Reflecting on Your Implementation of Project Management Tools

Looking back at my project charter from the MSUS Project Proposal in late January, I adhered pretty close to the original scope agreed upon by myself and my client. The main difference between the proposal and the actual project was how little time I had in the beginning to get started. Originally, the project was organized into 3 phases with one part of the project building on the next. Phase 1 was general updates to OpenStreetMap, Phase 2 was the constructing of historical basemaps for Apache Junction, and Phase 3 was the implementation of the community values survey. Due to the proposal being accepted late into the semester, my client and I agreed to prioritize Phase 3 ahead of Phase 2, postponing the creation of the historical base maps and focusing on survey data collection. Looking back, this was the right course of action. The data gathering phase of the project went well and there was actual need for the historical basemaps until after Spring Break during Session B. At this moment, I am completing phase 3 of the project and going to begin on Phase 2. The final deliverable of the project to my client will be the historical basemaps. Changing the original order of phases allowed me to focus on the public survey process when the time came.

The actual project did not follow the original GANTT chart and timeline. Only the pre-planned event dates for data gathering was followed according to schedule, the weekend days of February 17th, 23rd, and 24th. As stated in the prior prompt, I had to switch the original Phase 2 and 3 due to time constraints. To accommodate this, the overall project timeline had to be pushed back by almost an entire month. Originally, the entire project would have been completed by the second week of March. I had a meeting with my client today, March 29th 2018, and we talked
about moving forward with building historical basemaps for Apache Junction. The completion of the client’s Final Report and historical base maps will put this project into completion around the second week of April. Changing the schedule in real-time did affect the attainment of interim deliverables, because my client did not receive the historical basemaps of the city that I originally planned to provide. Now, I plan for the very final deliverable I send to the client will be those basemaps.

Throughout the time of the project, I was in constant communication with my main client, Dr. Joshua MacFadyen (Josh). We communicated through email and personally met weekly or bi-weekly. It was through him that I was able to meet with the Development Services Director from the City of Apache Junction, Larry Kirch. On February 17th, during the survey data gathering session at the Lost Dutchman Marathon Fitness Expo, I was at the same booth as Larry. I offered my services and told him about my MSUS project, but he seemed fully occupied with what the city was working on. That was the end of my stakeholder engagement with the city. The final act of stakeholder engagement with the AJ government will be sending Larry the Final Report Deliverable I am providing to my main client, Josh. That will be completed in the next two weeks, by April 13th.

When thinking about stakeholders, I always come back to the many survey participants I met during the two survey weekends in February. I interacted with the public of Apache Junction by listening to their stories. For example, I learned about how one woman cherishes Prospector Park because she runs the yearly camping event there. I also remember how one man placed stickers on his friend’s houses, indicating to me that he experiences the city in a social way. My original plan to engage with the City of Apache Junction and the general public was much more formal than what actually happened. Originally, I thought I needed to attend the Marathon Fitness Expo on February 17th to engage with the local residents and learn about how to make the community survey better. I thought that I was going to set up meetings with city officials to conduct an interview. Instead, I engaged residents by going into the community and talking to them. On the day of the Marathon Expo, I ended up gathering data and engaging with people at the same time. I enjoyed this process very much, it was an enlightening to learn about AJ directly from locals. This allowed me to complete my project with a stronger data set, an additional 46 community values stickers that I would otherwise have not gathered.

Next time, I would start on the engagement earlier by starting the project earlier. The beginning is so delicate when needing to break into a new community and engage with people. Frankly, I was able to be in this position from connections through ASU’s staff and faculty. I was able to set up with the city of AJ’s own booth, that was very nice of them to provide.

I did end up spending some money on the project. I was out in public trying to gather survey data and my materials were all flying away due to the wind on Friday February 23rd, so I bought a foam board and large paper clips. I also had travel costs, the drive from my apartment to the Rodeo Grounds was 34 miles. Through the project process, I learned that it is smart to
leave a contingency budget to cover any last-minute expenses. Thankfully, there is a reimbursement mechanism set up for the Project Cities program. Primarily though Anne Reichman, I have been in a paperwork process of getting my expenditures reimbursed.

**Reflecting on You as a Project Manager**

The most important skill I gained through doing this project is consistent work ethic. Prior to this MSUS project, I have been used to working on schoolwork in bursts. However, this project has been challenging to me because I have had to consistently work on it for many days in a row in order not to fall behind. I think working full-time has a role in this, my time is limited and precious. Working in out in the field, consistently working on a single project is mandatory, and being able to effectively work on multiple projects at the same time is expected. Additionally, I learned how to utilize the stakeholder engagement process. There is a reason why the first map survey map has 46 value stickers on it and the final map has 105. Acting by myself in a foreign environment and asking people about their values is not easy. Thanks to this experience, I now know how to engage with many people in a short amount of time in a meaningful way. Sustainability is an iterative process that works best when the local population is involved in their own solutions. I learned how to listen well during this project; when people found out I was a student trying to catalogue the city’s favorite places, people would open up to me about their values and feelings about their own homes. It was quite a special experience. Behind every sticker on the map is an experience, or memory, that means something valuable to that person. I grew up in Phoenix, and had never been to Apache Junction before. After this project, I identified with their feelings about their personal ownership and pride of Superstition Mountain. I felt the same way about South Mountain growing up, the red lights at night a constant fixation as I was being picked up and dropped off between my parents’ houses. Admittedly, Superstition Mountain is prettier than South Mountain.

I wish I had gained better skills in project management writing, especially at the beginning of the semester in early January. I counted 5 project proposal drafts; the proposal process pushed the start time of the project back enough that I had to push back the delivery of Phase 2 historical basemaps to the middle of April. Additionally, I wish I had gained better skills in time management at the beginning of the project. I always managed to keep up the pace, but looking back, I know I could have used my free time better to get ahead. I feel like this MSUS project has changed me and made me a much better project manager. I knew I could do it, but actually being in the weeds and working on this myself has taken extra effort. A small skill, but still noticeable. Looking back at my Project Update assignments for the class, my completion percentage was always very off. For example, one I submitted on Monday March 26th stated I
I was 90% done with the project. This is just not true, I still have work to do and deliverables to submit to my client. Throughout this whole process I have not been able to properly assess the work load, until the very end.

The easiest part of the project to implement was the Phase 1 updates to OpenStreetMaps. This was just me, some geographical data, and a mapping tool on a computer. I was most comfortable in this environment, since I literally work as a GIS Technician. The hardest part of the project to implement was certainly the engagement process with the city. I am well aware that the main reason I have had an audience with Larry Kirch, and others, is because of the connections through Josh, Paul Prosser, and project Cities. I am happy for this, since it facilitated the progress of the project, and I also know that the city engagement process would have been more organic and successful if started earlier. Being short on time, I did what I could. It is important to note that I am not done with the project. I still have to re-upload the sticker data onto Maptionnaire, complete the Final Report Deliverable for Josh, send it to Apache Junction, and build the Phase 2 historical basemap. These parts of the project still need to be implemented.

Several months later, the project proposal process is still the most surprising part of this MSUS project. In my mind, sustainability, geography, urban planning, and society all come together to obviously intersect into sustainability issues. Humans live in cities, and how they value their surroundings will determine how they act. Actions lead to outcomes, and now we have an intervention point for sustainability. If a community wants to improve their negative reputation, then the outsider’s prejudices need to be exposed to the community’s most valuable places. It took many proposal iterations to make my thoughts on this topic clear.

There is a technique that I developed recently that I will take with me beyond this MSUS project. I look at what next week’s work load is. By looking ahead, this ensures that I will never be backed up with old work interrupting approaching deadlines. Next time I manage a project, I will be working ahead, not working to keep up. Being my own project manager showed me the value of forecasting the near-future workload. Additionally, the next time I manage a project I will be more actively engaged with my clients. I am understandable to my own reality, I am a graduate student with a wife and full-time job. I am constantly wanting to go in different directions, and the balance is delicate. Because of this, my time is limited and my energy should be placed strategically. Purposefully strengthening individual relationships is very important to being a project manager. Next time, I will be present more often.

I already knew that I have periodical anxiety that makes me purposefully avoid a stressor, like school. In context of being a project manager, I learned that the project continues to move and deadlines are always getting closer, regardless of how I am feeling. I learned that my personal excuses I make for myself will not work for other people who are relying on work to be completed by deadlines. This is an obvious reality, but it is even more palpable when I am the project manager. Now, I want to avoid feeling like the world is piling on top of me because of inaction of slowness. It is an incentive for me to avoid that feeling and keep up with the project.
As a sustainability professional, I learned that the MSUS degree program prepares me for real world sustainability projects. Tackling an issue like a city’s reputation and future urban development is complicated. A sustainability lens allows me to focus in solutions that are capacity building. For example, this MSUS project that I am working on relies on community involvement to compile data that is then sent to the government for decision-making. Along the path of data gathering, there was public engagement and civic pride. Talking to people about their favorite places builds community, and even improves the reputation Apache Junction has for itself. The social capacity of the city has been strengthened through values surveying. Now, the city will have community feedback on areas of the city that are meaningful to them.

Reflecting on Your Learning About Sustainability Projects

- Of the five core sustainability competencies (systems, anticipatory, normative, strategic and interpersonal competence) what weaknesses have you addressed through your CE work?

  Arnim Wiek wrote about the five core sustainability competencies! (Wiek, Withycombe, and Redman. 2011)

  I have addressed 4 of the 5 sustainability competencies through the work of this CE project: systems, normative, strategic, and interpersonal competencies.

  A weakness of systems thinking is not blatantly apparent, but the social and government systems in the city inherently have room to improve. An exercise of ‘place stickers on your favorite places on the map, each color means a different value’ builds systems thinking into the participant’s mind. A location can have multiple values, like placing aesthetic and cultural values onto the public library. At the same time, the building is integrated with the environment through architecture and valuable in social capital. In terms of the government, seeing a values map like this breaks the traditional mold of zoning. Most zoning regulations enforce a strict, 1 use policy on that tract of land. Seeing that an area can be valuable in different ways for the community expands the thinking of the government beyond the traditional zoning model.

  The normative benefits of the Public Participation GIS methodology are easily apparent. When the people assign values to locations in the community they are specifying their values and express their own view of what should be valued. Specifically, correlating the nearby natural amenities with values builds the community’s capacity to further protect their natural resources. Ironically, this CE Project exposed a weakness of normative competence in Apache Junction. Despite living around unique natural amenities, 4 out of the 5 most valued areas were from the built environment. There is a disconnect between the city’s messaging and the citizen’s experience or feelings.
The strategic competency of the city government is not necessarily weak within business as usual, but it is definitely weak for their sustainability goals. The city aims to increase the number of trails and interconnect them all with an active transportation plan. However, the city has been developed for automobile travel and is very sprawled out. This dilemma means the city’s past policies are inhibiting their capacity to get things done. This CE project delivers data to the city that they can then use for development decisions. Maybe, they can construct a multi-modal trail that connects Flatiron Park to the Multigenerational Center and Library. This project delivers the community’s most valuable areas in an easy to visualize format. This can be utilized in the government for decision making.

The weakness of Apache Junction’s interpersonal competence stems from its inability to properly market itself to the outside region. Having a negative reputation inhibits their ability to fairly communicate with others and collaborate on a human level. Unfortunately, prejudice can impact interpersonal relations between people. The overall goal of this CE project is to produce a deliverable for the city that they can use to help improve its reputation. They can actively promote the most valuable areas to the outside community to improve the city’s brand.

The obvious class that comes to mind is the Sustainable Neighborhoods for Happiness class with Scott Cloutier. This class was very similar in the public engagement process and stakeholder communications. One of the lessons of the class is to always enter a community as someone eager to learn. When visiting Apache Junction, I did my best to act as a sponge and listen to as many stories as possible. I engaged with residents and did my best to facilitate their participation in the survey. This approach reminded me of that class. Additionally, community values and happiness are intertwined. I aimed to learn about people’s favorite places, which most likely makes them happy as well. Creating a map of community values and providing it to the city is reminiscent of putting together a cookbook of the neighborhood’s dishes and then sharing it. The data gathering processes are similar, the information and insights come directly from the local population. Mapping community values, and working with happiness, is a way to quantify qualitative data like feelings and history.

At the heart of the project is stakeholder engagement and normative competency. Providing the information to the government is a way for the people’s positive feelings to be acknowledged. If the city is struggling from macroeconomic issues and suffers from a bad reputation in the metro area, then the response to that has to come from the bottom up. Engaging the local community both builds their capacity to appreciate their favorite places, but it places a spotlight on the normative strength of the city’s residents. Quantifying the community’s most valued locations helps facilitate a conversation toward sustainability goals and local development principles.
This project has contributed to my overall career goals. Up to the very end of the MSUS program, I had not yet seen how GIS and sustainability can merge. I know that is what I wanted to do, I just had not seen it yet. Being able to work on this project expanded my mind to the possibility of utilizing PPGIS methodologies in other contexts. This same methodology can be performed at companies, organizations, institutions. Applying PPGIS makes me confident in my choice of career and education, and confidence is great to have at this stage in my career. I am just getting started.

Reflecting on Your Project’s Accomplishments for Your Client and Stakeholders

The client deliverables for this project have been mostly successful. The main focus of this project was in Phase 3, and that has been the most successful part of the project. I uploaded the survey results data and the HST 485 class has been conducting the online version of the survey. The survey responses will grow and the data set will improve through the end of the semester. Phase 1 deliverables were strange. I drew a bunch of lines on OpenStreetMaps, I counted 60 separate lines, but they have yet to show up on the OSM layer displayed on Maptionnaire. My best guess, is that Maptionnaire updates the OSM layer less frequently. Phase 2 deliverables have also been delivered. I had some technical problems using the Mosaic tool on those raster files. Frustratingly, following the same work flow, 1985 came out fine and 2004 was a completely black image. Thankfully the Geospatial Hub in Noble Library helped me out and I was able to deliver the second historical base map to Josh.

The short-term outcomes I suggested in the proposal was mostly around Phase 1. The outcome is there now, there are more nature trails mapped on OpenStreetMap than there were a few months ago. Most of the outcomes I suggested were reliant on the public utilizing the tools that I am updating and relying on the city to act on the survey data. These outcomes could be measured by a full case-study performed by the city on the PPGIS method used during the CE project. Or, they could just use other mapping survey software, like Maptionnaire, to constantly gather community feedback. Reversing the negative perception of the city can be measured if the city acts on this project’s data and they utilize it within the Positively Apache Junction campaign.

This project is mainly a capacity building project to gather data that will be used for developmental purposes. The data gathered during this project will be subsequently sent to the city of Apache Junction, and they will be able to incorporate this within the Positively Apache Junction project. There are many moving parts going on with Apache Junction, ASU, and sustainability. This CE project is one sustainability capacity building effort among many others. In the grand scale of sustainability, this project aimed to help facilitate the change of a negative reputation to a better one. This means attracting more economic development and strategically direct investments toward highly valued areas. The direct impact this project had on
sustainability is yet to be known, as the Final Report still needs to be presented at the Project Cities and shared with the city of Apache Junction. From a person’s perspective, it is powerful to have the community’s favorite places marked for all to see. The social fabric within the community will be strengthened once the findings are shared and favorite places with high values are identified.

**Final prompt:**

I came into ASU with my sustainability mindset honed since high school. Now that I have received a formal education, I am more down to earth. Before, my sustainability theories were very theoretical and based on ethics, which is a good place to start. Now, I know that sustainability problems are unique. They require systems-level thinking to find the proper intervention points. Sustainability is transformation on a human scale, which now is in the billions and has measureable consequences on a geologic time scale. Interestingly, the most successful transformations will come from small places, local solutions for local problems. I think the coursework of this program has given me expertise in areas that I was already interested in. For example, thanks to the Urban Infrastructure Anatomy course taught by Mikhail Chester, I now know that heat resilience is extremely important going into the future as critical infrastructure start to break at extremely high temperatures. The CE project gives me the experience to call myself a sustainability professional after graduation. There is some credibility of being my own project manager and going out into the world with experience behind me. My experience at ASU has been great, and I would definitely come back to MSUS and do it all over again.

When I place this CE project on my resume, it would look like this:

**Sustainability Change Agent, Master’s Culminating Experience Project**

**Arizona State University, Project Cities**

January 2018 – May 2018

- Utilized public participation geospatial techniques to quantify community values and favorite locations in Apache Junction, AZ.

- Collaborated with officials in Apache Junction’s Urban Planning Department and ASU faculty, and monitored project progress to ensure client deliverables.
Community Values Mapping for Apache Junction, AZ

Work Cited