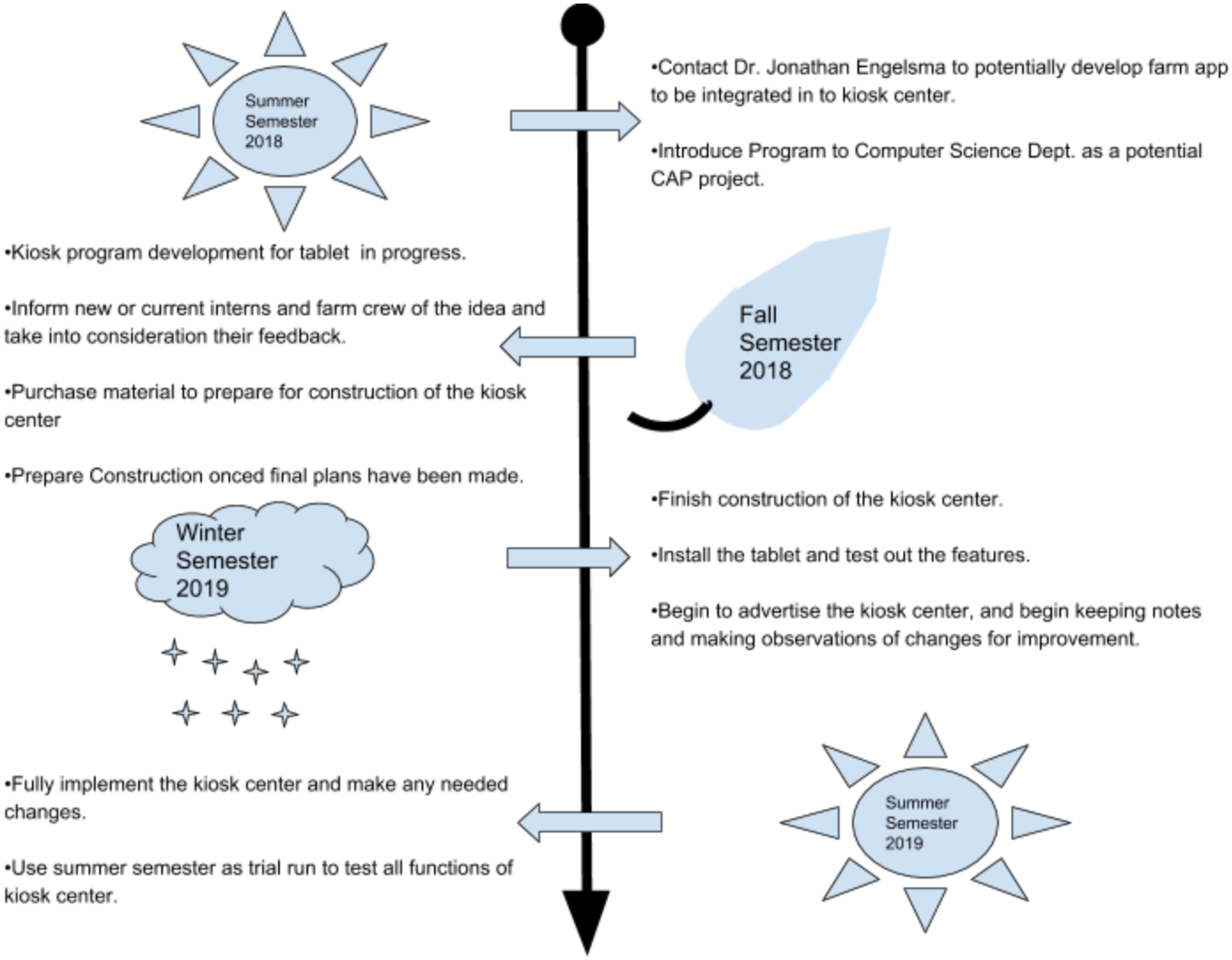
Recommended actions for the Sustainable Agriculture Project include the installation of kiosk used for student login and training. Kiosk will also include:

- Welcome Sign
- Community Board
- Site Map
- Handbook
- Training Manual
- Training Videos
- Frequently Asked Question
- Suggestion Box
- Standard Operating Procedures
- Rules
- Social Media
- Community Outreach
- Pictures
- Web Application
- Tablet
- Weatherproofing

Promotional Paragraph

In an effort to increase productivity and student participation at the Sustainable Agriculture Project, We have begun the development of a Kiosk Welcome Center. This Welcome center will be designed to provide affirmation to new volunteers and direct volunteer training. The welcome Kiosk will become the start point for all volentuetters in hopes to better track student participation at the SAP. Better volunteer tracking will provide the SAP with necessary data to prove academic participation to Grand Valley State University. Welcome Kiosk will also introduce web application to students to provide onsite training. Introducing internet access will also allow for social media and community outreach throughout the SAP. If you wish to donate to this project please feel free through the GVSU Office of Sustainability Practices.

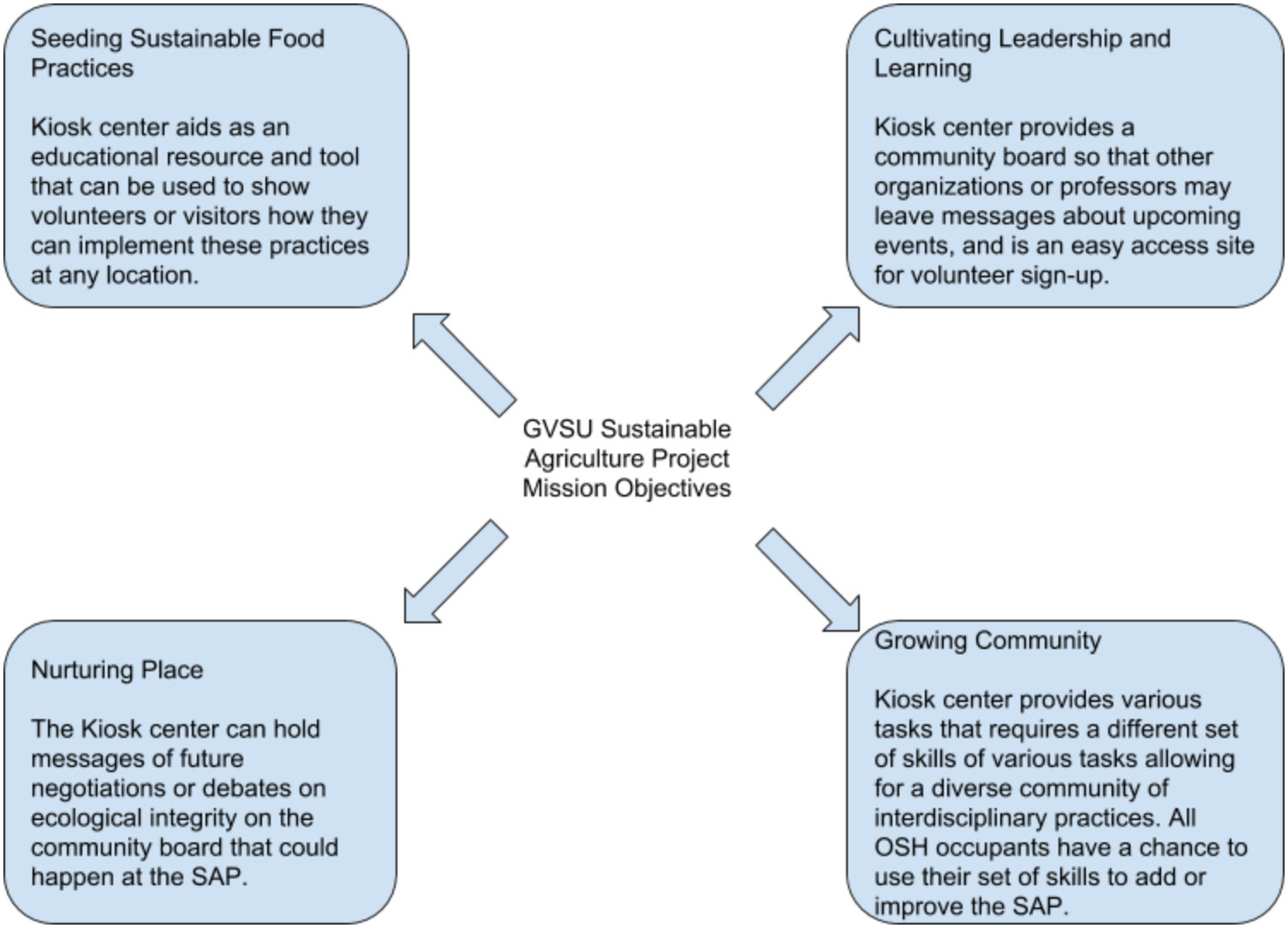
Optional Implementation Timeline



This timeline is a suggestion to start the project this summer and have it completed next summer of 2019. This suggestion may not be realistic, but the implementation process can still be carried out in this particular order.

1. Notify the computer science department of the app so that it can at least be in progress.
2. Construction of the kiosk center. If the program is on hold for the app, the kiosk structure can still be used as a welcome center for visitors.
3. Once the app has been integrated advertise the new sign in features for visitors and volunteers to use.
4. Collected feedback on the success
5. Make any final adjustments to the kiosk system

Organizational Values



Background Research

Self-service World

In the ever-changing culture of today, it seems that the world continues to move toward “computer-facilitated self-service technologies” like ATMs, pay-at-the-pump gas stations, and self-checkout at grocery stores tend to unveil both supporters and critics of the idea. This “do it yourself ” attitude allows users to personalize their life, or not, by selecting what they want and don’t want. iTunes, for example, allows its consumers to “download just the songs they want and construct their own custom albums, is a further manifestation of the kiosk culture” [1]. Corporations use this same idea as a means to give consumers the convenience and control that they desire which in return rewards the company with more satisfied consumers and more likely to return.

Looking back, the idea of self-service began when Charles Saunders opened the first Piggly Wiggly grocery store in 1916 which required shoppers to choose their own food from the shelves and bring it to a central check-out area. Although today’s concept of self-service has come a long way with the help of technology, “the idea to take responsibility away from trained employees and place it in the hands of the consumers can be traced back to Saunders” [1].

[1] Cavanagh, Thomas B. “Prosthetic Gods: The Posthuman Threat of Self-Service Technology.” *Interaction Studies Interaction Studies Social Behaviour and Communication in Biological and Artificial Systems*, vol. 9, no. 3, 2008, pp. 458–480., doi:10.1075/is.9.3.06cav.

Powered by the Sun

As the use of personal self-service devices, like iPads, continues to increase, consumers constantly want new and faster technology. This constant change increases prices while making older models almost obsolete. In addition to finding an affordable tablet, another key requirement is that the tablet needs to be solar powered so that it doesn’t have to rely on being charged during the day. In order to find such a tablet, we

needed to look beyond the United States into India where *Bharat Electronics Limited* has announced the development of a $75 solar-powered tablet. Running the “Android 2.2 system, this tablet is equipped with a solar-powered power back up and stores its data through ‘the cloud’ based server which can be accessed remotely with another computer” [2].

[2]"Bharat Electronics showcases $75 solar-powered Android tablet." *Instablogs.com*, 8 Aug. 2011. *General OneFile*.

http://link.galegroup.com/apps/doc/A263663370/ITOF?u=lom_gvalleysu&sid=ITOF&xid=b9a44533. Accessed 3 Apr. 2018.

Another option, instead of using a tablet with the solar power piece attached, is to find a product that the tablet can be plugged into so that the panels can be placed at the optimum spot to receive the sun’s power. The *Spark* from Voltaic offers a product which has “four, 2-watt solar panels which can fully charge an iPad in ten hours” [3]. This its larger size, it can provide “one hour of video playback with one hour of direct solar charging” when compared to other solar chargers. Even though it is larger in size, Voltaic designed the charger so that it can be The volume of the product is also used as a spatial advantage by integrating a convenient carrying case with the device itself. With its convenient size, efficiency and usability, the product is estimated to come with a price tag of $299 [3].

Figure 1: *Spark* solar-powered charger from Voltaic[4]

[3] "Spark solar-powered charger for tablets, doubles as a carrying case." *Instablogs.com*, 25 June 2011. *General OneFile*, http://link.galegroup.com/apps/doc/A259753741/ITOF?u=lom_gvalleysu&sid=ITOF&xid=5704 7a1a. Accessed 3 Apr. 2018.

[4] https://www.voltaicsystems.com/blog/ces-preview-spark-solar-tablet-case/

Inclusion

"A typical interactive kiosk is accessible in a public location and created for the use of general public" [5]. The first aspect of the kiosk that designers have to look into, and is possibly the most important, is the location. If the kiosk isn't in a place for visitors to see, then all the planning and budget work was for nothing. In addition to its placement, it also has to catch the attention and be inviting enough to lure the passer-by in while being clear of what the purpose of the kiosk actually is. The second major aspect that designers have to keep in mind when constructing the kiosk and its structure is that the public includes people of all technical experience so it has to be straightforward and easy enough for all walks of life to understand and navigate the system. In addition to making the kiosk easy, it also has to be designed with time in mind because often when visitors arrive they just want to start exploring or find out where to go, so it has to be a simple and self-explanatory while including the necessities that people will need to find where to go.

Anni Veijalainen, the author of *Breaking Barriers: Accessible Self-Service Kiosks for Everyone*, described eight key components that a welcome kiosk should include to help attract the visitors who need help finding their way[5].

1. Location
2. Interactive kiosks rely on being noticed by the public passing by because the decision to use it is made on the spot.
3. Encouraging use: It's a good idea to set up signs pointing to its location.
4. Running a demonstration on the screen is a good way to encourage passers-by to approach the device.
5. Physical access for all walks of life. Gives equal access to users whether they are standing or using a wheelchair.

6. Introduction and instructions for using the system. Instructions should be kept brief and presented at each stage of interaction.
7. Language selection
8. Privacy: The physical device should be designed so that user's body will block the view to the screen from others.

[5] Veijalainen, Anni. "Breaking Barriers: Accessible Self-Service Kiosks for Everyone." Apr. 2017. https://www.theseus.fi/bitstream/handle/10024/132168/Veijalainen-Anni.pdf?sequence=1&isAllowed=y

The Best Practices

Main issues being addressed:

- Time management of farm crew	- Volunteer / Visitor sign in
- Community events notifications	- Training and process understanding

Kiosk center: a small stand-alone device providing information and services on a computer screen.

This research group has identified certain areas of development that could be solved with the used of a kiosk center. Many industries have adopted to this new and developing method to help make information not only more convenient and available but to also keep up with the generation of ever developing technology. Hospitals use kiosk centers to help with patient confidentiality, museums to better portray historical facts, and banks to make transactions more secure. The use of a kiosk center that displays information and allows for interaction is not only efficient it is also an investment to better portray information. This in turn will help with managing newcomers to the farm and providing tasks.

One example of a successful kiosk center is one used at Bowling Green State University Libraries. In 2006 the library in Ohio was renovated to match with the new generation of students way of learning and to bring in more traffic. With the changes and increased flow of students the library said, “we also needed a better way to inform users about our services and collections, as well as advertise our events.” (56, Broughton). By strategically placing their kiosk in a high traffic area more visitors were noticing the available information. This relates to the SAP’s issue of being able to portray information of the SAP and upcoming events. By installing a kiosk center at the SAP visitors can easily access the information and be aware of upcoming events and information about the SAP.

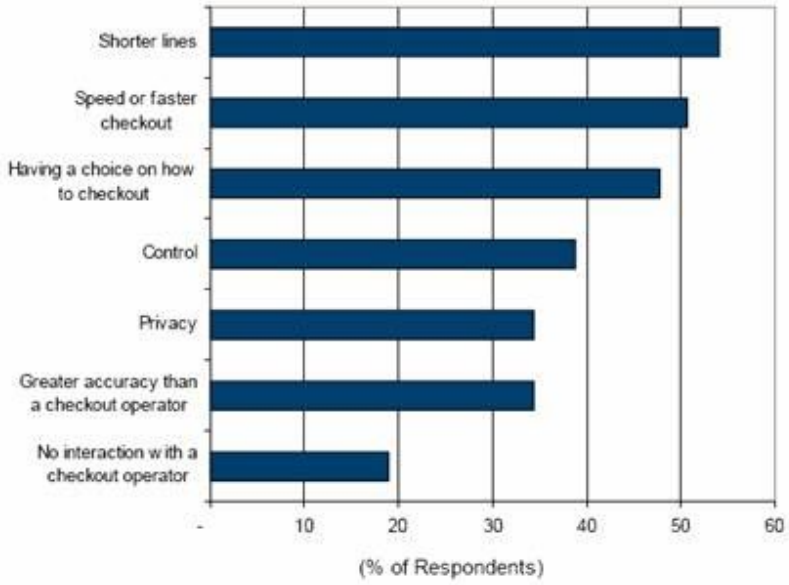
Broughton, Kelly. “Totem Kiosk, Not Just for the Hotel Lobby”. *Journal of Access Services.*(2007). Retrieved from: https://www.tandfonline.com/doi/pdf/10.1080/15367960802197749?needAccess=true

Second Example, are kiosk centers you see at least once a week. Many food shopping centers have adopted the self-check center which is just another form of a kiosk. The kiosk that we wish to install and the ones you see in the stores share the same type of benefits. With stores have the self-checkout lanes, this provides people with more options and security to their shopping. A research done by MIT shows some results of the benefit of having the kiosk center. Some of the similarities of the two kiosks benefits include is privacy, control, and choice on how to gather information. With the kiosk center at the SAP, visitors have the option to gather information in their own way. Having this type of personal experience will hopefully show an increase in traffic to the SAP.

Final example is the kiosk center that is Whaley Park in Flint. Their kiosk system is all informational and has no technology, but still has plenty of amenities like directions, doggy bags, and other information. This is a prime of example of how the SAP kiosk could work even if the app program were not to be developed. By having the

kiosk center this provides the community with extra information.

http://signsbycrannie.com/outdoor-park-kiosk/



Taking a closer look. Human-use Experience | Supermarket self service kiosk. http://web.mit.edu/2.744/www/Project/Assignments/humanUse/lynette/2-About%20the%20machine.html

Serving the community

The Sustainable Agriculture Project has had different circumstances where first time volunteers have had feeling of disassociation when visiting. The Welcome Kiosk is a way to bring unification to farm managers and volunteers. The inclusion of Community Board to the Welcome Center Kiosk will allow for involvement from other GVSU clubs and organizations. The implementation of community outreach within the Welcome Kiosk serves as a way to increase awareness of the Sustainable Agriculture Project into the community.

Two-Phase Educational Plan

Phase 1: *New Volunteers* **Basic training includes:** Introduction to the farm; tools, workstations, general questions. Tasks include weeding, seeding, watering flowers, washing produce, introduction to plants and flowers, germination.
New Volunteer Tasks: ● **Move Wood Chips** ● **Clear Beds** ● **Hoe Walkways** ● **Transplant large seedlings** ● **Harvesting Flowers** ● **Seedling Nursery Flats** ● **Broadfork**
Phase 2: *Experienced Volunteers* **Experienced training includes:** airting compost pile, equipment maintenance, digging irrigation ditches, pruning, making soil, waste removal.
Advanced Volunteer Tasks: ● **Direct Seeding Using Seeder** ● **Trellising Crops** ● **Setting up Irrigation** ● **Cultivating Within Beds** ● **Harvesting Vegetables (with appropriate training)**

Screen Simulation: Lock Screen

Home Page

Educational Program

Supporting Sustainability

Sustainability of the Kiosk Center and its Efficiency benefits

- Solar Powered Tablet
- Fast and Easy Sign in for Groups and Volunteers
- Posted available tasks and directions on task to minimize farm manager and crew time on teaching task
- Tasks and projects easily accessible online for all members of the community so to practice the techniques on their own time.
- Students take the knowledge gained at the SAP and can bring it with them into their future occupations outside of GV
- Kiosk center hold important information to help farm crew and interns learn more about the tasks on the SAP

Location

Having the structure and kiosk placed in the right spot on the SAP is the most important factor to its usefulness and it efficiency benefits. Keeping the GVSU facilities crew in mind, a great and easy place to put the structure would be on the east side of the garage directly attached to the existing foundation. The only problem this poses is its view to new students and volunteers who may have a hard time finding it without signs directing them. Another place to build the structure would be out front in the yard near the porch of the Wesley House. With it placed by the house, it would allow a visual cue for new students to come and gather to start their experience at the SAP. This placement, however, could block the view of the house if it is built to large in front. The structure could also be built near the front tree which would offer additional shelter for the kiosk and be very visible for students and classes to meet.

Signage

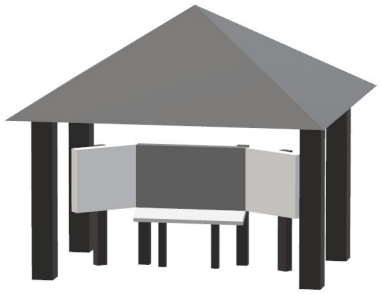
If the kiosk is in a hard place to see for the new students and visitors then a sign, or multiple, needs to be placed in a spot that is visual and inviting to guide the visitors to the welcome area. Although a basic sample, all the sign needs to do is to direct students to where the main kiosk is and then its up to them to follow the instructions for how to proceed on the tablet. An simple example is shown below as a possible option for the sign design.

Overall Estimated Budget for Material

Outdoor treated posts	$44 x4
Roofing	$28
Trusses	$61 x3
Ipad	$330
Kiosk posts	$42 x2
Kiosk Board	$30 x3
Solar Power Source	$75
Cork board	$63
White board	$280
Plywood Walls	$37 x8

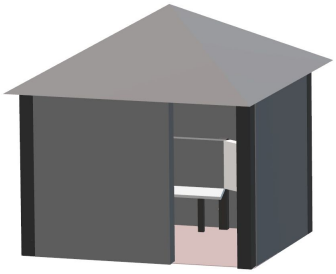
*Not including Tax or hourly rate wages

Phase Estimates of the structures and added features



Special features	Costs
Cork Board	$63
Rough Estimate Total	$1,100

Added Features	Costs
White Board	$280 x 2
Rough Estimate Total	$ 1,629



Added Features	Costs
Plywood Walls	$300
Rough Estimate Total	$2,000

Estimated Costs without the Ipad

Sources for Supplies

14 Variations Available

Owens Corning® TruDefinition® Duration® Architectural Shingles (32.8 ...

Sku #: 1513178

Online Price

$27.98 /bndl

10'/12' 8/12 Storage Truss

Sku #: 1871092

Online Price

$60.49

7 Variations Available

6 x 6 #1 & Better S4S Timber

Sku #: 1022714

Online Price

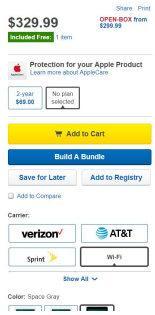
$41.99

Outdoor Essentials 4 in. x 4 in. x 9 ft. Pressure-Treated Cedar-Tone Moulded Fence Post

Model# 162524

(11)

$43 37



Share Save to List Print

1/2 in. x 4 ft. x 8 ft. CDX Ground Contact Pressure-Tr Plywood

(26) Write a Review Questions & Answers (25)

- 2X the protection compared to Above Ground treatment
- Treated for protection against fungal decay, rot and termites
- Ideal for decks, walkways, landscaping and other outdoor projects

$36 98 /each

Write a Review

SKU: UV-OEDE-851

Price: $277.00

prev See all 317 items i

Cork Bulletin Boa Frame

Item #: T9F695319

Ships same day.

6 review

Price: $ 62.95

https://www.homedepot.com/p/1-2-in-x-4-ft-x-8-ft-CDX-Ground-Contact-Pressure-Treated-Plywood-131876/206970940

https://mywhiteboards.com/outdoor-dry-erase-cabinet.html

https://www.bestbuy.com/site/apple-ipad-latest-model-with-wi-fi-32gb-space-gray/5201300.p?skuId=5201300

https://www.menards.com/main/building-materials/trusses-i-joists-engineered-lumber/storage-building-trusses-frames/c-13922.htm

https://www.menards.com/main/building-materials/lumber-boards/timbers-logs/c-13131.htm

https://www.menards.com/main/building-materials/panel-products/construction-panels/sheathing/plywood-sheathing/ac2-reg-4-x-4-treated-ccx-handi-panel/1234060/p-1444431334397-c-13337.htm?tid=7442060614534558076&ipos=5

https://www.menards.com/main/building-materials/roofing/roofing-shingles/c-5814.htm?Spec_ProductType_facet=Architectural+Shingles

https://www.homedepot.com/b/Lumber-Composites-Fencing-Wood-Fencing-Wood-Fence-Posts/9/N-5yc1vZc3mjZ1z0mvso

Other Information

AgHelp!

AgHelp! Is a web application designed to help farm workers locate work and activities throughout the agriculture community. The Web app launched June 5, 2017. The app was located in the app store for approximately 6 months. AgHelp! Was an app similar to the Yelp app, where employers could advertise job openings and workers could locate positions. Although this web application has a different functionality as the one that would be required for the Sustainable Agriculture Project, the research done may assist in future agriculture based mobile applications.

Source: https://scholarworks.gvsu.edu/cistechlib/273/

Moving Forward with this Project

This section is for the individual or group that has decided to continue or improve on the idea of the kiosk and how the above information will help in continuing the work.

Main objectives to get started on this project.

- The construction of the kiosk
    - There are some designs in this folder, but they are not exact not do they have precise dimensions in place. There was talk that the structure could even be built off of an existing structure on the farm already this could make the build easier and also save on costs. Please look further into this.
- App: the actual app for the kiosk center is the main attraction for the project bu it is not the main focus. Meaning that the farm in general would like the kiosk center built first to be used as a gathering location and information center. Dr. Engelsma mentioned above is the Cap stone professor to contact for the app creation.
- SOP: Build off other parts of the app and what could go into the app such as the SOPs.

Contact information

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