FINAL REPORT

Interdisciplinary, Community Engagement Curriculum















George Bozzi, Andrea Rizzo, and Yuri Pertsew

Engineering Studies Class of 2019

December 13, 2018

Introduction

At the confluence of the Lehigh and Delaware rivers is the city of Easton, Pennsylvania. Mostly known for being home to Lafayette College and Crayola Factory. However, these two important locations are not what solely characterizes the city. Although the smallest city in the Lehigh Valley, the greater Easton area is also famous for its dominant culinary scene and vibrant cultural festivities such as the BaconFest and Garlic festival. The city thrives with tourism from both people from the inside of the Lehigh Valley and the outside.

Even though it might not be apparent at a first glance, the city of Easton boasts an exceedingly rich history. It was founded in 1752 (Heller, 1920) and seen as an important military center during the revolutionary war, from when the city is also known by historians as being one of the first three cities where the declaration of independence was first read publicly (Heller, 1920). Just after the war, the Lehigh Valley became an important industrial hub in Pennsylvania, and for longer than a century, the region has profited from producing mainly steel and Portland cement. Easton specifically hosted a number of industrial enterprises along its history, such as an important silk mill, coal processing center and numerous railroads along its territory.

Unfortunately, Easton's rich industrial history seems to have faded away. The decline of the steel and cement industries in the 20th century led the region to look for other sources of income and forgo its industrial drive. Many of its once booming industrial factories, historic buildings, railroads and railroad trestles have been left unattended and thus decayed over time. The city's past governments did little to preserve its industrial heritage and most of it was lost with time.

Lafayette College, located on the steps of Easton's downtown, is one of the few places in the region where historical buildings have been kept in excellent condition. But the college's relationship to the city of Easton has been eroded a long ago. A strong town-gown relationship, a relevant term which implies the active connections between educational institutions and the greater area they are inserted in, is critical to maintain Lafayette's reputation in good shape among the members of the community. The city of Easton also has much to gain from a healthy town-gown relationship, as increased student movement within the city would boost revenue in local stores and raise the link between the two communities. Yet, lately, neither Lafayette's administration or Easton's local government have actively pursued improvements in this important community aspect. The neglect from both involved parties has deeply eroded their relationship and is evident in recent movements from both students and residents to stop Lafayette from expanding further into the surrounding neighborhoods.

However, even with an eroded town-gown relationship, Lafayette college is still a renowned institution. It is recognized nationally for its strong liberal arts education and distinct engineering program. Lafayette advertises its deep inter-connected programs and makes an evident effort to have students from different majors working together to tackle bigger problems. It heavily incentivizes professors with interdisciplinary interests and offers students numerous different interdisciplinary activities, majors and minors, to the point where students can design their own academic majors with faculty guidance (Interdisciplinary Studies, 2018).

Although the engineering program has been heavily targeted for an array of interdisciplinary projects, not much has been done between the Lafayette's engineering

and art departments. Both of these programs have striking similarities, such as incentivizing creative thinking and demanding extensive problem-solving, yet they have been historically separated for too long. Several other learning institutions across the United States have since explored the connection between these two majors with interdisciplinary programs. But Lafayette is still far from achieving a clear and concise interdisciplinary program between the two majors.

This capstone project proposes a single solution addressing the three problems delineated above: the forgotten rich industrial history of Easton, Lafayette's eroded towngown relationship with the city and Lafayette's non-existent link between engineering and art majors. The solution to all of these problems comes in the form of an interdisciplinary course designed to host both engineering and arts students. Working together, students from the two areas will research possible art projects that renovate Easton's historical heritage, design solutions, build and implement them with the help of several key community members. The coursework we propose can easily be implemented in existing classes as well, such as the Engineering Studies class EGRS 480 Sustainable Solutions, which already has students researching and proposing key community projects.

In addition to proposing this course, we also propose a portfolio of two projects, which best achieve the goals we delineate in this document, that can be sought after by the students working in the proposed course. The first is to paint murals expressing Easton's industrial heritage around the city itself, the campus of Lafayette and the Silk Mill complex. This specific project will have students working alongside the Easton Mural Project, an initiative by Chaz Hampton and others, which already painted a few murals along Easton's downtown. For this project, engineering students would analyze and adapt the structure in which the mural is to be painted on and help selecting what will be depicted in the mural, while Art students work on how to better depict it and do the artistic work to paint the murals.

The second proposed project is to have students renovate an old railroad trestle in the Karl Stirner Arts Trail. This forgotten railroad trestle dates from Easton's industrial boom, and is totally unusable as of right now, since its deck is completely broken. Studies completed previously by civil engineering students at Lafayette have analyzed the trestle and devised a plan to bring it back in working condition. In this proposal, engineering and art students would work alongside to completely renovate the trestle and build a new deck commemorating Easton's industrial heritage.

The portfolio of projects we propose deeply increase the connections between the art and engineering majors by having its students work together with a shared goal. They celebrate Easton's industrial heritage, which is currently not evident, but has the potential to increase Easton's tourism in the following years. The two of them also have students building concrete solutions on territories outside of the college hill, which will positively impact the town-gown relationship between Lafayette and Easton.

The two proposed projects and the proposed course curriculum also come with numerous challenges that must be addressed by the future students working on them. First of all, since these solutions are to be carried in an interdisciplinary course, a reputable professor from either department must adopt these ideas and carry them forward. In order to achieve these goals, we delineate in this project, the course that houses these ideas must be sustainable, in that it does not simply happen for a single semester but grows steadily along the years into something bigger and more palpable. As we go in more detail further in this report, the mural project would need constant contact with community members that are invaluable to its success, such as Chaz Hampton. Without the help of the Easton Mural Project, this enterprise would be a lot longer and more difficult. For the bridge trestle, expert help for technical problems might be necessary, as its project proposes the trestle to be renovated to be usable again. This specific project will also need to closely work with the local government to ensure every piece is up to the building codes and the trestle is safe for pedestrian use.

To achieve what we propose in this capstone project, more work needs to be completed. At the course of this semester, we have deeply analyzed the problems that afflict Easton, Lafayette, and its students. Once we decided the direction we were going, we analyzed all possible facets of the problem and have gone through several different possible solutions, narrowing them down by working with a number of key contacts both at Lafayette and in the Easton community. By writing this report, our hope is that whoever is carrying this project forward has the most complete and accurate information about the subject as possible. We have exposed each critical context, social, economic, political, and technical, with the firm belief that by following our directions and recommendations, all three of the problems expressed in this report can be mitigated and solved, and that a sustainable solution can be created.

Social Context

Building a connection between members of a community takes much more than the physical infrastructure of a railroad trestle or a series of murals painted onto brick. While these are key components, such connections require an understanding of community-based development and a desire to create sustainable change. Thus, this project required an immense consideration and appreciation for the social context this initiative operates within, which will ultimately act as a major force in determining its success and sustainability. For this reason, this project seeks to pay homage to the era of industrial prosperity while bringing together both the Lafayette and Easton communities. The means by which we hope to accomplish this is through the collaboration of arts and engineering students from Lafayette.

The city of Easton, Pennsylvania has a long and rich industrial history, as well as a history of being home to an elite liberal arts college, Lafayette College. Since its founding in 1826, Lafayette College has been a faction embedded within the Easton community, for the most part operating independently on its own accord (Mission and History). Over time, the college's values evolved and now reflect a dedication to community engagement and encouraging students to be both educated citizens and to pursue community-based learning experiences (Community-Based Learning and Research). As both a student of Lafayette College and member of the Easton community, even if it is for four years, it is important to immerse oneself in the community, as there are opportunities for learning and growth for students and community members.

Easton has a robust industrial history, much of which can be credited to its location at the fork of the Lehigh River and Delaware River. This natural capital aided in its emergence as a hub for industry and transportation (City of Easton – History). In the 1800s, Easton had a variety of industrial infrastructure, for example, a paint mill, flour mills, sandstone grinding mills, and most notably of all, the Simon Silk Mill (Condit, 1885, p.82). This history of enterprise and activity is incredibly valuable and gives the city both character and a unique story, which should be kept alive and shared with members of the community and visitors passing through.

Historically, artists and engineering students have had struggles collaborating. The Experiments in Art and Technology, E.A.T. initiative, for example, started in the late 1960s, and aimed to create technology which was "not the preconception of the engineer or the artist, but rather the result of the human interaction between their two areas" (Wisnioski, 2016, p.138). While this initiative had admirable intentions, much of the tension that occurred was caused by differences in attitudes between artists and engineers. However, this initiative seeks to mitigate those tensions and encourage open dialogue and creative conversation amongst students. One of the main reasons such a program could be successful at Lafayette, is because of the emphasis placed on a liberal arts education and the encouragement from Lafayette to engage community members across disciplines. Students at Lafayette are encouraged to pursue learning, not only across disciplines, but also to incorporate an interdisciplinary approach to solving problems and implementing solutions. Furthermore, this initiative will aid in bridging a gap that students may feel within the Lafayette community. As stated in an article published by the American Physiological Society, "institution-wide teamwork, demonstrates inclusion, and builds community amid students and colleagues" across an institution (VanRyn & Wehrwein, 2018).

Based on experiences shared by a multitude of students, there is often a divide present amongst students based on major, and most noticeably for arts and engineering students. Engineering students are known for late nights studying in Acopian Engineering Center, and arts students are known for trekking down College Hill to the arts buildings for long studio hours. However, many students do not realize the similarities they really have, and the potential they have to create a successful and sustainable community-based project. Both arts and engineering students must be creative and use an analytical mindset, but these skills are applied differently. Through initiatives such as this one, students are provided with the opportunities to explore new connections within their own discipline and to use their backgrounds to create works that exemplify the synthesis of two academic disciplines.

Another crucial component of this project is to encourage a town-gown relationship between Lafayette and the Easton community. A town-gown relationship, as depicted in Figure 1, is the rapport present between a collegiate institution and the town it is housed in. Town-gown relationships are categorically a tricky business, often described as "a source of difficulty, frustration, and annoyance, for both the town and the university" (Bruning, McGrew, & Cooper, 2006). This can be attributed to the invisible barriers which institutions create surrounding their campus, which students are educated, eat, sleep, and interact within (Bruning, McGrew, & Cooper, 2006). However, through thoughtful programs and interaction, there is the potential to have a valuable relationship between the two entities. As stated by Dr. Lawrence Martin, Director of the Center for Community Partnerships at the University of Central Florida, "the linkage between universities that create knowledge, and communities that develop it and create incubators to find markets for creative ideas is getting closer--and towns that do not tap into this synergy are at a competitive disadvantage" (Chenoweth, 2017). Furthermore, this idea of focusing on "supporting efforts that link the town and the college/university to a common destiny by enhancing the physical assets of the institution while concurrently preserving

the heritage of the community" is said to improve town-gown relations (Bruning, McGrew, & Cooper, 2006). By choosing projects that highlight the heritage of the community, it lets community members know they are as much a part of the process as the students leading the effort and that the college values their heritage as a community. In the long run, this can have huge benefits as it has been shown that incorporating community members gives them a sense of pride and ownership over the project which will make it much more sustainable for years to come (Lucena, Schneider, & Leydens, 2010).



Figure 1: Town-gown relations. (Chenoweth, 2017)

Town-gown relationships are often described as a relationship "a lot like an arranged marriage that neither partner can end" (Gavazzi & Fox, 2015). Similar to marriages, with a great deal of work, dedication, and patience, they can be extremely rewarding, prosperous, and harmonious. There are many sources available to make an improved town-gown relationship possible for students working on these communitybased projects. First and foremost, there is a wealth of faculty and staff at Lafayette that are very supportive of initiatives such as this, and furthermore have excellent ties and connections to the community to help facilitate these projects. Lafayette has two representatives on the Arts Advisory Council, including President Byerly, and Ed Ahart, who serves as a Lafayette College Board of Trustees Chair (Board and Advisors). In addition, there are staff such as Mary Wilford Hunt who has previously stated, " I think there are many opportunities to display student artwork on campus, both on a temporary and permanent basis" (personal communication, November 16, 2018). With countless more people ready and available to help students to carry out such initiatives, all that is left for students to do is show some initiative and a genuine interest for bettering community ties through arts and engineering projects.

A contact who is extremely valuable for development of this initiative is Jim Toia, a professor in the art department, who also serves as a director on the Karl Stirner Arts Trail Board (Board and Advisors). Originally, an idea was proposed for arts and engineering students to collaborate on a project surrounding the installation of a new footbridge that would connect the KSAT to Simon Silk Mill. However, Professor Toia explained that the footbridge was already too far along in its construction for students to participate in the process, but suggested they take a look at an abandoned railroad trestle that can also be found on the KSAT. While at one time "lovers of nature would be sorry to see the beautiful [Lehigh] valley marred by the presence of a railroad," in current times it has become a piece of history in Easton and many have come to admire what remains of the railroad trestle which is juxtaposition amongst nature on the KSAT (Condit, 1885, p.87). Another resource to help create a town-gown relationship is Chaz Hampton, owner of Brick + Mortar Art Gallery and Design Studio. Mr. Hampton is in a unique position to help students because he integrates many of the components of these proposed projects

all together. First and foremost, he is a member of the community interested in preserving the historical heritage of Easton, which can be seen in his artwork. Secondly, he is a business owner in the Simon Silk Mill complex which is area these projects aim to integrate into both the Lafayette and Easton communities, and finally, he is very active within the Easton Mural Project. Professor McGuire, of the civil engineering department, is yet another asset who will be extremely helpful for students, especially those working on the railroad trestle project. He has already conducted a comprehensive structural analysis on the trestle and past students have already worked with him to create a plan to get it up to operational status. While much of the technical foundational work has already been completed by Professor McGuire and his students, this leaves the opportunity open for future students to approach the trestle in a more creative sense and to find a way to ensure they are beautifying it, honoring its historic heritage, and engaging the community with the social context in mind. These are just a few examples of the countless resources that students have available to them to make progress with these projects. This illustrates yet another aspect of these projects, that they encourage students to make meaningful connections with community members and to act as the manpower and glue that has previously been lacking to bring these projects to fruition.

In order for these projects to be successful, high levels of participation are required from students, faculty, community contacts, and community members, as this creates a sense of inclusivity for the projects being carried out. This concept of inclusivity also plays a major role in terms of who has access to the final deliverable of these projects. By preserving Easton's heritage through murals, and refurbished railroad trestles, these are art installations that all members of the community can appreciate no matter their socioeconomic status. These all aim to include all community members and to make them feel united in their identity as Eastonians, rather than making people feel as if these projects are gentrifying or dividing.

Projects like the Easton Mural Project are also meant to "to improve the visual landscape of the City and to create opportunities for the promising artistic community" and create excitement in the community (Easton Mural Project). Similarly, these projects will give students the opportunity to engage community members about Easton and its history and allow them the opportunity to show off their work to a wide variety of people whether it is shown at the Silk Mill, on the KSAT, on the Lafayette Campus, or elsewhere in Easton. Art installations on the Lafayette campus could be especially beneficial as a study published by the Public Relations Review found "that individuals who had attended an event on campus were more likely to regard the university positively on the relational dimensions of trust, openness, investment, and commitment (Bruning et al., 2006)" The same goes for the railroad trestle on the KSAT, which will encourage a flow of people along the trail to explore what's on both sides and maybe discover a new part of Easton they had yet to see, which could include Lafayette. It is just as important for these projects to reassure students that they are a part of the Easton community as it is for members of the Easton community to feel as if they are welcome on the Lafayette campus.

When considering this initiative, it is vital to view the social context as one overarching social context, rather than identifying social contexts for each individual project. No matter the project, they are all surrounded by the same context and all aim to meet the same goals. This initiative places high priority on the relationship between arts and engineering students and the relationship between Lafayette and the Easton community. Furthermore, this capstone project aims to lay foundations for future work, as it is imperative that there is clear communication on what the goal of these projects should be and that students understand the potential impacts of their work. While a mural may seem like a trivial thing to some, or a bridge just appears to be a mass of metal welded together, there is much more at stake.

Making decisions without careful consideration for the community these projects would appear within could do more harm than good and create an even larger rift between the college and city and the people who live there. For example, Movies at the Mill is an event held at the Simon Silk Mill, which has the potential to be a great opportunity to bring the community together to enjoy a historic site in Easton (Movies at the Mill Easton). Mark Mulligan even stated in an interview with 69 News that VM Development "designed the entire site around the idea of doing a film festival there," however, tickets ranged from \$30 to \$125 and did not prove to provide a very inclusive event for the community (Russo, 2018). This ties back to the concept that programs and events that aim to bring the community together should not limit the socioeconomic groups that can attend. While VM Development definitely wanted to cater to the desires of Easton who "really wanted an artist community" and wanted to create inclusivity with this project, they prevented large groups of people from being included (Russo, 2018). These kinds of events are what leads to the gentrification of communities, distrust, and rocky relations between a community and outlying entities such as a college.

The city of Easton has a rich industrial heritage which should be shared with community members and Lafayette students. Lafayette students should be proud of the city Lafayette is housed in and should be inspired to engage their neighbors on the hill. Through effective planning and implementation, students can be the necessary link to bridge the gap that has been missing for some time. These projects are more than installing a deck on an abandoned railroad trestle or painting a brick wall. They aim to take something, already full of history and life, and to transform it into the best version of itself for the community to join together around. When people in a community are proud of their community and care about its wellbeing, everyone is better off.

Political Context

The first connection that needs to be formed from a policy perspective is found within the school, at the juncture that bridges Lafayette engineers with Lafayette arts majors. This juncture should be in the form of a course, with these projects being the focal point. To create this course, a course proposal form must be filled out which is found on Lafayette's website. This particular course, because of its integration between engineering and arts students, will be available to all junior and senior arts and engineering students; it will be cross registered as both an arts and engineering course. Only upperclassman would be able to enroll, given the fact that they have lived in the community for longest, a fact that should correlate into a better understanding and appreciation for Easton as a whole. In addition, this work is permanent, so the valuable skill set of more educated upperclassman is sought after most.

The program will be instructed by two teachers, one from the engineering department and one from the arts. The idea of project-based courses that are taught by two teachers is not uncommon within Lafayette, as seen in the Engineering Studies class EGRS 480 Sustainable Solutions. Much like other courses at Lafayette, this one will be a project-based course where students can pick between multiple options, in this case two. This will better ensure students can align themselves with projects they are most passionate about. However, other projects may be included if it falls under the curriculum's broad category of "public art". The Association for Public Art, which overseas Philadelphia's public art portfolio, one of the largest in the country, said that "public art is a reflection of how we see the world – the artist's response to our time and place combined with our own sense of who we are." In this case, Lafayette's curriculum will adopt this definition of public art and will interpret it through the lens of Easton's industrial heritage. As long as an idea matches this idea, it can be completely different than one of the two generated portfolio project proposals. All the projects will be based within the greater Easton area, as this policy coverage extends to only these locations. If the school were to extend the program's geographical grasp, it would need to do different political/ policy analysis on the new municipalities, groups and entities involved with the project.

Locations on campus are available for public art ideas generated from this course. Lafayette College Director of Facilities Planning and Construction Mary Wilford-Hunt very much liked the curriculum. Regarding art on campus, she said that "there are many opportunities to display student artwork on campus, both on a temporary and permanent basis". From a policy end, to maximize feasibility, she said that "key components of any proposed plan would be to assure that the art can be properly maintained over time, so some sort of maintenance plan (and budget) should be proposed to help reassure the administration that the artwork is a true amenity to campus, and not a liability". This means that before any idea is passed onto the school for approval, it should meet these requirements at a minimum in addition to being crafted to fit the industrial ideology of the course.

The Karl-Stirner Arts Trail is an Easton government project but has a completely different political structure. This structure includes both an Arts and a Lafayette College Advisory Councils, as well as board members (Board and Advisors). There are highly useful contacts for the development of this project in all of these boards which we have contacted and seem to approve of it. They are Jim Toia and Ed Kerns, both professors form the Art department, and Professor Benjamin Cohen from the Engineering Studies department. Having the support of as many council and board members as possible will be essential to approve the display of student created artwork in the trail. There is currently a program similar to what we propose in place at the Art Trail: The Young Masters Wall. It convenes several Easton residents interested in art from different groups to express themselves in a wall section of the trail. This program proves that our proposal for having Lafayette students' artwork included into the trail is not far-fetched and has a high probability of being accepted by the Trail council and board members.

Getting permission to expose the artwork around the Simon Silk Mill will require connections with the VM Development group, which is the company currently building and administering it. We have tried several times contacting Mark Mulligan, the president of the company who is also part of the Arts Council for the Arts Trail, but to no avail. Chaz Hampton, co-owner of the Brick + Mortar Art Gallery warned us about the difficulty of making this work with the VM group. Exposing the artwork in this location would be a great accomplishment for bettering the relation between Lafayette and the Silk Mill region, although given the difficulty it presents, this might not be a great place to start the project.

Exposing the art at and on the surroundings of Easton's downtown is a whole different challenge. It is a critical to strengthen the town-gown relation, yet it will probably be the hardest to work with given the complexity of the local-government and the lesser space available downtown for art work to be exposed. Although challenging, Easton's 2035 development plan includes several mentions to improving the relationship between city and college, such as increasing the frequency of LCAT shuttles to downtown and researching the possibility of homing new professors in prominent development areas (Executive Summary and Priority Projects), and further delineates the importance of a sustainable relation between the two (Executive Summary and Priority Projects). Knowing that the city is committed to improving it, future students that take on this project must determine useful contacts on the city's government and convince them that this project has the possibility of greatly improving this relationship.

To increase the feasibility of long-term success of the overall course, Lafayette must integrate their communications team and promote the town-gown collaboration. This will highlight the community engagement initiative which has taken the form of a course, bringing added value to Lafayette's overall reputation in the Easton area, strengthening the school's academic program and supporting the liberal arts agenda. Placing art in the greater Easton community would be ideal to achieve a maximum town-gown relationship and new ideas that diversify the portfolio of public art should always be encouraged. Once the school program is established, with its overall theme of public art, community connections to make the art installations both authentic and installable must be forged. However, since every project has a different political and policy path to shortterm and long-term success, there are two unique political contexts. Each context is individually tailored to account for differences within each project, the main reason why customized approaches are required. As stated before, if the curriculum ever expands past Easton's borders, new contexts will be created and must be accounted for.

Proposed Project 1: Student Murals

Our first project recommendation is one that seeks to revitalize, beautify and add new meaning to places that lack significance within the community. Blank walls all around Easton's downtown and surrounding neighbors, the Simon Silk Mill and Lafayette could be turned into murals by students to convey a message about the past history of Easton, further adding immensurable value to the respective locations. Politically, this proposal is very intricate, since it will require the participation of all parties that can be affected and influenced by it, which will be vital to ensure both the short-term and long-term success of the program. Once the initial connection is setup between Lafayette Engineering and Arts majors in the form of a course and the students are ready to pick a portfolio option, a program needs to be in place that unites Lafayette with the community.

This program will combine the Lafayette class with a community organization, in this case the Easton Mural Project. Chaz Hampton, owner of the local business Brick + Mortar Gallery, is also one of the driving forces behind this initiative. As one of the central figures in this project, Mr. Hampton has offered his guidance with this project. In this case, the professors of the course will introduce the murals group with Mr. Hampton to ensure not just a community influence, but also an expert in ways to put up a mural in the Easton area legally, artistically, and economically.

Working in unison with Mr. Hampton, Lafayette College can approach the Easton Mural Project, the Easton Main Street Initiative and its parent organization the Greater Easton Development Partnership. All three community organizations are responsible for helping obtain the legal framework behind the creation and existence of the murals as well as financing. It is important to gain approval for a mural way before a group even forms, as the engineers and art students need to design and implement the visual within the course's timeframe.

To ensure murals do not get rejected by the city, in an effort to increase approval feasibility, a board must be created, consisting of both Lafayette College faculty and administrators as well as community figures. This board will approve the designs that will be sent to the city. The student's mural will only be rejected it if it is deemed offensive or not reflective of the overall community, and school's values, image, and goals. In addition, the mural must meet the course's goal of representing Easton's industrial heritage. Once a mural gets approved, because the legal framework is done months in advance, the team of students can now get the "final okay" from the school and community entities overseeing the project. Once the final thumbs up is given, the students will install the mural within a timely and efficient manner.

The second cycle to the mural's policy backing lies in its maintenance. The Greater Easton Development Partnership and its subsidiaries will be responsible for maintaining the original aesthetic image of the mural for as long as possible, maximizing the life of the public work. The mural itself will be protected under vandalism laws. Once enough murals originating from this program start to populate the city, the school can set up further initiatives that train students to preserve and maintain these pieces. This will make the program not only self-sustaining, but also arm Lafayette students with knowledge on how to preserve historical pieces of public art.

By having a structured program in place that fast tracks a team's work, from inception, to its design and finally to its implementation all within a semester, the mural option has the ability for long term success. By having a concrete maintenance plan put in place, the murals will be set to represent Easton's industrial heritage for many years to come.

Proposed Project 2: Railroad Trestle

The Railroad Trestle project recommendation explores the revitalization of an important piece of industrial archeology from Easton's past: a trestle located in the Karl-Stirner Arts Trail. Because of its location, this project would include dealing with both the Karl-Stirner Arts Trail board and council members (Board and Advisors) and the government of Easton, making it quite complicated in the political context, but definitely achievable.

As explained for the previous recommendation, we are in contact with some highly supporting members of Karl-Stirner Arts Trail councils, including Jim Toia, Ed Kerns and Benjamin Cohen. Art professor Jim Toia heavily advocates the idea of this project and was the one who conceptualized it in the first place. Having him as a supporter in the near future will greatly increase the odds of this being a successful project. The bridge is not currently used for anything, as the only surviving structures are the bridges' supports. As explained in the technical section, we have proven the bridge's supports to be structurally sound, therefore we have proof that this structure can indeed be used for a revitalization process and convincing Easton authorities and Arts Trail council members about it should not be of much trouble.

Although, since this project is putting students in the process of rebuilding the trestle so that it becomes usable again as a pathway, extreme caution will need to take place to ensure the product created is secure enough for the common population to use. If they approve the project, the Easton government will probably want the bridge construction process to take on high amounts of bureaucracy to ensure its safety and that it is following the city's building codes. The project heads will need to actively work with Easton's Bureau of Codes and Inspections, as it is the institution that emits permits for new construction and renovations to existing buildings.

The Local Historic District Commission, part of the Bureau of Codes and Inspections, is another institution that might be useful in this project. Although the location of the railroad trestle falls outside of the jurisdiction of this commission, they can be consulted for best practices and advice on the trestle renewal.

Finally, it must be analyzed and decided upon who or which institution will be responsible for maintaining the renovated railroad trestle in good conditions in the future. The strongest candidate for this position is the local government, since they dispose of the necessary funding and expertise to keep the trestle functioning. Lafayette college could also partake in this responsibility by having civil engineers analyze the soundness of the structure every few years, just as they have done once in the past.

Economic Context

While the individual technical requirements for each portfolio project requires a different financial cost, the overall economic context is the same. Through the prepared Lafayette course that integrates the engineering and arts, creating public works of art scattered around the Greater Easton area, the town-gown relationship will be further strengthened. Nationally, town-gown relationships are a proven economic development tool, with studies showing that better relations between an educational institution and town results in higher economic activity and growth (Rooney, 2009). In recent years, art and culture have become viewed as a tool for economic development, and by using this program as a community engagement tool, it can not only serve as a cultural tool, but also an economic one as well (Ostertag, 2012).

This curriculum was designed around a handful of core principles such as connecting the topics of community engagement, a liberal arts curriculum, and the promotion of the intersection between engineering and the arts. Institutionally, Lafayette College is a perfect candidate for a curriculum like this as a liberal arts school that has "community engagement" as one of its core values. In addition, the college has spent a considerable amount of money trying to expand and strengthen the art department while continuously climbing the ranks as a prestigious engineering school. By having a program that covers, promotes, and strengthens all three values, Lafayette is even closer to fulfilling its strategic institutional goal.

While these goals are policies, policy success can also correlate into economic success. In this case, generating a strengthened town-gown relationship leads to positive

economic benefits for all parties and impacts "local economic development in small and medium cities" (Massey, Chan, & Field, 2014), such as Easton, PA. Across the world, "colleges tend to be large employers and major economic contributors to the communities in which they are located" (Carr, 2010). As a city, Easton has much to reap from the town-gown relationship, and many prominent entities cover this mutually beneficial exchange. The Boston Foundation is an example of an established and successful program that advocates for the promotion of the town-gown relationship. As one of the nation's oldest and largest community foundations driving innovation and prosperity within the city, the Boston Foundation teams up to create overlapping community partnerships and networks. As an entity, they state that "higher education's impact on a region's economy has always been significant, but it has become all the more catalytic locally and nationally" (Rooney, 2009) amidst the increasing level of importance placed on higher education and the record enrollment within it. This means as the years pass, the importance of a Lafayette degree will only grow stronger, and so too will the towngown relationship that is a part of the greater Easton-Lafayette bond.

As stated before, many of the town's policy initiatives can be achieved through the course's community engagement approach, centered around the town-gown relationship. The course's portfolio includes two options: the Easton Mural Project, and the Railroad Trestle. All options were crafted using community input and aligning the course to fulfill a long-term strategic goal of a city initiative, as seen with the Easton Mural Project option. If there are to be other projects added to the portfolio, they need to match the same standards and requirements the two other projects met, falling under the umbrella theme of "public art". While these two proposed portfolio projects are both contributing to policy success from both a Lafayette and community entity perspective, they add a massive dimension to this town-gown relationship, one of economic development. As a city, Easton attracts much of its revenue off of consumer expenditures. AmeriCorps VISTA, a national service program that works to eliminate poverty suggests the use of "asset mapping" when trying to advance a community economically. As stated by the organization, asset mapping "is a tool that relies on a core belief of asset-based community development; namely, that good things exist in communities and that those things can be highlighted and encouraged" (AmeriCorps VISTA). They further go on to name the six categories of community assets: physical assets, economic assets, stories, local residents, local associations, and local institutions. Easton has a large volume of assets within each category, but specifically, physical, and economic assets are some of the most visible within the community. This can be seen with a large culinary presence, museums, a college within the community, and various nightlife venues such as One Center Square. Any initiative that would drive up visitors would correlate with more cash inflows for consumer dependent businesses in Easton, allowing the town to flourish even more while strengthening the assets found within its borders. By using a town-gown public art curriculum, the assets of local associations, local residents, local institutions and stories will also increase in economic value as well as strategic importance to the community.

The National League of Cities is an advocacy organization and a group that controls the Pennsylvania Municipal League. The Pennsylvania Municipal League represents participating Pennsylvania cities, boroughs, townships, home rule communities and towns that all share the League's municipal policy interests (Pennsylvania Municipal League); Easton is a participating member. The National League of Cities, and its subsidiary groups create innovative and proven policy ideas for municipalities across America, regardless of size. One of the policy recommendations is the application of the arts and culture sector within the economic development setting. In fact, they state that the "arts and culture sector can have a larger impact on your city's economy (in terms of GDP) than other industries like tourism and transportation — but city leaders often do not recognize the economic value and impact of the arts in their community". This can be seen in their report that only "25 percent of U.S. mayors discussed the importance of arts and culture when talking about economic development in their 2017 state of the city speeches" (Dick, 2017).

Domestically, art's positive impact on economic development within the community has been documented by the most important of Federal Institutions. The Federal Reserve Bank of San Francisco publishes extensive research around community development, particularly within their *Community Development Innovation Review*. The *Community Development Innovation Review* provides "cross-sector dialogue around a range of emerging issues and related investments that advance economic resilience and mobility for low- and moderate-income communities" (Choi, L, 2017). As a community, according to *Data USA*, the median household income in Pennsylvania was \$56,904 in 2016 (Data USA, 2017). In the same year, Northampton County's median household income was \$62,753 while the City of Easton's was \$45,361 (Data USA, 2017). These statistics would indicate that the greater Easton community falls within the economic spectrum that the Federal Reserve Bank of San Francisco's research applies to.

The Reserve stated that "most states and cities recognize the merits of using arts, culture, and design to enhance tourism, and they depend on the cooperation between economic development, arts and cultural agencies to design and implement strategies for leveraging and marketing the unique quality of life, culture, and cuisine in regions to boost tourism value and growth" (Waits, 2012). This confirms that art and culture influence and promotes tourism, something the city of Easton strives for. The Reserve also notes that "newer for states and cities is the connection that arts, culture, and design can have to renewal and retooling other industries. One such industry is manufacturing" (Waits, 2012). This shows that art can not only help tourism, but also promote and preserve industry, serving as a multipurpose development tool. By using Easton's rich industrial heritage, which falls in many ways under the industry of "manufacturing" that was mentioned in Waits' conclusion, representing the industrial heritage through art could in fact help preserve while serving in other capacities. For example, murals at the Simon Silk Mill depicting its history could attract tourism, further helping the businesses economically that sit within the Mill today.

Some governors and mayors across the country are already including arts and cultural influences in their approaches. A *2012 National Governors Association* (NGA) report outlined "how arts, culture, and design can compel economic solutions in five ways": creates a fast-growth dynamic industry cluster, helps mature industries become more competitive, provides the critical ingredients for innovative places, catalyzes community revitalization, and delivers a better-prepared workforce (Waits, 2012). Many real-life examples of applications show the powerful relationship between arts, culture, and the local community economy. Examining these case studies, the economic impact

of murals within the community can be detected by all stakeholders of respective art project. In 1998, five Saskatchewan communities made the decision to develop tourism through the use of wall murals on the exteriors of buildings. By allocating \$250,000 towards the project, multiple murals were created, and the number of visitors had increased from 96,000 in 1998 to 169,000 in 2001. In addition, consumer expenditures within the town had doubled from \$15.2 to \$30.7 million over the same time period (Koster & Randall, 2008). Many other initiatives featuring murals have been established all throughout the world, regardless of municipality size. In cities such as Washington D.C., the Chinatown Community Development Center expanded a program in 2010 to "install murals and storefront installations in alleyways throughout Chinatown" with the intention to beautify the neighborhood, create a draw for visitors, and to attract potential commercial tenants. With a mural program similar to the one found in Oakland, California, cities can churn out over a thousand locally crafted murals within the course of a decade.

The economic "value added" from these art installations is positive, but different depending on which point in the future you are evaluating it from. As seen with the Saskatchewan case study, the number of tourists and increased revenue became apparent only after years had gone by. This would be true for Easton, PA as well, since the value of art goes up both as time and people's awareness for it increases. If these murals were to be around in 100 years, they could potentially be so well integrated into the city's identify, that its economic and cultural value is considered priceless. However, a mural created tomorrow would not be deemed priceless 5 months from its creation.

To increase awareness and fully harness the positive reputational impact on the school's end that will occur from this course, Lafayette's communications team should be in sync with this course, reporting on select projects. This will raise the program's awareness within the broader school and Easton community. Positive reputational impact is in fact an economic benefit, as it correlates to such things as higher applicants, more funding, and better rankings. Public image is something institutions such as Lafayette pay, meaning that every competitive advantage within public relations is needed. In fact, the National School Public Relations Association says school public relations is "the essential ingredient to student and school success" (National School Public Relations Association), evident in "how universities spend big money on public relations" (Contarino, 2016).

To ensure the maximize the investment, costs must be assigned and analyzed with respect to the project. In the mural's case, finding the right technical ingredients that maximize lifespan and durability is essential. With this technical need, the economic means must be there to allow all requirements to be met. This goes the same for all projects, as the funding must be there to cover costs associated with the project's budget. In all, the financial costs will be associated with three variables: the course, the course's products (art), and the maintenance fees for years to come to ensure the preservation of the murals and artwork. Maintenance fees should be dealt with from a fund created specifically for the Lafayette projects. On top of this, all future maintenance fees covering the first ten years of a project should be financed before the artwork is installed; this requires proper financial planning on top of legal advice for what type of funding structure will be put in place. Ten years was established as Chaz Hampton said public art, especially murals are crafted to last at least ten years. Financing for the projects will come from multiple sources, ranging from community, grants, to school connections. Each team should know well in advance the budget their group has to work with. This serves as both a protection to the group's work, while also giving set financial guidelines to work with. By the school funding these art projects, they are funding the curriculum as well as the creation and implementation of economic development tools for the city of Easton.

In the future, once the course amasses a decent sized portfolio of completed projects, a separate commission should be considered to strictly oversee the maintenance process. This commission, with both community and school members sitting on it will oversee all aspects of the completed art, ranging from the technical to economic components.

Within Lafayette College's core values, "community engagement" stands proud. As the school expands in size, both in terms of geographical area and population, its town-gown relationship becomes ever more present. Academically, the school is home to a well ranked engineering division in addition to a growing arts department. In the spirit of liberal arts and its core value of "community engagement", Lafayette can embrace this town-gown relationship and leverage it to achieve internal values and goals. In addition to a positive internal impact, there are plenty on the community, ranging from cultural to economic. This economic impact is powerful, and with art now an accepted economic development tool, Lafayette can turn this curriculum into a tool that is much more than a class. Rather, this program will have real life policy, cultural, and economic impacts. The economic context is deep, and its impact will be long-term.

Technical Context

Within the curriculum, the framework for two project options has been generated. The generation of these two options was done to show what contexts, values, and guidelines all proposed projects should encompass. It is important to consider that even though we are proposing two specific projects, there are many more possible ideas, some of which we explored that could also accomplish our goals. Some of these ideas include exposing art pieces around the campus of Lafayette College or the Karl Stirner Arts Trail. If the future students working on this project decide that they want to head in this direction, there are a few technicalities they must address, which also apply to our two proposed projects. The two proposed projects involve repurposing an abandoned bridge trestle and creating murals around the greater Easton area. The structural analysis has been completed for the abandoned bridge trestle while the murals option will be accomplished with the help of the Easton Mural Project. By both projects leveraging the framework already built for them, the technical context of each project will become more transparent, putting less of a burden on the project group.

Both of the two proposed projects have a different technical context. Each project requires different tools, supplies, and even human capital. For example, the railroad trestle project specifically required a civil engineer to complete a structural analysis, whereas the mural project did not necessarily require one. A benefit of having multiple projects, each with a different technical focus, is that students have the ability to choose which one they want to work on and furthermore, they can contribute their expertise or learn about something new. Generally, most art students would not have exposure to working with engineers to inspect for the structural integrity of a railroad trestle, and on the other hand most engineers would not have the experience in their engineering education to use their problem-solving skills to create a mural or public art piece.

Before the design process even begins, it is necessary to determine where the piece of art will be installed, mainly because the design process must take into account the amount of space it is given for such art piece. Additionally, depending on the location, certain considerations may need to be made. For example, if the art will be installed outside, it must be a medium which can withstand the conditions it will be placed in. The Karl Stirner Arts Trail has a special arts advisory council, which must approve of the artwork before it is placed in the trail (Art and Nature Converge). Therefore, students will need to work with council members to determine both where they will be able to place their creations, how big they can be, and most importantly what they are. This is also true for any of the other three locations proposed, as each has a different governing body that will determine the location and size specifics of each art piece.

If instead the art pieces or murals are to be displayed at Lafayette, our communications with professor Mary Wilford-Hunt, director of the college's facilities planning and construction, might prove useful. We found that in order to display student created artwork on campus, it is necessary that a robust plan including how the art piece will be maintained over time and a specific budget for it must be submitted for review (Wilford-Hunt, 2018). Thus, not only for Lafayette but all four locations, students in the design phase will also need to assess their creation's maintenance needs and create a comprehensive budget plan for it.

The maintenance needs and budget plan will depend on how long the art is exposed, the materials used, and a multitude of other factors depending on the individual project. Chaz Hampton stated that public art and murals in Easton are built to have a minimum lifespan of 10 years. This guideline will be implemented into all projects, deeming it necessary that all works of art produced from this curriculum are built to last at least 10 years. This is not to say that the art will be required to stay at its location or on public display for 10 years. Lifespan, maintenance, and a budget plan is needed as soon as possible in the design process, so that students can plan accordingly on which materials they will use in their specific projects. As with the location and size aspect, governing bodies of each of the four locations will need to be consulted. The Karl Stirner Arts Trail has several art pieces that are placed indefinitely, but also art expositions that are seasonal, such as the ones on the Young Masters Wall (Art and Nature Converge). Future students will need to work closely with the board members and maintain an open line of communication to ensure the installations are occurring in the correct location depending on the art piece.

One technicality that all projects share is that they all require students from the arts and engineering to collaborate. We propose that this is initially done by either meshing these projects with an existing course or by creating a totally new interdisciplinary course between the two departments. If such projects are successful, creating an entity on campus to hold these projects and expand them college-wide, such as the Dyer Center for Innovation and Entrepreneurship was created to foster a culture of innovation at Lafayette (Dyer Center Lafayette College), could be sought after. The creation of a new course was explored before by another EGRS capstone project form the fall of 2013, the Sports and Engineering Seminar project (*Lantz, K.*, & *Tuttle, K.*). They delineate that in order to achieve the status of course at Lafayette, a course proposal form must be submitted within the college administration. But before that, all the course specifics must be determined, and a syllabus created, including course objectives, learning outcomes, grading policy, an academic honesty statement, course bibliography/reading list, and a federal credit hour compliance statement.

Proposed Project 1: Student Murals

The Student Murals project proposes that students, in conjunction with professors and community members, design and mount murals highlighting the Easton's technological and industrial past around the city, the Silk Mill complex and the campus of Lafayette college. As with the other proposed projects, in order to achieve this objective, students from both the engineering and art departments will need to work together to tackle design and artistic problems as well as several technical challenges. Since the art pieces themselves are idealized to highlight Easton's industrial history, the initial idea is to have engineering students research and choose which artifacts and/or locations they want to depict in the art murals. Art students will then be tasked with creatively designing and later painting the murals themselves.

This project aims to work together with the Easton Murals Project (EMP), a collaboration between the owners of the Brick + Mortar Art Gallery and the Easton Main Street Initiative (Easton Mural Project.). The EMP's initial target location for its murals is in Easton's downtown area so that the art pieces are more visible to the public and the

organization can further garnish attention and support for the project. An example of such work can be seen in Figure 3. This will in turn help the initiative secure funding in an easier manner, due to the increased awareness and approval. Since EMP's inception in mid-2016, the group has successfully had artists paint 3 murals around downtown Easton with one wall waiting to be painted. The work done by their organization should be considered as an achievement by itself, but it also shows just how difficult it is to find suitable walls to paint murals over in Easton. Because our project aims to improve the town-gown relationship between Lafayette and Easton, the target locations for murals produced by this project should be similar to the EMP's. Therefore, this is the biggest technical challenge this project will face.



Figure 3: Mural by Scott Albrecht in Easton, PA.

An alternative to exposing the murals in the downtown Easton is to choose uncommon locations around the county, as the industrial buildings themselves. Going down this path will require further participation of engineering students in the project to ensure the reliability of the walls being painted on. Engineered structures might even be needed to house such art murals.

At the time of writing of this report, there is still one wall open for artist bids in the EMP website, at 133 North Fourth Street, Easton (Easton Mural Project). The proposed wall measures roughly 542.5 square feet in area, making it a mid-sized wall for a mural, something that should be considered within a cost and technical analysis. In working with the EMP, students would need to submit their designs as bids to the organization, as well as other documents such as estimated budgets and proposed mediums.

Since the portfolio option follows the idea that students will be painting the wall, no labor costs should be needed in this project. Because each art piece is uniquely created, there is no telling exactly which or how much of each material will be needed for this project. Students will need to evaluate how and with what materials they will complete their murals. It should be emphasized that high-quality materials should be preferred as it will increase the longevity of the mural which needs to be ten years minimum. The main materials needed will most likely be the paint and primer chosen, alongside with other such as brushes, stairs and equipment. However, murals can be abstract and main materials can vary. Costs of other materials, such as brushes, stairs and equipment should also be considered when analyzing the cost of murals. Chaz Hampton in particular will serve as the main figure from the community giving guidance on the mural option due to his expertise within murals and their implementation.

Technical Project 2: Railroad Trestle

The railroad trestle project requires both technical and artistic expertise. First and foremost, the trestle must be structurally sound, as people need to cross from one side to

the other without the possibility of injury or risk for disaster. Fortunately, Professor McGuire, a civil engineering professor at Lafayette has conducted structural analysis on the railroad trestle which will be a massive help to students working on projects in the future. Professor McGuire, along with a group of senior design students, conducted an investigation on the structural integrity of the railroad trestle and devised a construction plan to bring it to code and in working condition. Their analysis concluded that the trestle was structurally sound, and all it required in a technical sense was a new platform to walk across, which can be seen in Figure 4.



Figure 4: Proposed bike path on old bridge (View of upstream approach).

In terms of the aesthetics of the trestle, there are various ways future students could commemorate its history while also highlighting its technical quality. One idea proposed is the placement of a plaque or sign to commemorate the trestle and to pay homage to its history. This plan would ensure its story is being celebrated but does not physically alter the trestle in any way, aside from the deck that must be built. While a viable possibility and relatively inexpensive, this doesn't provide the best opportunity for arts and engineering students to collaborate and breathe new life into such a unique artifact in Easton.

Another potential plan is to use the new deck to create a piece of art on the trestle itself, without taking away from the industrial beauty of the trusses themselves. The new deck could provide a way of encouraging people to venture across and to experience new areas of Easton. This is accessible by all people, no matter age, ability, or socioeconomic status and makes them feel welcomed into the community, no matter which way they cross the trestle. As previously mentioned, this initiative is not just focused on making Lafayette Students feel as if they are a part of the Easton community, but also to make Easton community members feel as if they are a part of the Lafayette community.

The medium by which the adornment on the deck could be done, could range from concrete striping paint, to street decals. Striping paint is similar to spray paint and is slightly more permanent approach but allows for the decoration of a larger surface area (Striping Paint) which can be seen in Figure 5. On the other hand, the decals are durable, but also easily removable and allow for students each year to redesign the decoration of the trestle (Street Decals | StickerYou Products). This kind of program is conducive to allowing for continuous learning about the trestle and using artistic creativity and freedom of expression, allowing students to show how they interpret the trestle on the Karl Stirner Arts Trail. This project could help the KSAT to further their efforts in reaching their goals of "connecting the urban environment to nature," in order to "promote a holistic view of our shared human experience" (Art and Nature Converge).



Figure 5: A painted pathway welcomes community members to a playground (Magic Carpet).

Conclusion

The development of a school curriculum that combines the engineering and the arts, further aligning itself with Lafayette College's core principles is strategic in many ways. There are many contexts in which this program not only fits into, but also strengthens. Through evaluating these contexts, a program was built in a way where both the community and school can reap benefits.

As stated within the report, "building a connection between members of a community takes much more than the physical infrastructure of a railroad trestle or a series of murals painted onto brick". This connection the curriculum seeks to target and strengthen is the town-gown relationship between Lafayette College and Easton, Pennsylvania. More specifically, this town-gown relationship will be developed through a curriculum generated with community and school input to achieve a common destiny. This common destiny is the preservation of Easton's industrial heritage through the creation of public art by engineering and arts students. As a city, Easton has a rich industrial heritage, something that is a community asset. Despite the integration of engineering and arts students, these two groups have historically struggled to collaborate. By combining each department under the umbrella of public arts, Lafayette can help weaken this historic trend while teaching the core institutional value of "community engagement". Community engagement is sewn within the fabric of the curriculum as the students are taking careful consideration for the community these projects would appear within in an attempt to create added value.

The first step to creating this course is to fill out a course proposal, found on Lafayette's website. As a course, it will be open to both upperclassman engineering and arts students, or by the instructor's permission. Furthermore, it will be cross registered as both an engineering and arts course, taught by both an arts and engineering professor, giving it an official liberal arts twist. The idea behind allowing only upperclassman to enroll is due to the fact that they have lived in the community the longest, something that should correlate in a better understanding and appreciation for Easton as a whole. The public art created within the program will be implemented in the greater Easton area. If the school were to extend the program's geographical grasp, they would need to recalibrate the political/ policy analysis to be adapted to the new municipalities, groups, and entities involved with the project. The potential of public art installations on Lafayette's campus generated from this curriculum has already been determined feasible, albeit with certain guidelines. Each of the portfolio options listed have the policy framework completed, with the guidelines and contacts available to leverage. In terms of public art in the city of Easton, the Greater Easton Development Partnership will provide policy guidance, as well as Chaz Hampton, owner of Brick + Mortar Art Studio who serves in many of these community initiatives. To increase the chances for long-term success while maximizing the benefits this program provides, Lafayette must integrate their communications team and promote the town-gown collaboration. It is essential to highlight this community engagement initiative which has taken the form of a course, bringing added value to Lafayette's overall reputation in the Easton area while further strengthening the school's core principles of liberal arts and community engagement.

Each project idea, whether generated in the future or within the portfolio, will have unique technical requirements such as differing tools, supplies, and amounts of required human capital. However, despite the individuality of each project's technical requirements, it is very important to determine where the art will be installed before generating the idea as the design process must take space into account. This is very important, as all entities expect a plan before structural implementation for how the art work will be maintained, a conclusion that will be impacted greatly by the scale and setting. All works of public art will be built to last at least 10 years. With that being said, the public art does not have to be on public display for the total duration of the minimum technical lifespan. By combining art and engineering students, the technical and artistic nature of these projects will become collaborative, further radiating the spirit of multidisciplinary thought. In terms of technical guidance, the portfolio options have laid out the community and school professionals, as well as framework that will help steer the group towards technical success. It is very important that every project, even if it is generated, is under the guidance of some reputable professional who can offer technical support.

The past decade has seen the emergence and acceptance of arts and culture as an economic development tool. Institutions such as the Federal Reserve Bank of San Francisco have stated that this development tool is crucial in advancing communities economically that fall in a certain economic range, something the Easton area fits within. Through assetizing the Easton economy, a tool that is both advocated by AmeriCorps VISTA and taught within Lafayette courses such as Foundations of Entrepreneurship and Economic Development, this curriculum can strengthen many of the factors that keep Easton economically thriving. When looking at Easton's assets, by preserving the industrial heritage through public works of art, all six categories of community assets AmeriCorps VISTA presents will be strengthened. Within the curriculum, every project's unique technical need will come with a different cost. No project will bear the same cost, but each team will be required to know the cost of their project, as well as the overall budget and maintenance before commencing on the idea. Each project's financing will come from a wide array of sources, such as community institutions, grants, Lafayette College alumni, and Lafayette College. By the school allocating funds for these art projects, they are investing in the curriculum as well as the creation and implementation of economic development tools for the city of Easton. In terms of reputational and community image, Lafayette has a lot to gain in added value from this curriculum. With the college' expansion and the quest to become even more elevated within collegiate rankings, the increased public awareness this program will bring to the college is strategic, coming with positive long-term impacts.

This portfolio of work has been designed to aid future students in collaborating with other arts and engineering students and other key players in the Easton community. Through the continuation of this work, students can play a small part in ensuring that the rich industrial heritage of Easton is preserved and can aid in improving town-gown relations for future generations of community members. The projects that are envisioned are to be implemented in a course similar to Engineering Studies 480 Sustainable Solutions and this curriculum should provide students with the opportunity to create meaningful and sustainable community-based development. As said by Professor Toia of the art department, "Lafayette students are the necessary link to make these plans a reality." To turn this into a reality, students or faculty must carry this framework one step farther and execute. This program could serve as a model for town-gown relations, with Lafayette College leading the way in using collaboration between two distinct departments to help the community it is in (de Wildt, 2013).

Bibliography

- Board and Advisors. (n.d.). Retrieved November 15, 2018, from https://karlstirnerartstrail.org/about-us/board-and-advisors/
- Bruning, S. D., McGrew, S., & Cooper, M. (2006). Town–gown relationships: Exploring university–community engagement from the perspective of community members. *Public Relations Review*, 32(2), 125–130. https://doi.org/10.1016/j.pubrev.2006.02.005
- CEP Course and Curricular Proposal Form and Directions. (n.d.). Retrieved November 12, 2018, from https://registrar.lafayette.edu/additional-resources/cepcourse-proposal/
- Chenoweth, H. (2017, December 6). [Town-gown relations]. Retrieved December 3, 2018, from https://info.higheredfacilitiesforum.com/blog/how-universities-canstrengthen-town-gown-relations
- City of Easton History. (n.d.). Retrieved November 15, 2018, from https://www.eastonpa.com/history.html
- Community-Based Learning and Research · Landis Center · Lafayette College. (n.d.). Retrieved November 15, 2018, from https://landiscenter.lafayette.edu/communitybased-learning-research/
- Choi, L. (December 2017). Community Development Investment Review, 154.
- Condit, U. W. (1885). *The history of Easton, Penn'a from the earliest times to the present, 1739- 1885.* [Easton, Pa.] : G. W. West. Retrieved from http://archive.org/details/historyofeastonp02cond
- Contarino, A. (2016, August 08). Universities Spend Big Money on Public Relations. Retrieved December 2, 2018, from https://www.jamesgmartin.center/2016/08/universities-spend-big-money-publicrelations/

- de Wildt, A. (2013). Community Websites: Linking the Personal to Urban History. *Journal of Museum Education*, 38(1), 9–19.
- Easton Mural Project. (n.d.). Retrieved November 14, 2018, from http://www.eastonmurals.org/
- Engineering Studies Courses. (n.d.). Retrieved November 14, 2018, from https://es.lafayette.edu/courses-revise/
- Executive Summary and Priority Projects. (n.d.). Retrieved November 15, 2018, from http://visioneaston.org/
- Gavazzi, S., & Fox, M. (2015). A Tale of Three Cities: Piloting a Measure of Effort and Comfort Levels within Town-Gown Relationships. Innovative Higher Education, 40(3), 189-199. doi:10.1007/s10755-014-9309-0
- "Interdisciplinary Studies." Interdisciplinary, interdisciplinary.lafayette.edu/.
- Lucena, J., Schneider, J. J., & Leydens, J. A. (2010). Engineering and sustainable community development. San Rafael, Calif. (1537 Fourth Street, San Rafael, CA 94901 USA): Morgan & Claypool Publishers.
- Magic Carpet [Photograph found in Jessie and Katey, Catonsville]. (n.d.). In J.
- Unterhalter & K. Truhn (Authors). Retrieved December 9, 2018, from https://static1.squarespace.com/static/5682d566a2bab87f93f06c18/5ba2d1982b6a 2866c3b86ad9/5ba2d1af03ce64a7b6ceaa83/1537397212185/magiccarpet1.jpg?fo rmat=2500w
- Mission and History · About · Lafayette College. (n.d.). Retrieved November 15, 2018, from https://about.lafayette.edu/mission-and-history/
- Movies at the Mill Easton. (n.d.). Retrieved November 16, 2018, from http://www.moviesatthemill.com/
- Ostertag, T. M. (2012). USING THE ARTS FOR ECONOMIC DEVELOPMENT: A CASE STUDY OF THE CANTON ARTS DISTRICT. Akron, OH: The University of Akron.
- Russo, E. (2018, September 27). Movies at the Mill highlights success of Silk Mill project. Retrieved November 16, 2018, from http://www.wfmz.com/news/69news-at-sunrise/movies-at-the-mill-highlights-success-of-silk-mill-project/800067687
- School Public Relations: The Essential Ingredient to Student and School Success. (n.d.). Retrieved December 1, 2018, from https://www.nspra.org/cap

- VanRyn, V. S., & Wehrwein, E. A. (2018). Building community by serving the community. Advances in Physiology Education, 42(2), 247–250. https://doi.org/10.1152/advan.00052.2017
- View of upstream approach [Photograph]. (n.d.). Lafayette College, Easton, Palmer Township Bridges - Bike Path Proposal.
- Waits, M. J. (2012). New Engines of Growth Five Roles for Arts, Culture and Design. THE NATIONAL GOVERNORS ASSOCIATION. Retrieved December 1, 2018, from https://www.giarts.org/sites/default/files/New-Engines-of-Growth.pdf
- William J. Heller (1920), History of Northampton County, Pennsylvania. Vols I and II. New York. American Historical Society.
- Wisnioski, M. (2016). Engineers for change: competing visions of technology in 1960s America. Cambridge, MA: MIT Press. What is Asset Mapping? (n.d.). Retrieved December 10, 2018, from https://www.vistacampus.gov/what-asset-mapping
- What is public art? (n.d.). Retrieved November 29, 2018, from https://www.associationforpublicart.org/what-is-public-art/
- Young Masters Wall [Photograph found in Karl Stirner Arts Trail, Easton]. (n.d.). Retrieved December 3, 2018, from https://karlstirnerartstrail.org/art/the-youngmasters-wall/