Completing the BPCP Recycling Best Practices Project

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Abstract:

Through observation and research, this project found that the current recycling practices of Balboa Park (BP) institutions were not sufficient to meet current and future waste diversion mandates set forth by the State of California and the City of San Diego. As an intern to the Balboa Park Cultural Partnership (BPCP), I proposed a project to define and test a set of recycling best practices for BP institutions to adopt in order to meet and exceed these mandates. This required initiating the project with standard project management requirements, which tested gaps in my project management skills. This project is my call to action and the story of its execution and success will hopefully inspire others to take up sustainability projects of their own, using the lessons learned from my project to help them execute theirs.

Keywords: waste diversion, recycling best practices
# Completing the BPCP Recycling Best Practices Project

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Introduction

When I became a teacher ten years ago, I wanted to help our youth become better scientists, with the goal that someday these students would help make this world a more sustainable place to live. In time, I realized that I wanted to be directly involved in the sustainability movement and teaching could not satisfy this goal. In 2015, I resigned my teaching position and set out to gain the tools I needed to help bring about sustainable change in my community. I knew this would require additional education and acquiring experience in the sustainability field. I jumped in with two feet and started volunteering with sustainable organizations like the San Diego Green Building Council (SDGBC) and the Balboa Park Cultural Partnership (BPCP), while enrolling in education programs to fill the knowledge gaps that I had.

My organization, the BPCP, represents all the institutions of Balboa Park. One of its core functions is to help BP institutions operate more sustainably. While working for the BPCP to research and compile the sustainability successes of BP institutions, it became obvious that the recycling practices of BP institutions needed improvement. My research showed that BP institutions’ recycling practices had very little commonality and had varying results. It was clear these practices were not researched based, benchmarked, nor based on targets for success. I found this was primarily due to a lack of urgency, recycling culture, required resources and expertise.

As my role in the BPCP evolved, I presented a proposed project to my superiors to assess and improve the recycling best practices of BP institutions. As this aligned well with the mission of the BPCP, it was embraced and approved by my supervisor and executive director. I was excited, but knew that I had limited project management experience and had never led sustainable change in this kind of system.

It was up to me to figure out how to get from having a vision for my project to actually executing the many different aspects of this project. It would require understanding the systems, strategic principles, and principles for success of all the BP institutions and their stakeholders for me to fully understand how to enact the vision I strove for. This vision was for BP institutions to become community leaders in recycling and waste diversion best practices, which will help
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guide San Diego communities, businesses, and citizens towards the ultimate goal becoming a Zero Waste city (McNall et al. 2011). Although this vision is broader than the specific goals of my project, I chose it because it aligns with the Zero Waste plan of the City of San Diego and provides guidance well beyond the completion of this project.

In the end, this project and the lessons learned will become a guidebook for me to use in the future on how to execute a sustainability project. At the start of this project I knew very little about what it would take to successfully initiate, execute, and finish a sustainability project. As the project progressed I began to understand, through trial and error, what it really takes to complete and sustain sustainable change through a project like this one. Hopefully this reflection of my project can be helpful to others when designing and executing sustainable projects within their organizations.

Choose a Project

The first step of creating a sustainability project is to identify a sustainability problem, need, or issue that needs to be solved. The sad reality is that one does not have to look very hard to find sustainable issues that need to be solved within their organizations. All it requires is to look through a specific sustainability lens to filter all that is being seen to identify the sustainable needs around you. The same was true for me and my project, while walking through my organization and other BP institutions, it was clear that every recycling program that I observed needed to be improved in some way.

Before I go any further however, I need to first I provide some background information for my project, which focused on waste diversion strategies. Waste diversion strategies are those designed to divert waste from the landfill to facilities that can repurpose that waste. In California, organizations are required to meet certain waste diversion rates as a metric to show how much waste they are diverting from the landfill, which is usually measured as a percentage of waste diverted from the landfill. For example, current waste diversion mandates require a 50% waste diversion rate, which means 50% percent of the waste produced by an organization needs to be diverted from the landfill by recycling, reusing, and repurposing that waste. The most common
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strategy is to divert waste to a recycling center, which requires a comprehensive recycling program.

The research that I had compiled unfortunately showed that over 90% of Balboa Park institutions could not meet current required State or City mandates and definitely would not be able to meet the more stringent mandates coming on line in 2020. The hard part was trying to understand why many of these organizations, who want to be sustainable, had recycling and waste diversion strategies that were subpar or worse. It did not take very long before I identified this sustainability need as the one I wanted to help solve; improving the waste diversion strategies and recycling practices of Balboa Park institutions.

Once a need is discovered and the desired outcome is identified, a good deal of research needs to be made to understand the system that created that need in the first place and what is the best way to design a solution based on that system (Tate and Martin 1997). A feasibility study is a great tool to assess the need, how to best solve it, and what resources might be needed. The feasibility research also needs to identify what limitations and leverage points exist so that they can be incorporated into the project design. Finally, the study needs to show that scale of the project is feasible considering the available resources, time, budget and staff a project manager may have. All this information can be discovered using a gap analysis performed during the feasibility study.

A gap analysis provides an understanding of what the current practices are and compares them to the desired outcome. Once this relationship is understood, a project can be designed to fill in the gaps found and create solutions to reach the desired outcome (Ny et al. 2010). My project was designed to fill the recycling practices gaps uncovered by the gap analysis of BP recycling practices. One of the first realities this gap analysis showed was that many of these BP institutions have significant budget and staff limitations to execute programs within their organization. The data and research from the gap analysis also showed that many institutional executives see recycling and waste diversion as a low priority of their primary mission. Because of this they choose not put resources towards improving their programs even though data clearly shows that the current recycling practices of BP institutions will not meet upcoming state and local mandates of a 75% waste diversion rate by 2020 (City of San Diego Staff 2015). I would later leverage this point to help convince BP institutions to participate.
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It is also important to research how internal and external systems influence BP institutions and their related stakeholders, and how they helped define their current strategic principles and principles for success (McNall et al. 2011). Only by truly understanding these elements can one design a solution and project that will be successful within those systems. I accomplished this research by auditing recycling practices in as many BP institutions as possible. This research included interviewing those responsible for the recycling programs. The surveys included in this research also helped define the most important stakeholders with whom I would need to engage.

The feasibility study also showed I would need a team beyond just those at the BPCP to scale my project and increase its credibility. I would need to create a coalition of trusted advisors that included the BPCP team and also outside experts in waste diversion. As my research shed more light on the factors contributing the recycling issues within BP, I realized that I needed assistance from the BP institution Green Team members, the SDGBC and the Solana center to help be a part of this coalition. BP institution Green Team members were essential in facilitating my project’s actions and goals within the institutions themselves. The staff of SDGBC and Solana Center were invaluable in filling in expertise and resource gaps, and scaling the project. These organizations also provided my project with increased credibility. With their involvement, my project was taken much more seriously by those who I worked with within Balboa Park. It can’t be stated enough without this coalition of change agents, achieving the desired success of my project would have been much more difficult.

Finally, as this research concluded, I was able to understand that most institutions did not follow researched-based recycling best practices. Most put recycling bins spread about their spaces and considered that satisfactory with little or no data to back up that satisfaction. The vast majority of the BP institutions did not periodically monitor their diversion rates, and as consequence did not know how effective or ineffective their practices were. This convinced me that my project, which offered to implement researched-based, piloted, and vetted recycling practices, could certainly help these institutions improve their current practices to meet and exceed the upcoming waste diversion mandates.

Thankfully my research also showed that some BP institutions already have fairly mature recycling practices. Many of which helped to influence the practices found in the BPCP recycling best practices project and its deliverables. At the conclusion of this process we had
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identified a sustainable need, understood what created this need in the first place, a desired outcome and possible solution. Once the feasibility study confirmed the project was viable and on a scale I could handle, it was time for the client and I to sit down to define the goals, scope and deliverables for the project.

Create a Project Charter and Scope

Once a sustainability need or problem is identified, a project to solve the problem and deliver a solution must take shape. One first step is to create a project charter to define a project’s goals, constraints, deliverables, and scope (Tate and Martin 2010). The charter also needs to define how the project and its deliverables will solve the sustainability problem and how success will be measured.

Once my supervisor and I decided that we wanted to initiate a project to improve the recycling best practices of BP institutions, we sat down with the task of creating our project charter. This charter defined how to reach our ultimate goal of improving the recycling best practices of BP institutions, so that they could reach and exceed the mandated 75% waste diversion rate by 2020. The project would need to be designed so that its deliverables, including the final deliverable, tools and actions of the project, would achieve the project’s waste diversion goals. The project charter also defined how we would measure success, which would be the increase of BP institutions waste diversion rates as compared to baselines and the upcoming mandates. In order to properly measure this success, our first major goal and deliverable would be benchmarking the waste diversion practices of participating BP institutions to assess current recycling practices and diversion rates. Without these baselines, we could not quantify the success of the project in regard to meeting our project’s goals (Hong, Jungbae Roh, and Rawski 2012).

Baselines also help define what the solutions can be. Our baseline research found that each BP institution had a different set of recycling practices with some that were advanced, but most I found were not sufficient nor effective enough to meet state and local mandates. As a result, my project focused on designing a final deliverable and its set of solutions that would standardize a set of practices that were effective and relatively simple to implement within the institutions of
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Balboa Park. What materialized were the BPCP recycling best practices. These practices were modeled from researched and proven best practices implemented in other museums and communities within the United States and beyond (Eureka Recycling Staff 2011). Our practices have three main tenants: 1) Pair all waste and recycling bins together in high visibility and high traffic areas; 2) Place educational recycling signage above the paired bins to educate “at the moment of discard”; and 3) Provide ongoing educational outreach to staff, patrons, and other stakeholders in how to participate in the program and establish a waste diversion culture.

Next, we understood that we would need to pilot the BPCP recycling best practices, based on data and results from the baseline, in two or more BP institutions as a proof of concept. One of the major hurdles for this project was proving to the institutions of Balboa Park that the BPCP recycling best practices will be effective and worth their while to implement (Swick 2016). The piloting elements of our project were designed to do just that. If other BP institutions could see the effectiveness of our recycling practices in other BP institutions, they would feel much more confident in implementing our practices in theirs.

The project’s final deliverable was decided to be a presentation to all BP institutions executives, showcasing the BPCP recycling best practices and recommending that they be adopted by BP institutions. We would base this recommendation on our research, baseline and pilot data, and goals for meeting state mandates. By highlight the success of the BPCP recycling practices, and leveraging the urgency to implement these practices, it was our hope that the leaders BP institutions would be persuaded to adopt our practices to meet state and local mandates. If our presentation failed to communicate this urgency, they would most likely not be adopted.

With the final goals and deliverables defined, they would then inform what the interim deliverables (survey, waste audits and reports, final best recycling best practices research, pilot project scope and deliverables, and project management work) would need to be and who would be responsible for those deliverables and sub-projects. Finally, once the project charter and scope were defined, the work breakdown schedule, project schedule, quality and acceptance criteria, and other required project management details could be defined. As the project charter and scope was approved by my supervisor and executive director, the tasks of the project scope started immediately.
Execute scope, assess project progress, quality, and deliverables:

With the project charter, scope, and project management plan complete, the next step was to start to execute the project elements and continually assess the progress of each element. It is important to understand if the project is progressing as planned and to work through any issues affecting the project as they come up. If not, any budget, staff, or resource overruns could cause the project to stall or even be cancelled. Also, it is very common for the elements of a project to be executed in a certain sequence, as the deliverables or actions of the of previous steps are usually required for the next (Tate and Martin 2010). Thus, making sure timing and the sequence of deliverables are going as planned is critical.

That was definitely the case for my project. First, a baseline was needed before we could start implementing any of the BPCP recycling best practices. Without a baseline set of data, it would not be possible to understand the starting point of my project. Without this understanding it would be difficult to set a course towards this project’s final goals. This baseline was accomplished in two main phases: first by sending out a survey to all BP institutions about their current recycling practices, and second by auditing the recycling practices of as many BP institutions as possible.

The survey accomplished two objectives. First, it supplied baseline data of institutional recycling practices and helped to solidify who my project stakeholders would be and what level of participation they would like to have. Understanding who the project stakeholders are and what their roles will be is paramount. Although my initial research identified some of these stakeholders, it was not until they committed via the survey did I truly know who I was going to work with and to what level they would participate. There were varying levels of participation, from no participation, to those wanting to participate in all phases of the project. Working with these stakeholders, we created plan for how to assess their practices and participate in the pilot. Understanding what these institutions were willing to do also influenced the scope and schedule of our project, which required us to modify the original scope more than once.

The second phase of this baseline process was to audit, understand, and document the current recycling practices of as many BP institutions as possible. This was primary accomplished through waste audits where we visually inspected an institution’s recycling practices and literally sorted through their trash to assess what their current waste diversion rates were. Although the
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audit took a good deal of coordination, the data that was acquired was invaluable. The data and observations supported our concerns that almost every institution could not meet upcoming mandates. The data also confirmed how needed this project was and how difficult our ultimate goal would be to achieve. Understanding these facts, however disappointing they may have been, gave us the necessary understanding, direction, and motivation we needed.

It was also clear to us that our project needed to show our stakeholders, through our proof of concept pilot programs, that our practices were effective. Proof of concepts give stakeholders and clients confidence that the concept and/or project deliverables are effective and will solve the problem as advertised (Swick 2016). My supervisor and I knew from the start that positing our recycling best practices as effective and imperative for institutions to implement was going to be critical if we were going to convince all of the BP institutions to adopt them. As a result, we designed the project to pilot our recommended practices in the BPCP offices first, then took the lessons learned and applied them to a second pilot of a large BP institution to show that these practices can be scaled.

As of now, the baseline phases and BPCP office pilot are complete. The BPCP office proof of concept pilot showed great results. The implemented BPCP recycling practices increased the waste diversion rates by 25% for an average waste diversion rate of 81%, easily meeting and exceeding our project goals. The pilot program in the Fleet Science Center has just started and preliminary data shows similar increased diversion rates within the Fleet Science Center. This data and any lessons learned will be incorporated into the final deliverable presentation which will be designed to persuade the other institutions of BP to adopt our practices.

Final deliverable and presentation:

The ultimate goal of this project was to create and validate a set of recycling best practices for all of Balboa Park institutions to consider adopting. When my supervisor and I initially sat down discuss the final deliverable, we agreed that it would need to some sort of informational product whose goal was to persuade BP institution to improve their recycling practices. The main reason we chose this type of deliverable was due to the fact that the BPCP
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could not force its member institutions to adopt our recommended practices, it could only advise and recommend practices. We also understood that the final deliverable had to express a sense of urgency that would help persuade BP institutions to hear our call to action (Howell 2017) and answer it (Gazzara 2017). To that end, the presentation would need to show that the BPCP recycling best practices are effective and deliver the needed results. Finally, we need to show that not only are the recycling best practices needed, they will help BP institutions fulfill their mission of being leaders in their community and save them money in the process.

Once the final deliverable is handed over to the client, one final step is required: getting feedback from the client. This client feedback and lessons learned will inform future projects so that what we have learned on this project can be applied to future sustainability projects in Balboa Park. There are many challenges managing the political and operational landscape of Balboa Park and the lesson learned in this project will go a long way to informing and streamlining future sustainably projects the BPCP has planned. Although the scope of my project ends with the delivery and presentation of the BPCP best practices, I plan on monitoring the adoption and successes of BP institutions that implemented our practices. That data will be relevant in the future as well.

Closeout Project

One of the most neglected but crucial phases of a project is the project closeout phase. Here, the project team solicits client feedback and reviews lessons learned (Tate and Martin 2010). This can be achieved through client surveys and/or meeting directly with clients and stakeholders to get the desired feedback. The lessons learned should be continuously documented by the project team throughout the project and in the closeout phase they should be collated and merged into a closeout report. This feedback, along with lessons learned by the project team, found in the closeout document can help guide future projects to be more effective and run more smoothly. If this phase is neglected or rushed, valuable insights and data can be lost because as team members move on, it is less likely they will remember the project’s details and be able to learn from them.
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Initially the first major lesson learned from this project was how to effectively work within a non-profit environment and understanding how my stakeholders operated in it. I learned that it takes a great deal of patience because the pace of work is not as fast as in the corporate world. Most employees within non-profits are burdened with huge workloads, and do not have enough time and budget to properly deal with them. I found having empathy was key in dealing with this reality. Letting my stakeholders know that I understood their situation and framing my project as something that can help relieve some of that burden was very helpful and allowed the project to move forward at a reasonable pace. This reinforced to me that empathy will be key in any future sustainability project regardless of what working environment I may find myself in because future stakeholders will be just as likely to be short on resources and time (Howell 2016).

Lessons learned can also be at a high level as well. I learned a great deal about recycling in general, especially about the current waste diversion culture of our city and how it affects my project and others like it. When performing the baseline research of BP institutions, it was clear that waste diversion is not yet a priority when compared to other sustainable initiatives like energy and water efficiency. As I started to get a sharper lens viewing waste diversion and the challenges associated with it, I knew that there is a long way to go for San Diego in general to meet these upcoming binding mandates. That was quite evident in my project as well. Initially, there was no clear urgency within BP organizations about waste diversion and in some cases very little understanding how it related to them. Knowing and accepting this reality helped me understand that I needed to demonstrate to my stakeholders that establishing an effective waste diversion culture was indeed urgent and needed to be done.

I also learned that my project, and the recycling practices it promoted, had some flaws. Initially, I was sure that they could be applied in any environment. The research seemed to support this and I naively took for granted what I thought would work. As the project moved on, it was clear that my “one size fits all model” would not work effectively in all environments. What became clear was that our practices were ideal in office and back-of-house environments, but were not specific enough for public spaces surrounding or adjoining these institutions.

The results from the pilot in the BPCP offices indeed corroborated this fact. The data and results showed an increase in their waste diversion rate of 25% for an average diversion rate of 81%, easily meeting the mandates. However, in the public environment beyond the offices and
back of house operations of BP institutions, I found that the educational signage and outreach needed to be tailored to these specific spaces and their audiences. Unfortunately, creating multiple sets of signage and reworking the outreach went beyond the scope of my project. In fact, it should and could be its own project. As a result, my project’s scope was limited to office and back of house operations. If I had known this at the start, I would have included in the scope or at least tried to include it. One more lesson learned.

The data also revealed that creating a waste diversion culture is key. Those in the BPCP offices who bought into our practices and the need to recycle, contributed to the project’s success. However, the follow up waste audits revealed that there was still a good deal of contamination in the recycling stream and a good deal of recyclables in the waste stream. With a little research, it was clear there were some individuals who simply did not care to participate and without their buy-in into our waste diversion culture, our best practices would not be as effective as they could be. To that end, our team increased the outreach to the staff to reinforce the use of these best practices, applauded the early successes, and educated the staff about what was still lacking. At the start of the project I thought our practices would be adopted quicker and with less resistance. The lesson learned here is that people are resistant to change, especially with respect in changing their habits to be more sustainable. It takes time and reinforcement to get the desired change in behavior resulting in the adoption of a new sustainable culture (Harish 2010).

Lastly, keeping tabs on a project’s lasting success is important. Many sustainability projects are designed to last for some time beyond their initial implementation and if left unmonitored, may lose their effectiveness. For example, an existing building I am helping to get LEED recertified, which was LEED Silver certified for new construction when it was first built, can no longer meet LEED standards. This was primarily due to the fact that many of the LEED practices were abandoned within their operations. I fear that once my project is complete, that it could be meet the same fate. That is why establishing and maintaining a waste diversion culture is critical so that the sustainable change created by this project can endure. I hope to take these lessons learned and client feedback and apply them to my next waste diversion project, which I confident will be improved over the previous one because of it.
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Conclusion:

The goal from the beginning of this project was to find a way for the 20-plus institutions of Balboa Park, who all have unique operational systems, to agree to improve their recycling practices. To that end, I needed to understand the systems of these BP institutions and of all the project’s stakeholders to ultimately define the vision of my project. This required a great deal of research to understand the complex challenges, relationships and needs of all the stakeholders involved, much of which was accomplished through the feasibility study.

For these institutions to want to agree to implement the BPCP recycling best practices, the urgency and need to do so must be clear and framed in their best interest. The final deliverable, which is a persuasive presentation to all BP institutions and the executive teams, is designed to highlight this urgency which is specific to their system. For my project to be successful, I needed to describe why it is important to BP institutions to implement my project and what happens if they do not improve their recycling practices. Therefore, we needed to show through data and results of our baseline waste audits how the current status of their current recycling programs compares to mandates, public expectations and environmental standards.

At the moment, the data shows there is clear room for improvement. Currently, less than half of BP institutions can meet the existing 50% waste diversion mandate and none can meet the 75% mandate they all have to meet by 2020. In order for this project to be successful, we needed to communicate several points. First, we have to prove that our recycling best practices are effective. Second, we need to show the urgency for meeting these mandates. And finally show how displaying leadership in waste diversion helps fulfill their missions as community leaders. Our project’s final deliverable goal was to do just that: communicate that showing leadership and environmental stewardship will benefit these institutions, along with the environmental and financial benefits that come with improving their recycling best practices.

None of the above would have been possible without a coalition of trusted advisors, stakeholders, and advocates that this project required. This coalition allowed my team to meet its objectives and deliver a product that will help solve their sustainability problem. When the project finally reaches its conclusion, we hope that BP institutions will have the motivation, tools, and know-how to meet and exceed current and future waste diversion mandates and to help start reshaping San Diego’s waste culture from a linear waste model into a zero waste culture.
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Appendix A:

Gantt Chart:

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<td>Waste audit, visual audits, informal interviews</td>
<td>12/15/16-3/10/16</td>
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<td>Pilot testing (updated) and best practices</td>
<td>4/11/16-5/3/16</td>
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<td>Creation of final presentation of best practices and actions based on pilot data</td>
<td>5/1/16-5/10/16</td>
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WBS:

BPCP Recycling Best Practices Presentation

BPCP recycling best-practices presentation project

- Project Management
  - Robert Carr & Jessica Travis

- Research and Design
- Pilot project
- Create Final Presentation
  - Robert Carr

- Proposal, Gantt Chart, WBS
  - Robert Carr

- Feasibility Study
  - Robert Carr

- Status Report
  - Robert Carr

- Stakeholder Engagement
  - Robert Carr, Jessica Travis, Rich Grousset, & Rubi Baricuatro

- Pilot Design
  - Robert Carr & Jessica Travis

- Final Presentation Design
  - Robert Carr and Jessica Travis