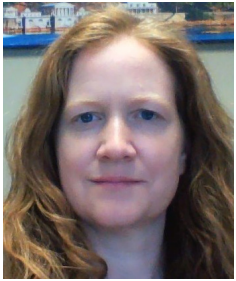


Teamwork (Really Does) Make the Dream Work! Lessons Learned from Implementing Citywide Infrastructure with Interdisciplinary Teams



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The City of Philadelphia is celebrating the 10th anniversary of its ambitious 25-year *Green City, Clean Waters* plan. It was the first endeavor of its kind, as the City proposed a primarily nature-based approach to meet regulatory requirements associated with decreasing the amount of polluted water entering creeks and rivers in Philadelphia. The forward-looking *Green City, Clean Waters* reimagined stormwater management as a visible investment in public areas such as sidewalks, parkland, and vacant lots, as well as other spaces in neighborhoods across the City.

Because the Philadelphia Water Department (PWD) is tasked with implementing this plan (although it owns very little land), partnerships and teamwork took on a new meaning for the Department. The plan required PWD to step outside of its standard operations to construct green infrastructure, which required expanding its capacity for team-building and collaboration. At the official start of the program in 2011, the team responsible for *Green City, Clean Waters* comprised approximately 10 staff that were predominantly engineers; today, the team is a staff of over 75 members, who incorporate specialties in urban planning, landscape architecture, public affairs, environmental science and more.

Teamwork and collaboration went well beyond the interdisciplinary teams that formed internally, too; teaming up with

those that own and operate the land that the City targeted for green stormwater infrastructure (GSI) was (and still is) mission critical. Collaboration with the private sector, non-profits and city agencies, like Philadelphia Parks and Recreation

and the Streets Department, in addition to the School District of Philadelphia and neighborhood communities, required partnership at all levels and during every phase of each project.

We learned that the key to success in the first ten years of the program is in creating teams that are composed of various disciplines, and not only one specialty; for example, when planners, designers, and community outreach specialists come together, the outcomes are most sustainable. The ability to have flexibility, and to tap into specialty backgrounds within a solid team, improves the process and ultimately the outcomes. The below list summarizes some of the most important takeaways we've learned through a decade of multidisciplinary collaboration, which we believe are universal across sectors.

First, let's cover one of our projects to see how the lessons learned translate into the real world:

The American Street Improvement Project is a collaboration between multiple city agencies that has resulted in the largest single contribution to publicly owned GSI, as well as many other improvements along the corridor that help support both the neighborhood and business communities. The project originated when the Streets Department and Water Department recognized that they were both interested in removing the historic train tracks that

were in the middle of the street along this commercial corridor, in order to facilitate their own improvements; together they were able to apply for and received over \$5M in funding to support the project. The funders were particularly supportive of this project because it would deliver multiple benefits (*Lesson 4*).

The funding meant the project could move forward, but it also had short deadlines associated with it. The project management team created a stakeholder group early on to facilitate communication and make space for everyone to be heard. Working together along the way meant that input was included up front and the design was completed within the required timeframe (*Lessons 1, 2, and 3*). The group responsible for maintenance was also included in the design process, and special considerations were included for access of maintenance vehicles in order to make future maintenance easier (*Lesson 5*). The management team held public meetings at various stages in the design process and along this corridor; this gave community members the ability to provide their input and ultimately led to their support of the project (*Lesson 6*). One community group made it clear that their priority was increasing the greening of the corridor, and collaboration with this group eventually led to additional green space being added to the project (*Lesson 7*). The project also allowed the Water Department to test out a new incentive we have been working on with private property owners (*Lesson 8*). Although the process of working with the private properties was new, standard materials were proposed in the design to make it easier to work with and maintain (*Lesson 9*). The team was ultimately awarded the Innovative Transportation Solution award from WTS Philadelphia and they were able to celebrate their accomplishments together at a special event. The completion of one project prepared the team to take on the next challenge more collaboratively (*Lesson 10*)!

Our Top 10 Lessons of Interdisciplinary Teamwork:

1. **Keep an open dialogue** with all of the parties involved in a project. Anticipate potential conflicts as early as possible. Figure out the weaknesses and issues in your projects and partnerships early on and address them head on. The sooner you are transparent and honest about issues you may face at a later date, the more respect you will gain in the eyes of your team member, partner or community member and the less energy, time and money you will waste in trying to fix the problem, when it may be too late. Projects always run more smoothly if challenges are addressed quickly and directly.
2. **Take time to make sure everyone is on the same page.** The benefits of a multidisciplinary team are manyfold, particularly once everyone's roles are clear. Sometimes the engineers need the planners to get them out of a potentially endless comment loop, while other times the planners need a reality check from engineers about the proposed location (siting) of the planned project.
3. **Get feedback from different team members at every stage.** The outreach specialists and designers need feedback from the maintenance staff to ensure the

upfront investments in time, money and talent are not short-lived. Maintenance is a long game. Request feedback.

4. **Sell a project from multiple angles.** If the city agencies and partners see what's in it for them, collaboration is undoubtedly smoother.
5. **Think about the entire life cycle of a project from the beginning to end.** It's not just about the planning, design, and construction; once the infrastructure is in the ground, it needs to be maintained in perpetuity and maintenance can be complicated. Being clear about what can and cannot be maintained needs to be a regular topic of conversation early on.
6. **Building trust within teams is critical to success.** Whether with internal or external partners, it's important to create opportunities for trust-building outside of seeing the task through.
7. **Listen! Listen! Listen to your partners.** Find out their priorities. Give them what they want/need and they will help you with your wants/needs. Find ways to align your priorities and be ready to compromise, if you want to be partners for the long haul.
8. When creating a new program, **allow space for mistakes and recognize the need for flexibility in the development**

stage. Giving a program the space it needs to form also allows time to develop partnerships and adjust to include partners' needs and perspectives along with your own.

9. Ultimately, however, a large program must **transition to standardization** to make it possible to manage the program at the citywide scale. Successful standardization relies heavily on the previous lessons being followed and helps to advance trust, because the other team members feel secure in what will be built in the future.
10. Finally, **have fun together** as a team! It's amazing how people from different walks of life and professional disciplines accomplish more together when they are creative, relaxed and/or simply enjoying each other's company. Create opportunities to make collaborations successful!

As we continue our journey of making Philadelphia's waterways cleaner and our city greener, we look forward to engaging with more disciplines that also promote health and an improved standard of living for all communities. Health and water are intertwined and the potential synergies and opportunities for collaboration are endless.