Copenhagen Project Center Multimedia Campaign

An Interactive Qualifying Project Final Report

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ABSTRACT

WPI's Copenhagen Project Center (CPC) needs a new approach to attracting project sponsors due to opening an additional term of operation. By analyzing the tools used by other project centers and similar organizations, we created a new promotional approach for the CPC. Drawing lessons from Danish designs and considering continual feedback from our Sponsor and Local Liaison, we created a multimedia platform to help promote the center to prospective sponsors. This platform includes a website, several short videos, an interactive project database, and a presentation.

ACKNOWLEDGEMENTS

EXECUTIVE SUMMARY

Worcester Polytechnic Institute's (WPI) Copenhagen Project Center (CPC) was founded in 1997 by two Danish-born WPI faculty, Professor Peder Pedersen and WPI International House Director, Mr. Tom Thomsen. In 2012, they passed the director position to Professor Steven Taylor. Over the years, the project center's popularity has risen, leading to the opening of the site for an additional term. This has effectively doubled the number of sponsors required for the project center to operate, making it much more difficult for the project center director to find the necessary sponsors.

Professor Taylor's current approach involves the use of a plain written document and his own personal contacts with potential and past sponsors. This approach has reached the limit of its effectiveness, for he has been unable to find enough new sponsors within his current network. In order to address this issue, new approaches to finding sponsors must be explored. The first step in this direction was the appointment of Mr. Carsten Ohm as the center's new local liaison.

The Copenhagen Project Center functions similarly to a nonprofit organization. To maximize the effectiveness of our approach, it is logical to promote the CPC using similar methods to such organizations. A key element that many successful nonprofits use is an interactive digital presence – something the CPC currently lacks. In this project, we created a **website** and a **presentation** to help the Director attract new sponsors.

When developing the **website (www.wpicpc.org)**, we worked closely with Professor Taylor and Mr. Ohm. Our website includes a project database, short videos, an FAQ page, and an easy way to contact Mr. Ohm. Additionally, we made a presentation for Mr. Ohm to use when speaking with potential sponsors that provides an overview of sponsoring a CPC project. So that the website remains current, we wrote a handbook that explains how to update it with ease.

Home page of Website

We used *WordPress Business* after analyzing the various approaches to building a website. We developed a list of attributes that we liked from popular Danish websites. We chose a template that included these ideas and customized it to fit our needs.

We began creating our **database** by cataloging all the past projects available to us in a Google Sheet. We used several filters to show potential sponsors what types of projects the CPC has done in the past. Learning about these projects shows sponsors the potential for new projects. Using Tableau, a data visualization software, we created an interactive report which displays every project on a timeline and gives information about each one. We created a Google Form that allows for future students to update the Google Sheet linked to the tableau report. This will provide an easy way to continually update the database.
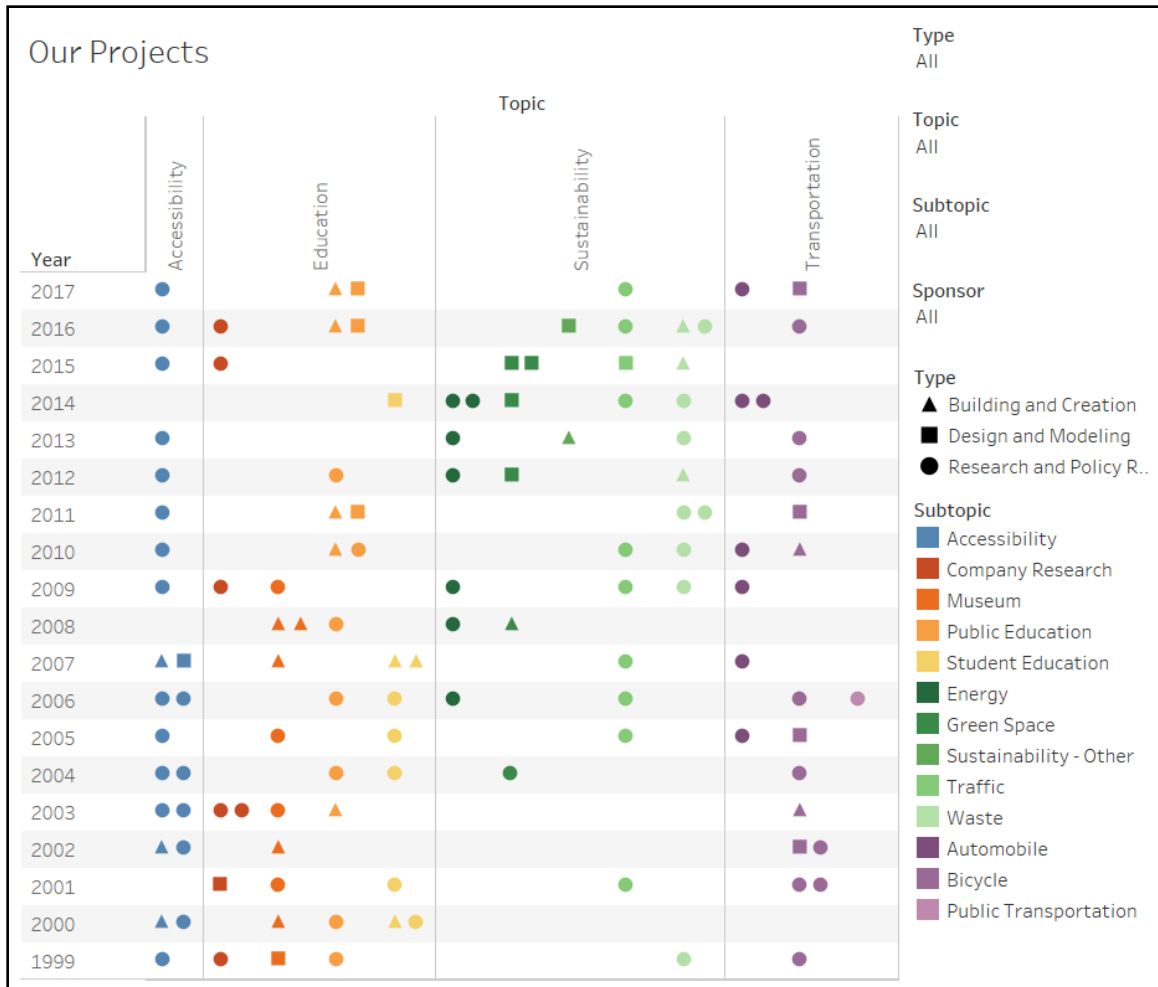
Project Database

We came up with four main categories of **videos**: a CPC promotional video, a student video, a project highlight video, and a set of short FAQ videos. These videos include interview footage of current director Steven Taylor, past and present sponsors, past CPC alumni, and current students. The promotional video is located on the front page of the website and provides a general introduction to what the CPC's mission is and some of the impacts it has had on the community. The student video is located on the "About Us" page and shows potential sponsors the kinds of students that come to the CPC, showcasing their abilities to complete projects outside of their majors. The project highlight video is located on the Home Page and show the impact and results of past and current student projects. The FAQ videos show sponsors answering questions about sponsoring a project. These videos are accompanied by written answers to provide further clarity.

Finally, we created a **presentation** for Mr. Ohm to use when discussing the CPC and the necessary requirements to sponsor a project. This presentation allows Mr. Ohm to go through the key points needed to accurately explain the process of an IQP. These deliverables will enable Mr. Ohm and the CPC director to efficiently garner interest from new Danish sponsors.

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1. INTRODUCTION

Worcester Polytechnic Institute (WPI) revolutionized traditional college teaching methods in 1970 by becoming a pioneer of project-based learning. This revamped curriculum, dubbed The WPI Plan,

> "…features integrative project work across four years, both in the major and in general education, in classrooms, and around the globe at more than 40 project centers. Under the Plan, students work closely with faculty and each other to develop solutions to real-world problems in their own communities and in communities around the globe." [*Project Based Learning*].

The Global Projects Program (GPP) provides the opportunity for WPI students to tackle these "real-world problems" every year at one of over 40 project centers. Over 65% of students at WPI complete a project off-campus at one of these global project centers during their undergraduate career [*Global Projects Program*]. WPI's President Laurie Leshin recently announced the initiative called Global Projects for All, which provides financial support for all students to complete a term at one of these global project centers. These projects help not only the students who complete them, but also the communities they pertain to, providing a notable impact on all parties involved with the project process. The Princeton Review ranked WPI's study abroad program number one in the nation this year, underscoring the impact these projects have had [*Most Popular Study Abroad Program, 2017*]. The push for over 90% of WPI students to travel to one of the school's off-campus locations spurred the creation of new project centers and led to some centers doubling their capacity. This year, the Copenhagen Project Center (CPC) has inaugurated a new session in the early fall (A term), in addition to the spring term that it has operated in for years.

Since its establishment in 1997, students have completed over 100 projects at the Copenhagen Project Center, focusing on education, accessibility, sustainability, and transportation. The CPC hopes to attract new sponsors who wish to complete similar projects in the Danish community. These projects have allowed WPI students to grow by expanding their abilities to think and putting their skills to practice, exemplifying WPI's motto of "Theory and Practice." Some of the more notable projects completed in the respective categories above are as follows:

- Raising Awareness of the Internet of Green Things (2017)
- IBeacons as an assistive tool for the blind in Copenhagen (2015)
- The Ecological Footprint of Composting and Incineration of Garden Waste (2009)
- The Nørrebrogade Project: Traffic Study (2009)

Currently, Professor Steven Taylor, the director of the Copenhagen Project Center, depends upon plain written materials to convey the impacts of the CPC to potential sponsors. Communication about the project center exists solely through paper resources and contacting Professor Taylor. Although this approach has provided sponsors in the past, the lack of resources detailing the IQP process poses a challenge when trying to accurately describe the necessary effort and resources required from the potential sponsors. Without easily accessible and more thorough materials, acquiring enough sponsors to fill two terms presents a challenge for Professor Taylor and any future director. With the opening of an additional term, the CPC needs a new approach to broaden its outreach in the community in order to identify new projects for the additional 24 WPI students who will be coming to Denmark every year.

Making tangible and accessible marketing materials available will help promote the CPC and aid in recruiting new sponsors. Students carrying out similar projects to promote other WPI project centers created databases, websites, and other materials. Project centers such as London and Melbourne have websites that include a lot of information, but focus on students rather than potential sponsors (Appendix A). Based on the needs of the CPC and the backgrounds of other project centers, we developed a website and digital presence to attract new sponsors.

The goal of our project is to develop promotional and informational multimedia tools that will enable the Copenhagen Project Center to be more effectively marketed to sponsors, in the Danish community. The objectives of this project are to:

1. Create a database of past CPC projects
2. Produce marketing materials
3. Develop an informative website for sponsors

To achieve this goal, we will research and digitize the history of the CPC and its past projects, effectively highlighting impact and providing accessible information to potential sponsors through a website containing our multimedia materials.

2. GENERAL BACKGROUND

Traditional college engineering curricula are transitioning towards a project-based learning approach, as more evidence surfaces to justify the advantages of interactive, hands-on programs. Several studies support this transition. In one such study Dr. Aruna Shekar of Massey University states:

> "a transformation in teaching and learning approaches is essential to prepare students to solve complex problems in a global world. In order for students to practice as engineers, they need to have had exposure to a number of projects that offer real-world problems… Learning to apply theoretical principles is much better done when given real problems and hands-on activities in projects" [*Shekar, 2014*].

Many studies also suggest that "project-based learning, when fully realized, can improve student learning" [*David, 2008*], by allowing students to gain valuable "career capital" throughout their undergraduate studies. Dr. Michael Arthur of Suffolk University describes career capital as "the overall set of non-financial resources a person is able to bring to his or her work" [*Arthur, 2001*]. A major issue with traditional college curricula lies in the heavy, and many times exclusive, focus on teaching strictly theory in a classroom setting [*Shekar, 2014*]. The issues with this approach are becoming more evident today, as many "students have felt that sometimes they do not see the relevance of what they are taught to real-life practice. Hence there is a need to transform the way 21st century students are educated and prepared for their future professional work" [*Shekar, 2014*].

This disconnect between "theory" and "real-life practice" has become an issue, and as The Institution of Professional Engineers New Zealand (IPENZ) stated in 2010, "graduates entering industry have technical knowledge that is largely theoretical, and industry needs to invest considerably to close off the knowledge gap between principles as taught and codified knowledge as used in industry" [*IPENZ, 2010*]. By emphasizing "on-the-job learning," a project-based program allows for students, especially in the engineering fields, to gain authentic experience [*Arthur, 2001*]. This established experience before graduation saves prospective employers money by closing the knowledge gap between theory and practice, giving a measurable edge to students enrolled in project-based learning curriculums. The benefits of transitioning to a project-based learning curriculum appear prevalent in a multitude of studies; "however, the research also underscores how difficult it is to implement project-based learning well" [*David, 2008*].

Several key components are necessary to successfully make the transition to a project-based curriculum. Studies have shown that establishing a "strong school support [system], access to well-developed projects, and a collaborative culture for teachers and students," is strongly recommended for schools planning on adopting the project-based educational model [*David, 2008*]. Failure to have these systems in place could lead to the detriment of an educational program, and these studies' findings "suggest caution in embracing this practice unless the conditions for success are in place" [*David, 2008*]. A variety of approaches can establish this foundation for success when integrating project-based learning into a successful educational program. Figure 1 portrays an example of a successful four-year project-based curriculum:
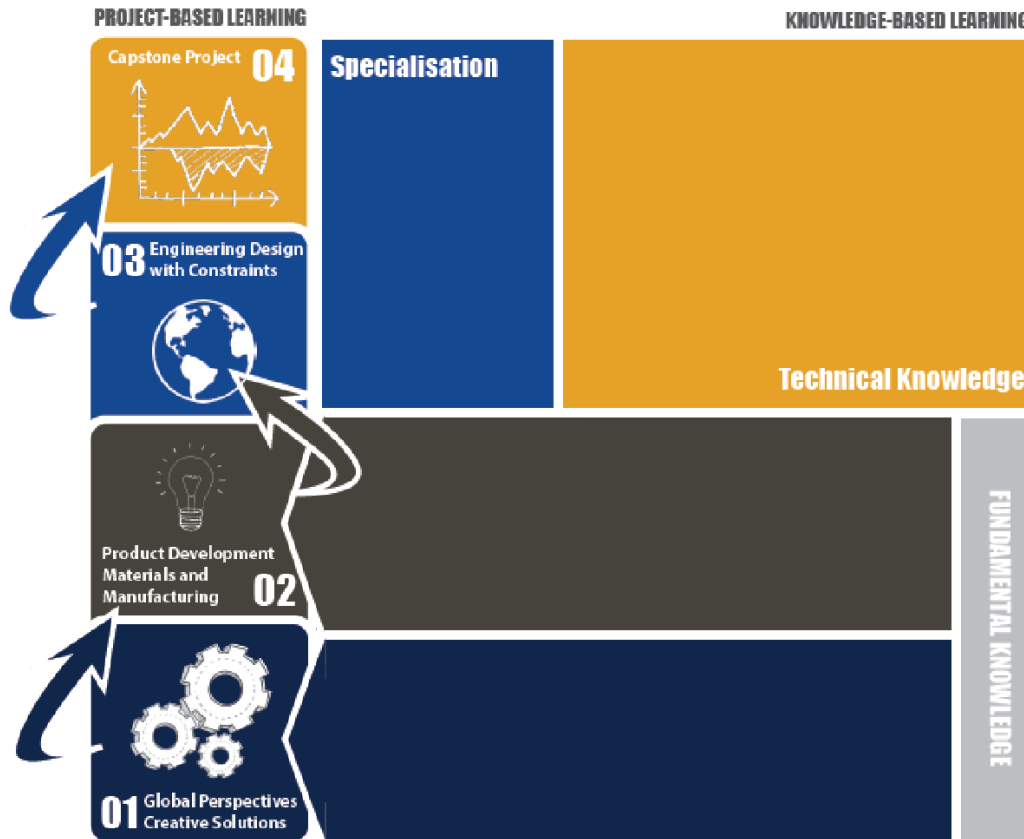
Figure 1: Model of successful four-year project-based curriculum [David, 2008].

This graphic displays a proven, successful project-based program model, broken up into each academic year with subsequent areas of respective focus. The project-based learning model that Worcester Polytechnic Institute currently has in place, exemplifies this successful model in a variety of ways.

2.1 THE WPI PLAN

Worcester Polytechnic Institute was established in 1865 with an influential motto: "Theory and Practice." This motto shaped WPI's teaching methods by having students spend half of their day in traditional classrooms learning theory, and the other half working in machine shops practicing their skills [*The Two Towers Tradition, 1995*]. This hands-on approach to learning lasted for over 100 years, providing a foundation for the curriculum used today. In the 1960s, a group of WPI professors began developing a proposal that would revolutionize the school curriculum. This proposal was based on adopting a project-based learning system that would require students to complete three categorical projects — a Humanities Seminar or Practicum, an Interactive Qualifying Project, and a Major Qualifying Project — throughout their undergraduate careers. In 1970, the Institution adopted this proposal and named it the "WPI Plan." As stated by WPI, "through the plan you learn *how to learn* by applying your classroom experiences in projects that challenge you from a proficiency, social, and global perspective" [*Leshin, 2015*].

These deep roots of teaching through "theory and practice" have provided the foundation necessary for success, as seen through WPI's nation-wide recognition of excellence. This year WPI was ranked the number one school that best combines scholarly research with classroom instruction, which is a direct testament to the collaborative faculty-student culture embedded throughout WPI [*Belkin, 2016*]. This collaboration sets WPI apart from other engineering institutions. However, this partnership between students and faculty reaches much farther than WPI's main campus in Worcester, Massachusetts.

To create a global presence, the development of the Interdisciplinary Global Studies Division (IGSD) began briefly after the establishment of the WPI Plan with its first project center opening in London in 1987 [*London Project Center*]. WPI's top ranked nation-wide study abroad program, the Global Projects Program (GPP), resides in this department [*Most Popular Study Abroad Program, 2017*]. WPI explains: "through our Global Projects Program, WPI science, engineering, and business students travel to more than 40 off-campus locations across six continents. Immersed in new cultures, they tackle unstructured problems in ways that are meaningful to local sponsors in real communities" [*Global Projects Program*]. This program has provided students with opportunities to make impacts on the world for almost 30 years. The majority of WPI's undergraduate students complete their Interactive Qualifying Projects through the GPP at any one of the many project centers offered. The Copenhagen Project Center is one of these centers that has had a notable impact on both the WPI and Danish communities.

2.2 THE COPENHAGEN PROJECT CENTER

In 1995, efforts to open a WPI IQP center in Denmark began. Professor Peder Pedersen and Mr. Tom Thomsen headed this effort, believing that the cultural experiences available in Denmark could benefit WPI students. The Copenhagen Project Center's development began in the summer of 1996, in Helsingør, Denmark. Professor Pedersen knew a local professor teaching at the International People's College in Helsingør who informed him that the college had developed a project program similar to WPI's MQP program. Professor Pedersen told Mr. Thomsen about this program, leading to the development of the Denmark Project Site. This site initially functioned in a smaller capacity that served as a test run for the program. The success of these trial projects justified the development of the Copenhagen Project Center to WPI in the 1997-98 school year. As a project center, the capacity of the program increased to groups of 15 students completing five projects every year [*P. Pedersen, personal communication, April 6, 2017*]. Over time, this number increased to 24 students completing six projects a term. Students have completed over 100 projects at the CPC since it became part of the WPI Global Projects Program almost 20 years ago. Figure 2 shows a timeline illustrating the development of the CPC.
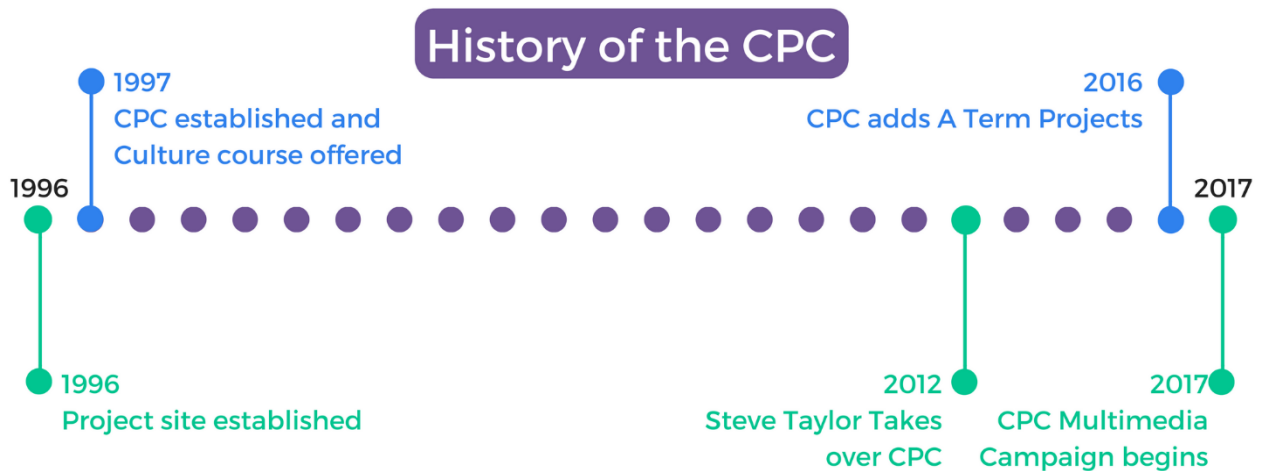

Figure 2: Timeline of the History of the CPC

Throughout its history, the CPC has had a predominant focus on sustainability, accessibility, and design [*S. Taylor, personal communication, August 25, 2017*]. As the Copenhagen Project Center has gained popularity with students, the need for more projects has arisen. Particularly in this past year, the opening of the project center for an additional term has led to the need for twice as many projects. However, it does not currently have enough sponsors to support this expansion. As a result, Professor Taylor, the current CPC director, needs updated promotional materials for the CPC to attract more potential sponsors outside of his limited network. The proposed materials should consider Danish culture, modern marketing practices, and the history of WPI's Copenhagen Project Center.

For the past 20 years, the CPC directors have relied on word of mouth and on one document (Appendix B) to find sponsors. The document briefly explains past projects completed at the CPC, inform potential sponsors of the types of projects the CPC looks for, and clarify the commitment required from sponsors. While this provides a starting point in giving potential sponsors with necessary information to attract their business, it lacks the engaging and alluring qualities necessary to acquire a new set of sponsors.

Marketing the CPC through word of mouth relies heavily on Professor Taylor's personal networking and communication with past and present sponsors of the Danish community. This had been an effective way to garner enough sponsors in past years when projects only occurred in the spring academic quarter; however, the addition of a fall academic quarter effectively doubles the number of projects, each of these requiring a sponsor. Professor Taylor typically uses his connections in Denmark to find new projects. Unfortunately, his network of sponsors has reached its limits, leading to major roadblocks in his searching process. In many locations, including Copenhagen, professional associates are often small tight knit groups, eventually leading to dead ends when trying to broaden a networking system [*S. Taylor, personal communication, March 14, 2017*].

Using a paper marketing method in this digital world limits Professor Taylor's ability to find new sponsors. CPI Financial stresses the importance of a digital presence by stating that "More than 90 percent of organizations are following the social media and digital marketing methods in addition to traditional marketing to support their marketing campaigns and promote themselves across the region and even globally" [*Amlot, 2014*]. Now more than ever, Professor Taylor needs to market the CPC to a wider audience than what a document can accomplish. Building a website will produce accessible means of communicating with future sponsors, creating a digital presence for the CPC. Nicole Leinbach-Reyhle from Forbes Magazine wrote, "... having a professional, polished looking website that functions easily and offers customers easy navigation, strong photo images, professional quality content and an overall experience that engages them enough for them to want to do business with you is key" [*Leinbach-Reyhle, 2014*]. Putting the CPC on the digital market will expand the CPC director's reach to increase his chances of finding more potential sponsors.

In addition to this digital presence, Professor Taylor has appointed a Local Liaison for the CPC, Mr. Carsten Ohm. Mr. Ohm currently lives in Copenhagen and will act as a local representative for the CPC to help bridge the gap between WPI and Denmark. His main role will be to inform and garner interest among potential Danish sponsors in personal meetings by using the presentation that we developed for his use.

The subsequent sections outline the design and creation of our main deliverables in the following order:

- Website
- Project Database
- Videos
- Presentation

3. WEBSITE

In order to create an effective website, we assessed and analyzed how modern-day organizations approach finding and retaining new sponsors. Every organization we investigated had some form of a multimedia campaign, focused on establishing a digital presence. The CPC has many similarities to nonprofits. These similarities include the fact that the CPC does not make any money, relies on sponsors to back it, and focuses primarily on helping the community around it. Due to this, we modeled our marketing strategy after those of nonprofits. This marketing strategy, paired with research into Danish culture and design formed our promotional approach to attract new interest from potential sponsors.

Nonprofit organizations currently establish their digital presences by incorporating interactivity within their platforms, particularly through the use of websites. Successful nonprofits include "an interactive online component or two-way communication primarily used to attract, engage, and retain customers" [*Kirk, 2016*]. Interactivity has greatly increased the success of nonprofit marketing campaigns by allowing the targeted "consumers" to feel more involved with the organizations. Our site incorporates interactivity through the use of a project database with filters, short videos, and project highlights.

To gain more sponsors, the CPC requires a website that looks professional and has a pleasing aesthetic. The website created should consider the three T's – Technology, Talent, and Tolerance – that exemplify Copenhagen's values [*Bayliss, 2007*]. These values, illustrated in Figure 3, emphasize the importance of all talent, putting value on the arts, and indicating that our site should focus on visually pleasing design to the Danish community.

Figure 3: Copenhagen's Values - Three T's

Past project center websites rely on a basic template provided by WPI Marketing and the WPI Academic Technology Center (ATC). Many project centers, including London, Bar Harbor, and Melbourne, have created their digital presences using this template; however, it produces sites with an identical layout and style, greatly restricting creativity and design. Figure 4 shows examples of this layout. Unfortunately, the style of this template does not align with Danish design preferences.
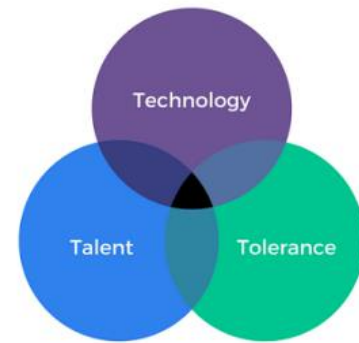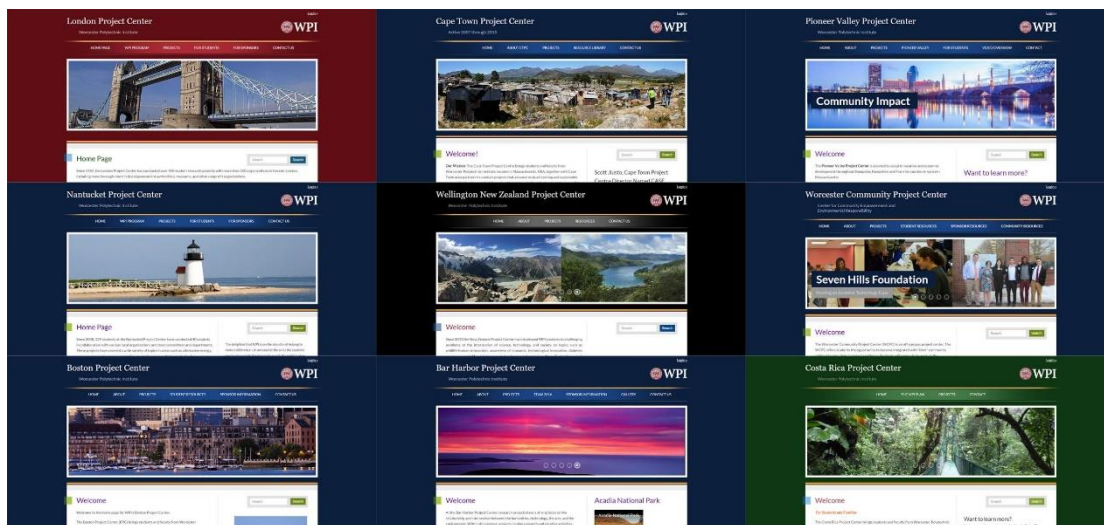

Figure 4: WPI Project Center Website Templates

The template shown above focuses on marketing the center to WPI students rather than potential sponsors. The CPC wants sponsors to know about its connections to WPI and the focus of its projects in accessibility, education, sustainability, and transportation. Even though we have the opportunity to use WPI's basic format, it would restrict our ability to create a brand for the CPC. Therefore, we need a separate website design that focuses on sponsors.

An essential part in effectively developing a website is establishing the desired content and layout. One of the fasted and most effective ways to begin designing a website is to create a wireframe. *The Oxford English Dictionary* defines a wireframe as, "An image or set of images which displays the functional elements of a website or page, typically used for planning a site's structure and functionality." An example of a wireframed website can be seen below in Figure 5 [*Wireframe Examples and Templates*].
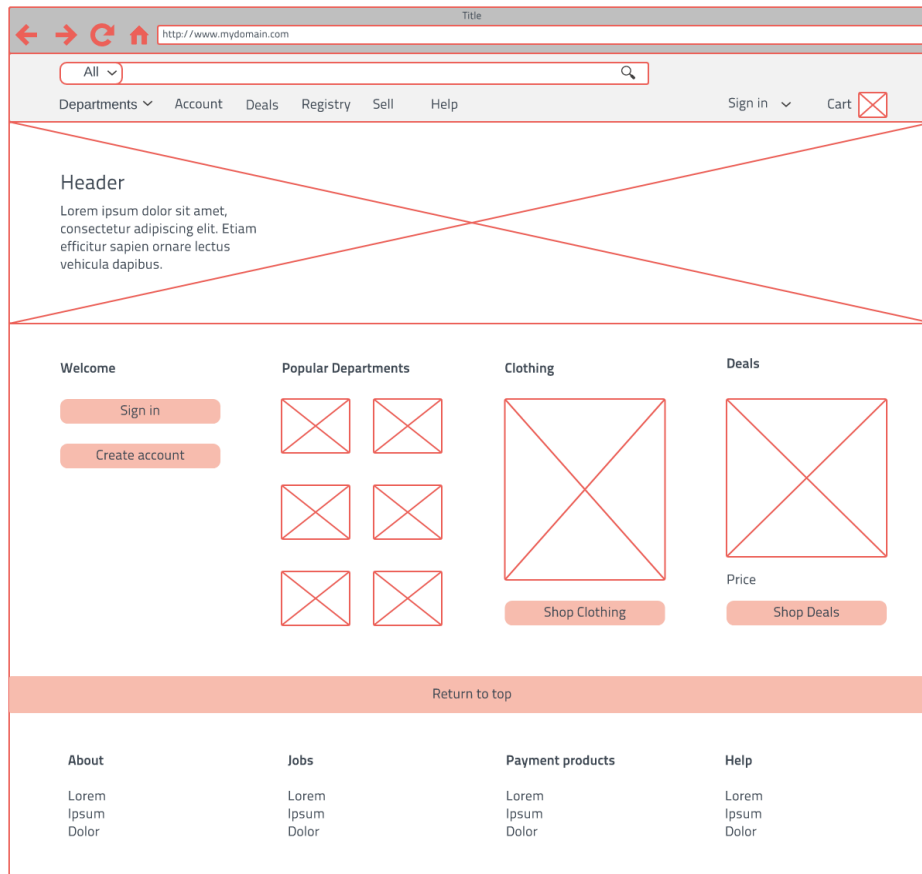

Figure 5: Example of Website Wireframe [Wireframe Examples and Templates]

3.1 DESIGNING THE WEBSITE

We began our website design process by adapting a version of the "sprint week" from the book *Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days*. This book outlines a step by step process on how to quickly and efficiently prototype different ideas [*Knapp, 2016*].

We used the book's wireframe technique to create several potential website layouts. First, we created a list of primary attributes that we felt our website absolutely needed. Next, we made a list of secondary attributes that contained some optional features. The list of primary and secondary attributes can be found in Appendix C.

After coming up with these two lists, we each folded a piece of paper to create eight boxes to work in. Within these boxes we individually came up with potential website layouts based on the two types of attributes. We created these layouts in a very rapid fashion, setting a timer for 15 minutes to complete the eight squares. See Figure 6 for an example of one of the sheets we created. Once everyone had completed their respective squares, we took turns explaining our boxes and the reasons behind their attributes and layouts. Then, we each marked specific attributes we liked on the various layouts with stars, rotating each paper so that everyone could review each one, including their own.
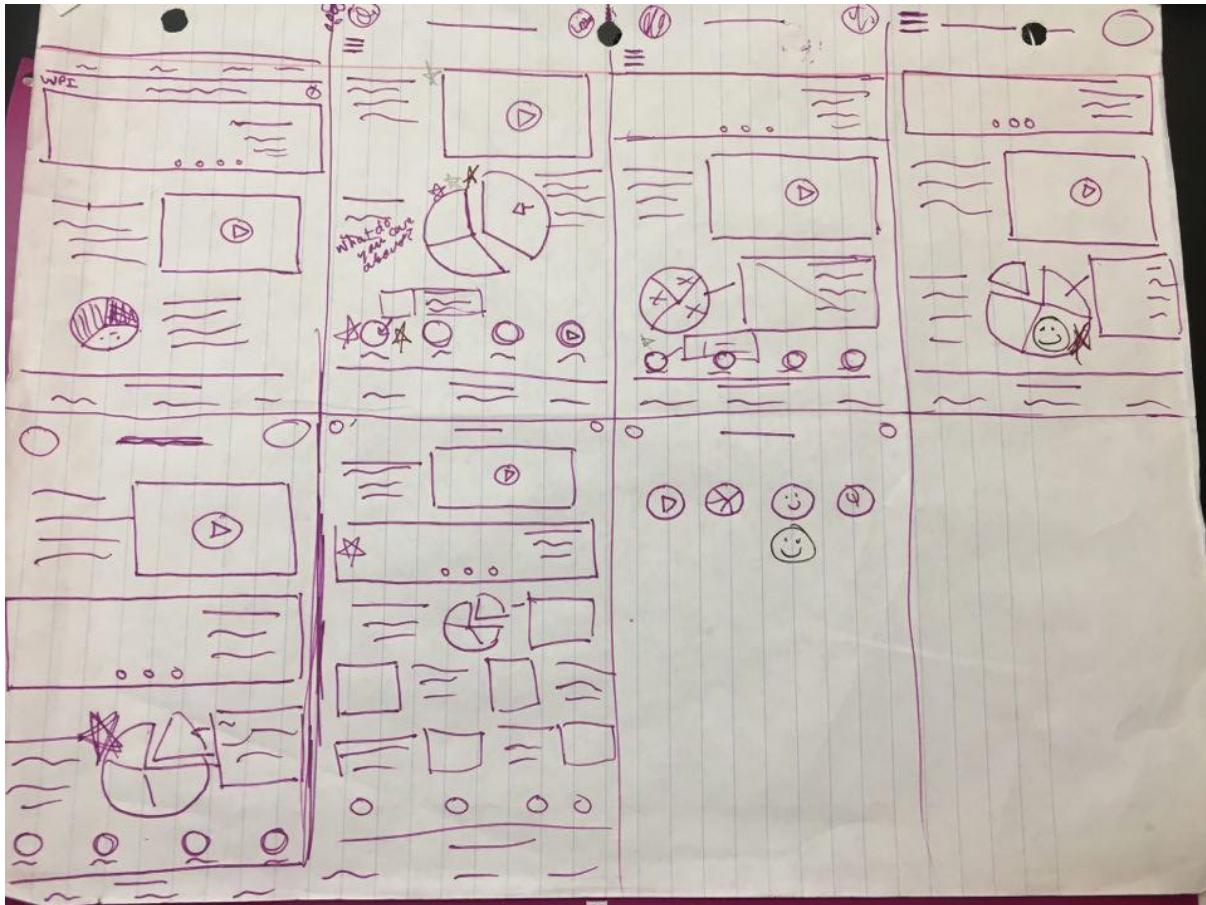
Figure 6: CPC Website Wireframe Sketch

Once we finished reviewing the designs individually, we listed the attributes that had the most stars from each of our papers. We discussed the common themes in attributes that we favored and created a list of primary components and attributes to focus on integrating into our website design. This process prepared us for our next step in determining what components and attributes we planned on using in our website.

To make our website fit in with Danish aesthetics, we compiled a list of Danish websites to analyze (Appendix D). To analyze these websites, we used a similar process to our own wireframe review – individually creating a list of attributes and components that we liked and disliked about each site and discussing our opinions. Using our individual reviews, we combined our comments on a whiteboard, creating a separate section for each website we discussed. Within each of the individual website sections, we voted on what we found to be most important for both the "like" and "dislike" columns. An image of the whiteboard setup is shown below in Figure 7.
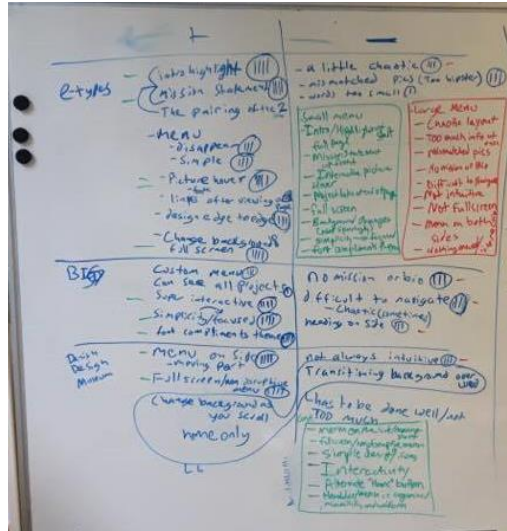
Figure 7: Website Likes and Dislikes

After discussing each website, we created a summary of all of the major components and attributes that we liked and disliked. We combined our comments from this chart with the one we made the day prior regarding our own wireframe ideas. Using both sources allowed us to combine our comments into one list of website components and attributes that encompassed both what we find favorable in websites and what the Danes find favorable in a website. Using this list, we worked to create a website that appeals to both parties, representing both WPI and Copenhagen.

3.2 BUILDING THE WEBSITE

Once we completed our research regarding available website building platforms, we initially used Dreamweaver, an Adobe web development software with a heavy emphasis on manual coding. We learned the essential programing languages of websites, HTML and CSS. After further consideration about the updatability of the site, we realized that Dreamweaver was not the right option for our sponsor. Once we came to this conclusion, we explored alternate options.

When assessing alternate options, we found that *WordPress Business* includes all the features necessary for us to create the website. The Illdy template satisfied our needs, so we uploaded it to WordPress to begin creating our website. The uploaded template contained all of the basic features we wanted, minimizing the work required to customize and fit it to our design and layout preferences. To achieve this customization, we primarily used WordPress plugins and widgets along with minimal coding in HTML and CSS.

We designed our website with two major factors in mind. First, we considered the flexibility of the template. Second, we considered the Danish design attributes discussed in the planning stages of the website (Appendix D). Including the following pages in our website best accounted for these two factors:

- Home
- About
- Projects
- FAQ (Frequently Asked Questions)

The four pages are included in Appendix M. We chose WPI red as the main accent color for the entire website because of the close relation of the site to the school. At the top of every page is the header, which includes the WPI logo to the left and a navigation menu on the right with a white background to satisfy the WPI logo usage requirements [*Worcester Polytechnic Institute, 2013*]. In the footer of the website we included the WPI logo which, when clicked, leads to the WPI home page. Also in the footer is another navigation menu that allows users to navigate the website from the bottom of the page as well.

The Home Page has the most varied content, therefore requiring the largest amount of work and design choices. Because Danish websites frequently use a minimalistic design with a white background, our website incorporates these design attributes. The top of the site features our tagline, "American Students Assisting Danish Organizations/ WPI's Copenhagen Project Center/ Social Solutions with Technical Precision."

A Project Highlights carousel also appears on the Home Page, located just below the tagline so that it is visible upon opening the site without scrolling. The images in the carousel illustrate the work done through the highlighted projects, attracting the attention of the user. Clicking the magnifying glass on the carousel opens a popup window. This popup window includes the project sponsor, title, and abstract highlighting the impacts of the project. Additionally, a "Learn more here" link that leads to the WPI Title Page for the project appears in each popup. The WPI Title Page (Figure 8) includes more information, the project report, and any other files related to the project. When applicable, the popup also includes a link to a highlight video.

Figure 8: WPI Project Title Page

Below the project highlights carousel, we added a counter showing the years since the founding of the CPC, the number of different sponsors, and the number of projects completed. The information included in this counter adds credibility to the CPC. We placed the promotional video next on the page, followed by a visual showing typical project topics (see Figure 9). These topics provide potential sponsors with a better understanding of the work the CPC does with organizations.
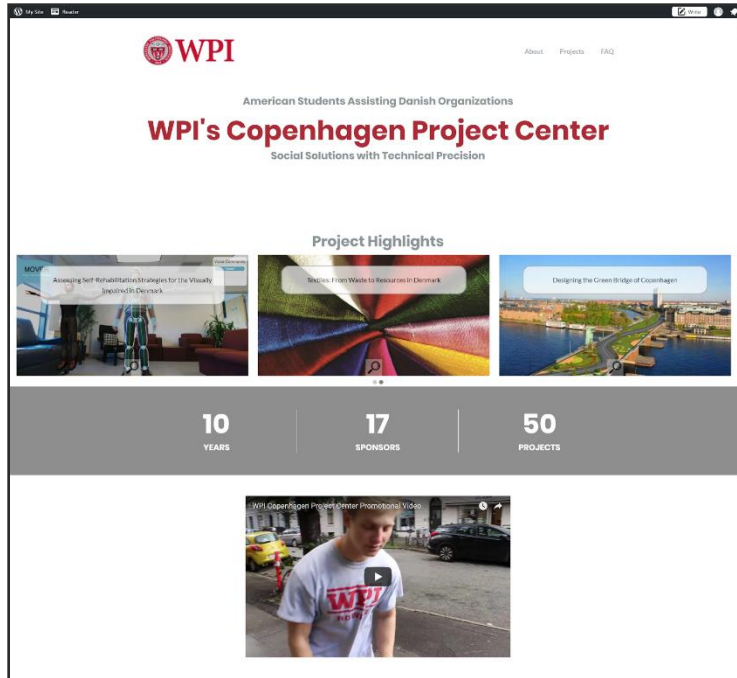
Figure 9: Home Page

A section at the bottom of the page titled "Contact Our Local Liaison," includes a picture of Mr. Ohm, a brief biography, and clickable text that reads "Send Email." When the user clicks this, it will open an email draft that is addressed to Mr. Ohm with the subject line "Inquiry about the CPC."

The About Page focuses on three titles "What we do," "How we work," and "Who we are." Many Danish websites use this form of statement titles to convey what they stand for. Under the statement titles there is a combination of text, images, and videos that provides a clear idea of the CPC's work and values.

The Projects Page includes a visual representation, created in Tableau, of the projects completed by the CPC. Below the project database is a guide describing how to use it. This guide includes sections explaining filters, types, topics, subtopics, and resetting the project database.

The FAQ Page includes seven questions that alternate left and right with keywords highlighted in red (see Figure 10). This scattering and highlighting will keep the reader engaged. The questions open when clicked upon, so users can focus only on the questions that interest them. When the questions open up they feature either an infographic or video along with an answer in text. We included the visual component of these answers as another way to increase user engagement.
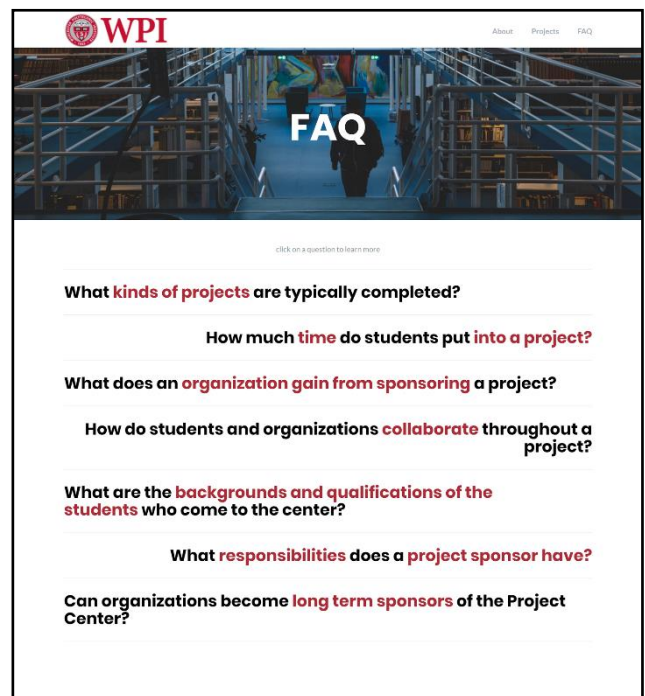
Figure 10: FAQ Page

4. PROJECT DATABASE

A critical component of our website has been the development of an interactive project database that shows sponsors the types of projects completed at the CPC. When developing this database design, we were heavily influenced by the customizable project viewing that the Bjarke Ingels Group website (big.dk) currently uses. A key to holding a user's interest is the ability to filter projects through purposeful categories. Including interactive filters in our own database will hopefully lead to sponsors taking the time to explore the variety of projects completed by the CPC. Knowing about these past projects will bring to light the multitude of possible projects that could be completed in the future.

Students have worked in London and Melbourne to create project center websites that include project center databases of some sort. In the Melbourne site, the user can view projects based on sponsor, year, or theme. The London site organizes the projects by year only. Our project database will include categorization capabilities similar to the Melbourne site, with the added ability to filter by multiple categories at one time.

4.1 DESIGNING THE PROJECT DATABASE

Our website requires a place where sponsors can view all of the projects completed at the CPC in an easy and interactive way. In order to create this database, we compiled information about past projects in one document. We then worked to categorize the projects into topics, subtopics, and types. Using this document, we created an interactive infographic for sponsors to use, showing the evolution of the projects completed at the CPC.

The WPI Gordon Library has a database of all the projects completed from approximately 1999 to the present. Using the project information from the WPI database, we compiled a list of the past IQP projects. The list includes each project's name, the dates the students were away, the sponsor's name/company, the students involved, and a link to a .pdf version of the final report if available. This database provided the foundation to assessing the impact of past CPC projects.

When the idea of categorizing projects first arose during our preparatory term, we based our categories on information provided by Professor Taylor. He explained in an interview that most of the projects completed at the CPC deal with Sustainability, Accessibility, and Design [*S. Taylor, personal communication, August 25, 2017*]. After arriving in Copenhagen, we created a Google Sheet with information about every project available that students completed at the CPC. This Sheet includes columns for Project Title, a link to the E-Project or project report (depending on how recently the project was completed), Sponsor, Year Submitted, Students, Advisors, and Division. Division describes the topic of the project based on some general categories provided by WPI. Although we could use these categories to filter the projects, they would not provide the same precision and accuracy as creating our own categories.

To begin the process of creating our filters, we reviewed the project titles and divisions and came up with three categories: Accessibility, Education, and Sustainability. After establishing these categories, each member of our team looked deeper into the projects, either placing each into one or more categories or indicating that it did not fit. We established a new Transportation category after this process. We then placed each project and met with Mr. Ohm and Professor Taylor to discuss them.

Mr. Ohm and Professor Taylor felt that our categories provided a good start for organizing the projects; however, they felt that the type of work completed by students also deserved mention. In order to accomplish this, we sorted the projects using the same method as previously described and placed them in one of three categories: Building and Creation, Design and Modeling, and Research and Policy Recommendation. The addition of work-type filters creates a multi-dimensional categorization system.

When discussing our categories with our advisors, they felt that the topic categories we created did not provide the level of specificity required to be effective. Because of this, we created subtopics for our projects. After looking through the projects multiple times, we created the subcategories listed below for each topic aside from Accessibility. If a project didn't fit into any specific subtopic, we labeled it as "Topic"-Other.

- Education
  - Company Research
  - Museum
  - Public Education
  - Student Education
- Sustainability
  - Energy
  - Green Space
  - Traffic
  - Waste
- Transportation
  - Automobile
  - Bicycle
  - Public Transportation

4.2 CREATING THE PROJECT DATABASE

To convey the information provided by the multidimensional categories of the project database, we created a shape graph. The placement of the shape on the y-axis indicates the year of project completion, the x-axis indicates the topic of the project, the color of the shape indicates the subtopic of the project, and the shape of the project indicates the type of work done. When the mouse hovers over a shape, information about the project appears in a toolbar. This information includes Project Title, Sponsor, Topic, Subtopic, Type, and Year completed. When a user clicks on a shape, an option to View Project Report appears. This option links to the WPI project report which opens in a new tab. This graph appears in Figure 11. For explicit instructions outlining how we created this graph and how to update it, see Appendix E.
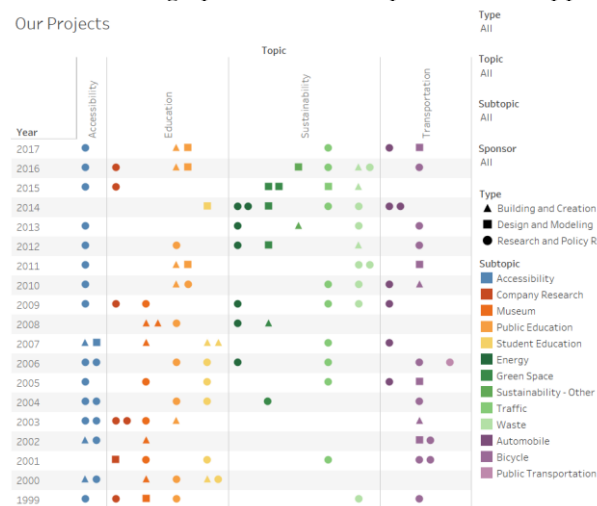

Figure 11: Project Database

5. VIDEOS

One of the ways to communicate content on a website effectively is through the production of videos. Programmed media creates an interactive method to inform an audience and showcase viable evidence regarding the impact of the CPC. By producing several different short videos, our website communicates what kind of impact the CPC has had on its sponsoring organizations through the use of recorded testimonials from past sponsors. This website includes four video types:

- A Promotional Video
- A Student Highlight Video
- A Project Highlights Video
- Frequently Asked Question Videos

In his book *Directing the Story,* Francis Glebas describes storyboarding as, "a tool for the visual planning of a movie. It is the rewriting of a written script into a visual plan… Storyboarding is the first pass at directing and editing a film. It's the most important step and should be created before one frame of film is shot" [*Glebas, 2012, p.7*]. Storyboarding involves deciding the goal of a video and organizing it in an order that accomplishes this. In the storyboarding process, decisions like transitions, music, and the order of content are made. This makes the filming process easier by providing a plan for what footage needs to be shot before starting.

A study done by MIT and edX provides us with several guidelines regarding the creation of engaging videos. In this study, experiments measured the level of student engagement during educational videos. The findings showed that shorter videos of less than six minutes in length that include a mix of close-up videos of a person's face while he/she talks and interactive elements kept the audience's attention the best [*Guo, 2014*].

Because of our focus on selling to the Danish population, successful advertisement approaches from Denmark largely influenced our campaign. When creating the videos that appear on the website, we considered what kind of videos created in Denmark succeeded as advertisements and held the audience's attention. Several recent popular Danish commercials are longer than typical American commercials. Advertisements for Midttrafik exemplify this, lasting almost one and one-half minutes as opposed to the concise advertisements produced in America. Commercials in America have followed a thirty-second standard for many years and have become shorter as time has passed [*Elliot, 2005*]. The length of Midttrafik commercials allows for a more cinematic feeling. They advertise taking the bus through a humorous production. Dramatic music and a low raspy voice set an intense tone as the commercial illustrates the wonders of taking the bus [*M2FilmProduction, 2012*].

All That We Share, a TV2 commercial from Denmark, gained popularity through social media internationally. It focuses on Denmark's accepting culture and shares the same cinematic approach to production as the Midttrafik advertisements. Again, music plays in the background of the commercial and dramatic narration accompanies powerful images [*TV2Danmark, 2017*]. Although this advertisement has a much more serious tone than those of Midttrafik, both work to move the viewer in some way.

5.1 PLANNING INTERVIEWS

As a part of our marketing materials and research, we conducted interviews with past project sponsors. These interviews provided us with material to include in our promotional, project highlights, and FAQ videos, while giving us a better understanding of the sponsor's perspective in the project process. To prepare for the interviews we followed the three steps outlined in the book *Interview Techniques for UX Practitioners* which are as follows:

1. Identify the goals or research focus of the interview
2. Develop a list of general questions to ask during the interview
3. Develop a guide with the general questions and basic script for the interview [*Wilson, 2013*].

Using these methods, we structured our interviews to focus on the IQP experience for sponsors working alongside WPI students. Asking open ended questions encouraged interviewees to share experiences about past projects in a less structured manner. Footage of these stories worked well as material for our videos. Finally, we developed our interview guide, shown in Figure 12, which we reviewed in preparation to each interview. We followed this same procedure before interviewing all other sources including students, Professor Taylor, and the CPC founders. The questions used for each respective interview can be found in Appendices F, G, and H. The consent script read to all interviewees prior to their interview can be found in Appendix I.

Activity	Details	Time
Introduction	Explain the project and have participant sign the consent script. Set up camera and find a good location to shoot	10 min
Semi-Structured interview questions	See interview questions	30-40 min
Off script question for both interviewer and interviewee	Ask if they have any questions. Ask for recommendations or opinions on our project deliverables	10 min
Closing comments and saying good bye		5 min

Figure 12: Interview Guide

We conducted semi-standardized interviews, which are interviews with flexible levels of language and an undefined order of the questions [*Berg and Lune, 2017, p. 59*]. We took notes while recording the interview and, if the interviewee consented, recorded video and audio to later quote in our materials or incorporate into our videos. Data collection during interviews was important because it preserved the information gathered during the interview process.

Before leaving for Copenhagen, we interviewed both founders of the Copenhagen Project Center, Professor Peder Pedersen, and Mr. Tom Thomsen. Appendix H lists the questions of these interviews. These interviews provided a concrete foundation for our team regarding the history of the CPC.

We held interviews with Professor Taylor, the project center director, at WPI and in Copenhagen. His initial, informal interviews at WPI allowed us to gain a better understanding of what deliverables would help most in recruiting more sponsors. We based these conversations on the questions in Appendix J. During these interviews we recorded detailed minutes, the content of which influenced the planning of our project. After arriving in Copenhagen, we interviewed Professor Taylor again with more structured questions. The questions used are located in Appendix G.

Once we arrived at the Copenhagen Project Center, we began to reach out to past sponsors. Initially, we contacted sponsors who had been involved in the most projects. Later, we received a list of recommended sponsors to contact from Professor Taylor and supplemented our previous list with this new information. We first contacted all of them by email, and followed up with a phone call if necessary. Once we heard back from a sponsor we scheduled meeting times for in-person interviews as close to the beginning of the term as possible. Overall, we interviewed a total of seven past and present sponsors. The sponsors interviewed are listed below:

- John D. Heilbrunn, Danish Association for the Blind
- Jacob Hartvig Simonsen, Danish Waste Association
- Frederik van Deurs, Green Tech Challenge
- Claus Knudsen, Miljøpunkt Amager
- Marianne Spang Bech, Miljøpunkt Indre By
- Ove Larsen, Miljøpunkt Nørrebro
- Martin Salamon, Danish Consumer Council

These interviews gave us the materials necessary to describe the CPC and its projects to potential sponsors. The questions asked address the experiences of these individuals with the CPC. They focus on the impacts of projects on their sponsors and the Danish community (see Appendix K for interview questions).

Through analysis, interviews, and audio and video documentation of the IQP process, we gained a better understanding of the history of the CPC and its impact on students, sponsors, and the Danish community. This enabled us to create an effective marketing campaign that will help WPI attract more sponsors.

We highlighted the past projects that sponsors stressed most during our interviews, creating a list of six projects that have impacted the Danish community. Our website highlights these projects to provide a more in-depth look at the variety of work the CPC has done over the years. These highlights show the long and short-term impacts of each project on the Danish community.

5.2 PRODUCING VIDEOS

To start, we made a storyboard of each short video to give us a better idea of the kinds of footage we would need, as well as illustrate the purpose of each video. In each storyboard, we planned the order of the scenes, the transitions between the footage, the content of each scene, and any background music as seen in Figure 13.
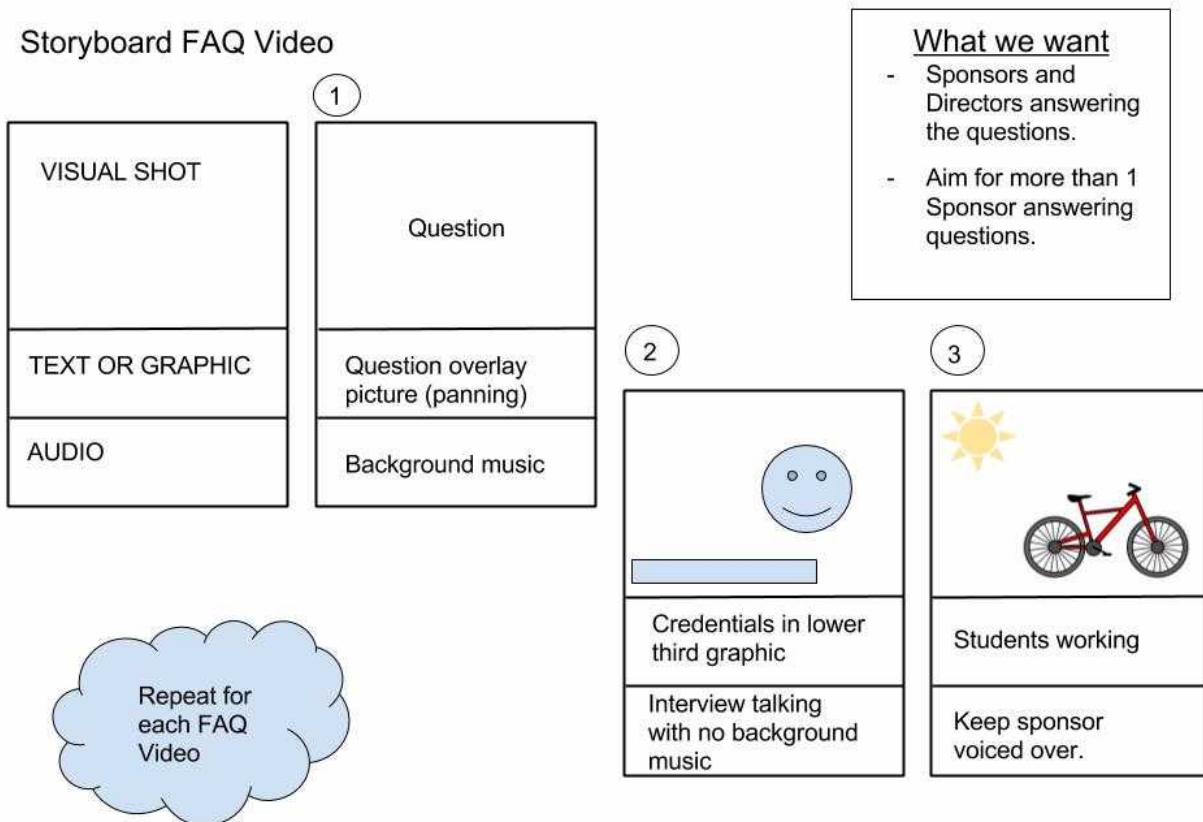

Figure 13: FAQ Video Storyboard

We produced and implemented five videos throughout the website. The videos are as follows:

- The Promotional Video - included on the Home Page
- The FAQ Video that answers the question: What are the backgrounds and qualifications of the students who come to the center?
- The FAQ Video that answers the question: Can organizations become long term sponsors of the Project Center?
- The Project Highlight Video that analyzes the effect of the project: "Raising Awareness on the Internet of Green Things"

Other websites with similar goals to our own include a promotional video on the front page. In our website, this video should accurately and concisely portray the values and missions of the CPC. This video is short and enticing to capture the attention of potential sponsors while giving them an overview of what the CPC stands for. It also includes footage of students working, snippets of students' projects, and encouraging quotes from past sponsors.

A short FAQ video addressing each question conveys the information in a concise manner. Parts of the interviews with students and past and current sponsors address a variety of the questions that potential sponsors might have. Using answers from sponsors and students provides a more interactive method to answering common questions and adds credibility to the answers.

The Student Highlight video educates potential sponsors about the IQP process by showing how the students interact with sponsors. We asked available students to explain their project and how they interacted with their respective sponsors. We created a list of questions for the student that can be seen in Appendix F. This video gives a brief overview of the work students put into a project.

To highlight the impact of past projects on the CPC, a video of the highlighted project, Raising Awareness on the Internet of Green Things, appears on the Home Page of the website in the highlighted projects carousel. The video not only displays impact, but lets future sponsors know that the projects completed have real effects on Copenhagen.

6. PRESENTATION

The presentation should facilitate Mr. Ohm's conversations with potential sponsors by illustrating the IQP process, sponsor responsibilities, typical projects of the center, and the benefits to sponsors. Using visual components explained with minimal text, we aim to convince potential sponsoring organizations that the CPC has a lot to offer.

Because this presentation markets the CPC to potential sponsors, a personal and engaging approach works best. To engage the audience, the slides convey most of their information through infographics. To create effective slides, we used the following guidelines outlined in Lankow's book, *The Power of Visual Storytelling* (*2012*):

1. Diversify Your Visual Repertoire
2. Minimize Slide Contents
3. Use Color Sparingly
4. Keep it Cohesive [*p. 176-177*].

6.1 PRESENTATION DESIGN

We focused on the guidelines above when creating the infographics used in our slides. To diversify our visual repertoire, we used several different types of images. These included pie charts, bubbles to highlight points, and maps. To minimize slide contents, we keep the text on slides minimal, using the graphics to communicate most of the information. Our color scheme only included two to three colors per slide. We used these colors to categorize elements on the slides. To keep the slides cohesive, we used similar layouts in our infographics to communicate different information. Additionally, we kept a consistent color scheme and font throughout our slides.

To create our presentation, we focused on topics Mr. Ohm should stress in his talks with sponsors. The presentation is organized in the following order:

1. An explanation of the WPI project program and describes the social implications aspect of IQPs that make them unique (Figure 14).

Figure 14: The Purpose of IQP

2. A brief overview of the history of the CPC, building the center's credibility through statistics (Figure 15).
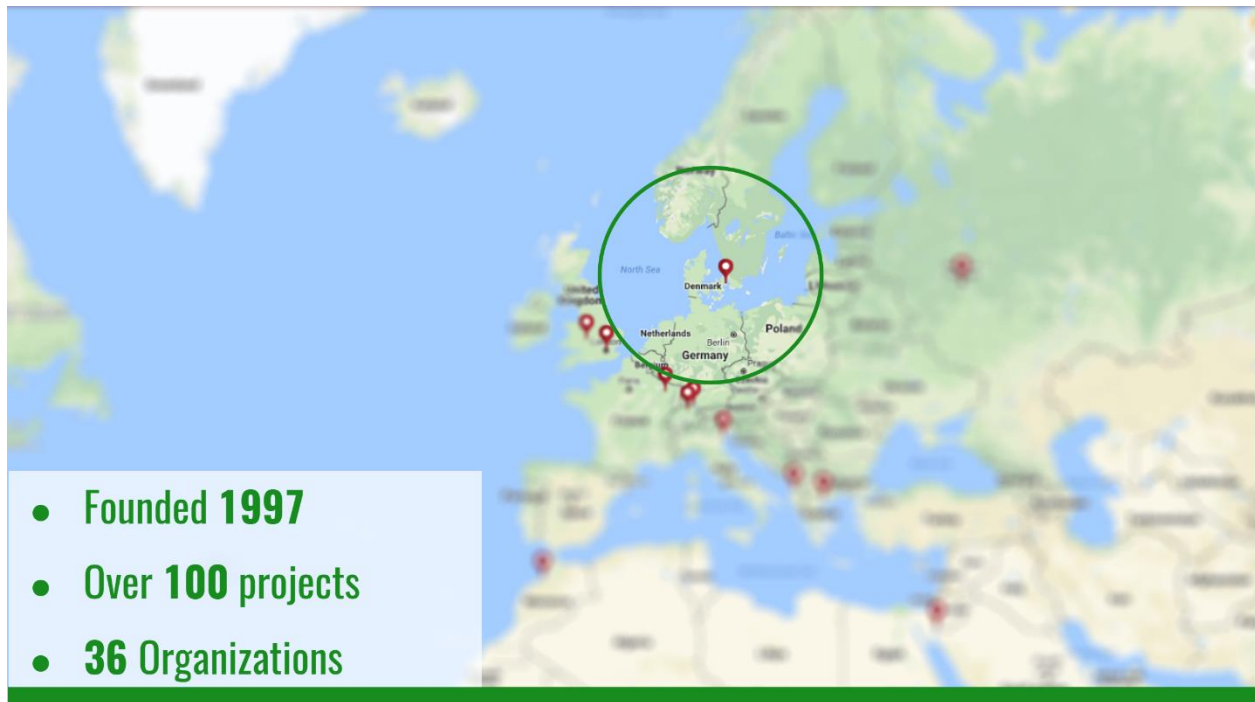

Figure 15: Information about the Copenhagen Project Center

3. Examples of different kinds of projects completed at the CPC. This section covers each topic, sub-topic, and type of project completed at the center and includes several examples of past projects, ending with an image of the infographic showing the variety of projects completed at the CPC (Figure 16).
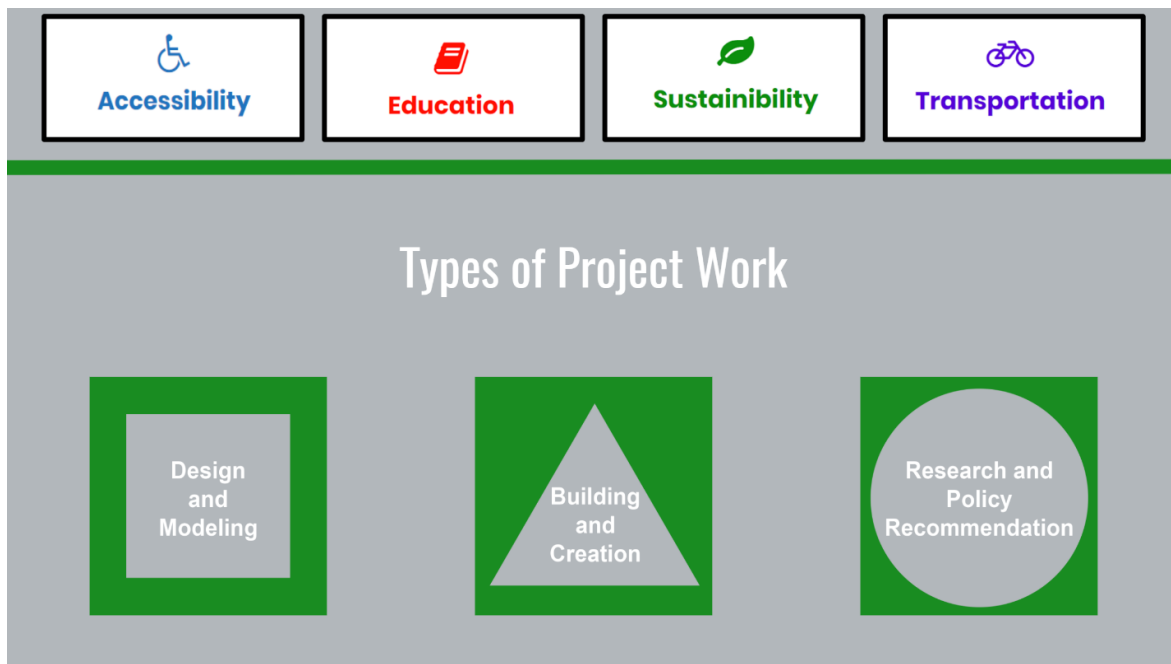

Figure 16: Topics and Types of Project Work

4. The responsibilities of sponsoring a project. This section includes a timeline of the project process for both the Spring and Fall (Figure 17).

Sponsor Requirements

Spring		Fall

Before Preparatory Term	Preparatory Term	Project Term
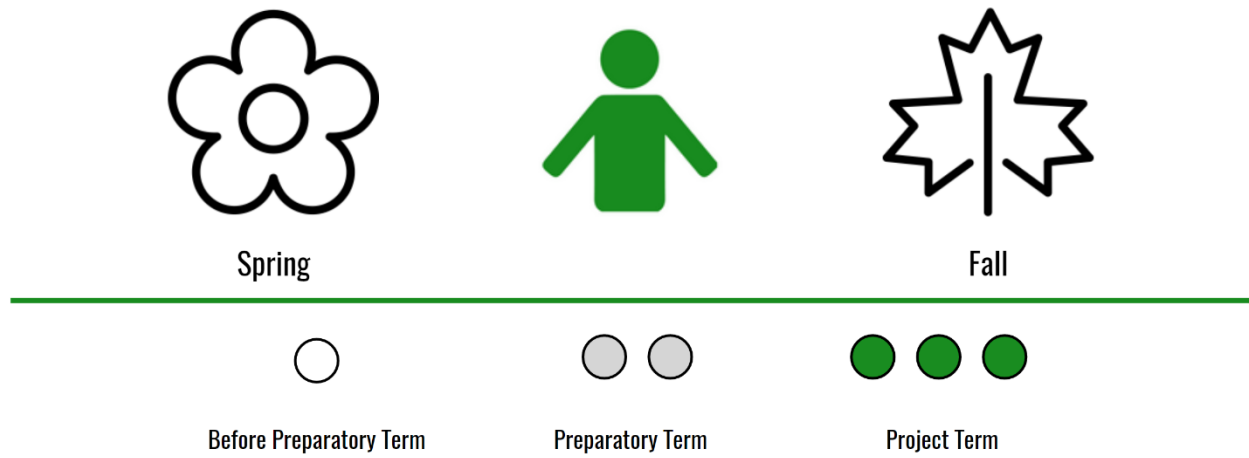
Figure 17: Sponsor Requirements

5. The final slide of the presentation includes Mr. Ohm's contact information and a link to our website.

7. CONCLUSION

The "More in Four" initiative, created by WPI President Laurie Leshin, states that WPI plans to have 90% of its students complete an IQP off campus by 2022. In 2017, project director Steven Taylor opened the Copenhagen Project Center (CPC) for an additional term to help promote this initiative. With this added term, the project center director needed to find more sponsors in order to produce the required number of projects. Due to Denmark's small social networks and location, finding sponsors has become more difficult. Therefore, the CPC needed a new method for recruiting sponsors. This lead to Professor Taylor appointing Mr. Carsten Ohm, a local Dane, as the CPC's Local Liaison. Furthermore, additional outreach to potential sponsors was essential.

The goal of our project was to develop promotional and informational multimedia tools that enabled WPI to market the Copenhagen Project Center more effectively to potential sponsors in the Danish community. We created an interactive digital presence composed of several deliverables that were integrated into our multimedia platform. These deliverables included a project center website, a past project database, several short videos, and a presentation for the CPC's Local Liaison Mr. Ohm. We created a handbook, located in Appendix L, to go along with these deliverables that details how to keep all aspects of the website and database up to date for current and future project center directors.

BIBLIOGRAPHY

Amlot, Matthew. "Digital Marketing VS. Traditional Marketing." *CPI Financial*, 19 Jan. 2014, http://www.cpifinancial.net/news/post/25056/digital-marketing-vs-traditional-marketing. Accessed 4 April 2017.

Arthur, M. B., DeFillippi, R. J., & Jones, C. (2001). Project-based learning as the interplay of career and company non-financial capital. *Management Learning, 32*(1), 99-117. doi:10.1177/1350507601321007.

Bayliss, D. (2007). The Rise of the Creative City: Culture and Creativity in Copenhagen. *European Planning Studies, 15*(7), 889-903. doi:10.1080/09654310701356183.

Belkin, Douglas. (2016, Sep 28,). Where great research meets great teaching; at many schools, professors focus on one or the other. but only a handful do both very well. *Wall Street Journal (Online)* Retrieved from http://search.proquest.com/docview/1823658661.

Berg, B. L., & Lune, H. (2017). Qualitative research methods for the social sciences. In A. Dodge, S. Mukherjee, & B. Sen (Eds.), (9. ed., Pearson new international ed., pp. 55-83). Harlow: Pearson Education Limited.

Boston Project Center. Retrieved from http://wp.wpi.edu/boston/.

Cape Town Project Center. Retrieved from wp.wpi.edu/capetown/.

Costa Rica Project Center. Retrieved from wp.wpi.edu/costarica/.

David, J. (2008). Teaching Students to Think.

Durgin, W. W., & Zwiep, D. N. (2001). Global projects prepare WPI students for the 21st century. In D. Weichert, B. Rauhut & R. Schmidt (Eds.), *Educating the engineer for the 21st century: Proceedings of the 3rd workshop on global engineering education* (pp. 307-313). Dordrecht: Springer Netherlands. doi:10.1007/0-306-48394-7_35.

Elliott, S. (2005). TV commercials adjust to a shorter attention span. Retrieved from https://www.nytimes.com/2005/04/08/business/media/tv-commercials-adjust-to-a-shorter-attention-span.html.

Elliott, S. (2006, OCT. 9,). Letting consumers control marketing: Priceless. Retrieved from https://www.nytimes.com/2006/10/09/business/media/09adcol.html.

Glebas, F.,(2012) Directing the Story: Professional Storytelling and Storyboarding Techniques for Live Action and Animation. Burlington, MA: *Taylor & Francis*. Retrieved from: https://books.google.dk/books?hl=en&lr=&id=mJLWi1LgtGkC&oi=fnd&pg=PR1&dq=storyboarding+techniques&ots=eh8WqRnTCG&sig=u1Uuuigtde5esaQfGu1uUbrBVtA&redir_esc=y#v=onepage&q=storyboarding%20techniques&f=false.

Global project program. Retrieved from https://www.wpi.edu/academics/undergraduate/project-based-learning/global-project-program.

Gordon library project database. Retrieved from http://gordonlibrary.wpi.edu/vwebv/search?searchArg=Denmark&searchCode=GKEY%5E*&limitTo=LOCA%3DPROJECTS+%28ALL+LOCATIONS%29&recCount=10&searchType=1&page.search.search.button=Search.

Guo, P. J., Kim, J., & Rubin, R. (2014). How video production affects student engagement: An empirical study of MOOC videos. Paper presented at the 41–50. doi:10.1145/2556325.2566239

Hautz, J., Füller, J., Hutter, K., & Thürridl, C. (2014). Let users generate your video ads? the impact of video source and quality on consumers' perceptions and intended behaviors. *Journal of Interactive Marketing, 28*(1), 1-15. doi://dx.doi.org/10.1016/j.intmar.2013.06.003.

INNOVATION (The Idea). *Changemaker challenge rubric (round 1)*.

Interactive Qualifying Project. Retrieved from https://www.wpi.edu/academics/undergraduate/project-based-learning/interactive-qualifying-project.

IPENZ. (2010). National engineering education plan. Retrieved from http://www.engineeringe2e.org.nz/Documents/NEEP-Report.pdf.

Kirk, K., Ractham, P., & Abrahams, A. (2016). Website development by nonprofit organizations in an emerging market: A case study of thai websites. *International Journal of Nonprofit and Voluntary Sector MArketing,* Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/nvsm.1557/full.

Knapp Jake. (2016). *Sprint: How to solve big problems and test new ideas in just five days.*

Kotler, P. (1979). Strategies for introducing marketing into nonprofit organizations. *Journal of Marketing, 43*(1), 37-44. doi:10.2307/1250756.

Lankow, J., Crooks, R., & Ritchie, J. (2012). *Infographics : the power of visual storytelling.* Retrieved from https://ebookcentral-proquest-com.ezproxy.wpi.edu.

Leinbach-Reyhle, N. (2014). 3 reasons websites are vital for small businesses. Retrieved from http://www.forbes.com/sites/nicoleleinbachreyhle/2014/09/29/websites-for-small-businesses/.

Leshin, L. (2015). Elevate impact: A strategic plan for WPI 2015-2018.

London Project Center. Retrieved from http://wp.wpi.edu/london/.

Lupton, E., & Phillips, J. C. (2008). *Graphic design : The new basics.* New York, US: Princeton Architectural Press. Retrieved from http://site.ebrary.com/lib/wpi/docDetail.action?docID=10343588&ppg=1.

M2FilmProduction (Producer). 2012, Aug. 30. *Midttrafik: The Bus [Official].* [Video File]. Retrieved from https://www.youtube.com/watch?v=N_Si6Jg=8-ds.

Most Popular Study Abroad Program. (n.d.). Retrieved March 01, 2017, from https://www.princetonreview.com/college-rankings?rankings=most-popular-study-abroadprogram.

Nantucket Project Center. Retrieved from http://wp.wpi.edu/nantucket/.

New Zealand Project Centers. Retrieved from http://wp.wpi.edu/newzealand/.

Oxford English Dictionary. www.oed.com. Accessed 9/28/2017.

Pioneer Valley Project Center. Retrieved from http://wp.wpi.edu/pioneervalley/.

Price, Lucy. The nørrebrogade project: Revitalizing a major road corridor for enhanced public transport and urban life.(April 2015) Retrieved from http://urbanleds.iclei.org/fileadmin/user_up-load/Resources/UrbanLEDS_case_story_Copenhagen_2015_Web.pdf.

Project Based Learning. Retrieved from https://www.wpi.edu/academics/undergraduate/project-based-learning.

Ruzza, M., Tiozzo, B., Mantovani, C., D'Este, F., & Ravarotto, L. (2017). Designing the information architecture of a complex website: A strategy based on news content and faceted classification. *International Journal of Information Management*, *37*(3), 166-176. Retrieved from: http://wpi.summon.serialssolutions.com/search?s.cmd=addFacetValueFilters(Library,WPI+Project+Reports)&s.pn=1#!/search?ho=t&fvf=Library,WPI%20Project%20Reports,f&l=en&q=Denmark&sort=PublicationDate:asc.

Shekar, A. (2014). *Project-based learning in engineering design education: Sharing best practices.*

The Two Towers Tradition. Retrieved from https://web.wpi.edu/academics/library/collections/two-towers.html.

TV2Danmark (Producer). 2017, Jan. 27. *TV 2 | All That We Share.* [Video File]. Retrieved from https://www.youtube.com/watch?v=jD8tjhVO1Tc.

Venice Project Center. Retrieved from http://veniceprojectcenter.org/.

Wilson, C. (2014) Interview Techniques for UX Practitioners: A User-Centered Design Method. 225 Wyman Street, Waltham, MA 02451, USA : Elsevier. Retrieved from: http://proquest.safaribooksonline.com.ezproxy.wpi.edu/book/software-engineering-and-development/user-interface/9780124103931/chapter-2dot-semi-structured-interviews/st0050_chp002_html#X2ludGVybmFsX0h0bWxWaWV3P3htbGGlkPTk3ODAx-MjQxMDM5MzElMkZzdDAwNTBfY2hwMDAyX2h0bWwmcXVlcnk9.

Wireframe Examples and Templates. lucidchart.com . Retrieved from: https://www.lucidchart.com/pages/examples/wireframe.

Worcester Polytechnic Institute. (2013). *WPI Logo Usage: Quick Referance Guide* (1st ed.). Worcester, MA: WPI Marketing.

Worcester Project Center. Retrieved from http://wp.wpi.edu/wcpc/.

APPENDICES

APPENDIX A: LONDON AND MELBOURNE PROJECT CENTER WEBSITES
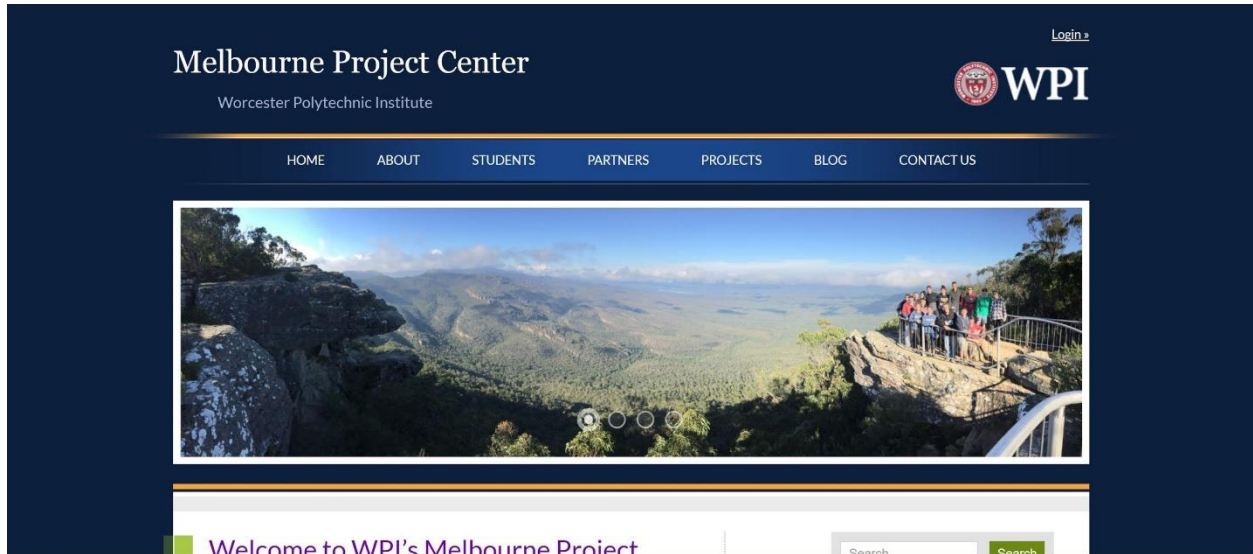
Melbourne Project Center Website
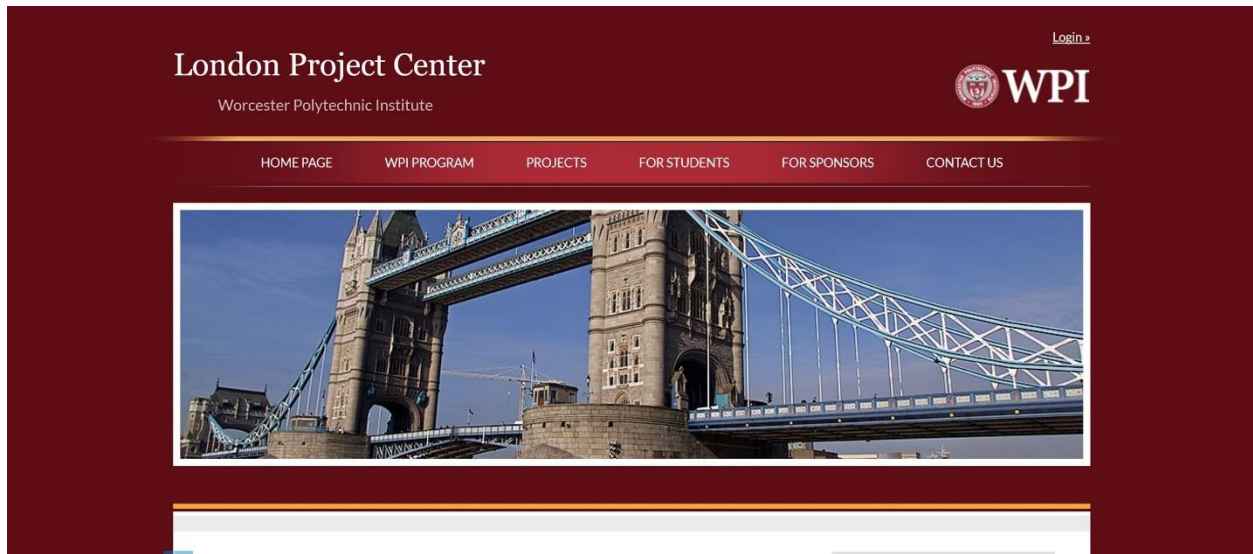
London Project Center Website

Sponsoring a Project with WPI

Broadly put the projects are interdisciplinary and involve applied research that connects science or technology with social issues and human needs. The projects are part of the student's' undergraduate education. For more information see:

https://www.wpi.edu/academics/igsd/iqp.html

The students will be working on projects in Copenhagen from Monday, 28 August through Friday 13 October. The students spend the seven week term prior to coming to Copenhagen creating a project proposal (March 13 – April 28).

The project sponsor's responsibilities include:

- providing a short (one-page) description of the project, prior to the start of the project (by the middle of February).
- Engaging in a couple of Skype conversations with the student team (consisting of 4 students) while they are preparing for the projects in the United States (this happens in the seven-week term prior to coming to Copenhagen).
- Providing workspace at your location for the students for the 7 weeks they are in Copenhagen
- Providing guidance, supervision, and support for the project for the 7 weeks they are in Copenhagen (which includes weekly meetings with the team and the faculty advisors and generally daily contact with the team - sponsors report that this is somewhere between 3 and 6 hours a week for them).

For more information or if you have questions, contact Steve Taylor – sst@wpi.edu (+45 71 56 89 58).

Projects cover a wide range of activities. For example, in 2015, projects included:

Assessing Traffic and Air Quality in Central Copenhagen.

Sponsored by Miljøpunkt Indre By, we assessed the traffic congestion and air quality in the city center of Copenhagen, Denmark. We conducted surveys with locals, interviewed experts, and conducted direct observations of the area. After analysis of the data, we evaluated the feasibility of a tunnel, explored possible alternative solutions, and offered recommendations for alleviating congestion and reducing air pollution. We found that while a tunnel would reduce air and noise pollution, it may not be effective in reducing traffic volume. Instead, we recommend discouraging car use and promoting public transportation by incorporating a light rail system, reducing lanes, implementing a park and ride system, and improving bicycle infrastructure.

Increasing Paper and Cardboard Collection for Recycling in Denmark.

In light of Denmark's goal of increasing municipal recycling rates to 50% by the year 2022, the purpose of this project was to assist the Danish Waste Association in increasing household paper and cardboard collection. To achieve our goal, we analyzed information collected from research, interviews, and on-site visits. By speaking with multinational stakeholders and some of the country's largest waste management companies, we found the impacts that

specific collection methods have on recycling, including the collection of mixed paper and cardboard, used beverage cartons, and contaminated cardboard. Finally, we developed three decision matrices which will aid municipalities in increasing their collection and recycling rates.

Assessing iBeacons as an Assistive Tool for Blind People in Denmark.

The blind community depends on sighted people for a significant amount of information and assistance. This project, sponsored by the Danish Association of the Blind, explored the ability of iBeacon technology to assist blind people while navigating indoors. Pilot testing discovered that the current iBeacon system, coupled with only the necessary Bluetooth technology, presents significant obstacles for use. Interviews with industry experts revealed that the weaknesses have been overcome internationally by blending Bluetooth with other technologies. We concluded that iBeacons have great potential as an assistive tool for blind people, but the system we tested needs significant improvements before we would advise implementing it in Denmark.

Green Space Design for Ågadeparken: a Pilot Project for Daylighting.

This project provided Miljøpunkt Nørrebro, a Danish environmental group, with designs for a stand-alone pilot project featuring a daylighted river and green space that addresses both stormwater and pollution concerns. This small pilot project is part of the larger vision of daylighting the Ladegårdsåen, which would lead to the creation of a city green strip and flood management highway tunnel. Public feedback and expert opinions, gathered through surveys, interviews, and a focus group led us to incorporate natural and multifunctional spaces into our green space design. We are confident that a successful pilot project will showcase the potential benefits of a larger scale green strip for the city of Copenhagen.

Improving Patient Safety in the European Union Through Medical Device Regulation.

Recent concern has arisen over multi-national medical device manufacturers using European patients as metaphorical guinea pigs for testing their devices before seeking approval in stricter regulatory environments. We worked with the Danish Consumer Council to recommend changes to European Union medical device regulation that should help improve patient safety without stifling innovation. We gathered public opinion regarding medical device safety through a survey, and conducted in-depth interviews with key stakeholders. Our end result is a set of proposed reforms to the current EU regulations, including increasing transparency and requiring more clinical trials. Our sponsor will use these recommendations in policy discussion to influence legislation that will increase patient safety.

Designing the Green Bridge of Copenhagen.

Air pollution is currently a problem for Copenhagen and, in a broader scale, has contributed to climate change. Langebro (Long Bridge) and the roads leading to it, are experiencing the worst of the city's pollution due to the heavy volume of traffic this area endures daily. To combat this problem, environmental organizations, including our sponsor Miljøpunkt Amager, have conceptualized a greater potential green strip for Copenhagen in the hopes of reducing traffic and naturally absorbing air pollutants from vehicles. Using interviews and street surveys, this project explored the balance between the city's political and public preferences for green spaces in order to create a surface design for, and web page to promote, the potential Langebro section of the larger green strip.

APPENDIX C: PRIMARY AND SECONDARY WEBSITE ATTRIBUTES

Primary Components
- Navigation tabs
- WPI logo
- CPC logo
- Title
- Intro video
- Contact info at footer
- Database

Secondary Components
- Project highlights
- Director pics
- Director bios
- Mission Statement
- Student info
- Contact us bar
- Project infographic
- Past project sponsor interviews
- About us blurb

APPENDIX D: ANALYZED DANISH WEBSITES

E-types: http://www.e-types.com/
- Mission message with photo appears when you enter site - good pairing
    - Parallax when you scroll down
- Menu - disappears and is simple
- Picture hover - others fade out
- Links to other projects at bottom of pages
- Designed edge to edge
- Change background to full screen views of images
- About page uses statement titles
- A little chaotic
- Mismatched pics
- Words too small

BIG: www.big.dk
- Customizable menu
- Potential for database page
    - Fullscreen
    - Changeable filters
- Interactivity
- Simplicity/focus in project pages
- Font compliments the theme
- Can see all the projects at once
- No mission statement/bio/easily findable about
- Difficult to navigate
    - Chaotic at times
- Side navigation

Danish design museum: https://designmuseum.dk/en/
- Menu on side with movement
    - Non-restrictive
- Fullscreen/non-disruptive menu
- Fading intro logo
- Changing background with scroll
    - Needs to be used with purpose.
        - Was overused on this site
- Not always intuitive

Ferdio: http://www.ferdio.com/da/home
- Intro animation
    - Simple but portrays mission statement well
- Menu compresses with scroll
- Video thumbnails

- Simplistic Design
- Simple Icons
- Links to projects at the end of pages
  - See more work
- About page uses statement titles
- Doesn't fit whole browser page
- Pics distract from text
  - Text too small
- Not full screen
- Intro button
  - Better to be able to click on the logo

Danish Furniture Design: http://www.dmk.dk/
- Good header
  - Logo and menu shrink back in
- Things becoming compact with scroll is good
- Carousel
- Consistent sizing - uniform
- Very organized
- We would want more variety in our own page
- Boring

The Royal Danish Academy of Fine Arts: http://www.kunstakademiet.dk/
- Color to convey theme
  - Background in menu sections
  - Filter while hovering over pics
- Burger menu X
- Shrinking header with scroll
- Menu is too big
- Disproportionate photos

Bad Sites:
Design Center: http://danskdesigncenter.dk/
- Subtle animations with mouse-overs
  - Could do something like YouTube does with our video links
- Double menu is gross
  - Inefficient use of space

Danish Real Estate: http://www.danishhomes.com/homes-for-rent
- Good tiny icons for contact info
- Nothing moved

Copenhagen university: http://www.ku.dk/
- Two menus

- Looks old

https://www.dexigner.com/directory/loc/Denmark/Firms https://www.apple.com/mac-pro

Pros	Cons
- Intro/HIghlight Start - Full Page - Mission Statement Upfront - Interactive picture hover - Project links at the bottom of page - Fullscreen - Background changes - Use sparingly - Simplicity - focused - Font Compliments Theme - Menu on the side with moving part - Fullscreen/nondisruptive menu - Simple design icons - Interactivity - Alternative "Home" button - Use logo as home - Header/menu is organized, minimalist, and uniform - About page uses statement titles	- Large menu - Chaotic layout - Too much info at once - Mismatched sizing of pics - No mission or bioSide - Difficult to navigate - Not intuitive - Not fullscreen - Menu on both sides - Nothing moved/no interactivity

Making a Project Database with Tableau

1. Creating a Spreadsheet

To create an effective Tableau report, you must first create a properly formatted spreadsheet. To facilitating updates for future, create a Google Form that links to a Google Sheet. In this sheet, each row contains the information about one project and each column contains information that will become available fields to work with in Tableau. The columns created for the Copenhagen Project Center include Project Title, Sponsor, Topic, Subtopic, Type, and Link. To create the spreadsheet, fill in the information for each project, making sure that spellings and spacings in words remain consistent. It is important to note that any project that fits into more than one category must be entered into the spreadsheet once per category. Tableau cannot handle having two values in one cell and will create a new category containing all values entered in the cell rather than recognizing that the project contains each value independently.

2. Syncing Data to Tableau

To create a free Tableau report, you must download Tableau Public and create an account there. Go to https://public.tableau.com/en-us/s/ and follow the steps to download. Open the Tableau Public desktop application to get started the download finishes.

To connect to your data, look at the options in the left Connect panel under To a Server. Select Google Sheets as your server and sign into the Google account where you created the sheet with your projects. A menu with the sheets in your account will appear. From this menu, select the sheet with your project data and click the Connect button in the bottom right corner. Under Sheets in the left panel find the specific sheet which contains your formatted spreadsheet. Drag this sheet to the area that says "Drag sheets here." This step with sync your data to Tableau.

3. Creating a Project Database Shape Graph

Click on the Sheet 1 tab at the bottom of the page to begin creating your first Worksheet. Make sure to save throughout this process so that you do not lose your work! Drag the Topic and Subtopic fields under Dimensions to the Columns bar. Drag the Year field to the Rows bar.

The display should look something like the Figure 3.1 after this step.
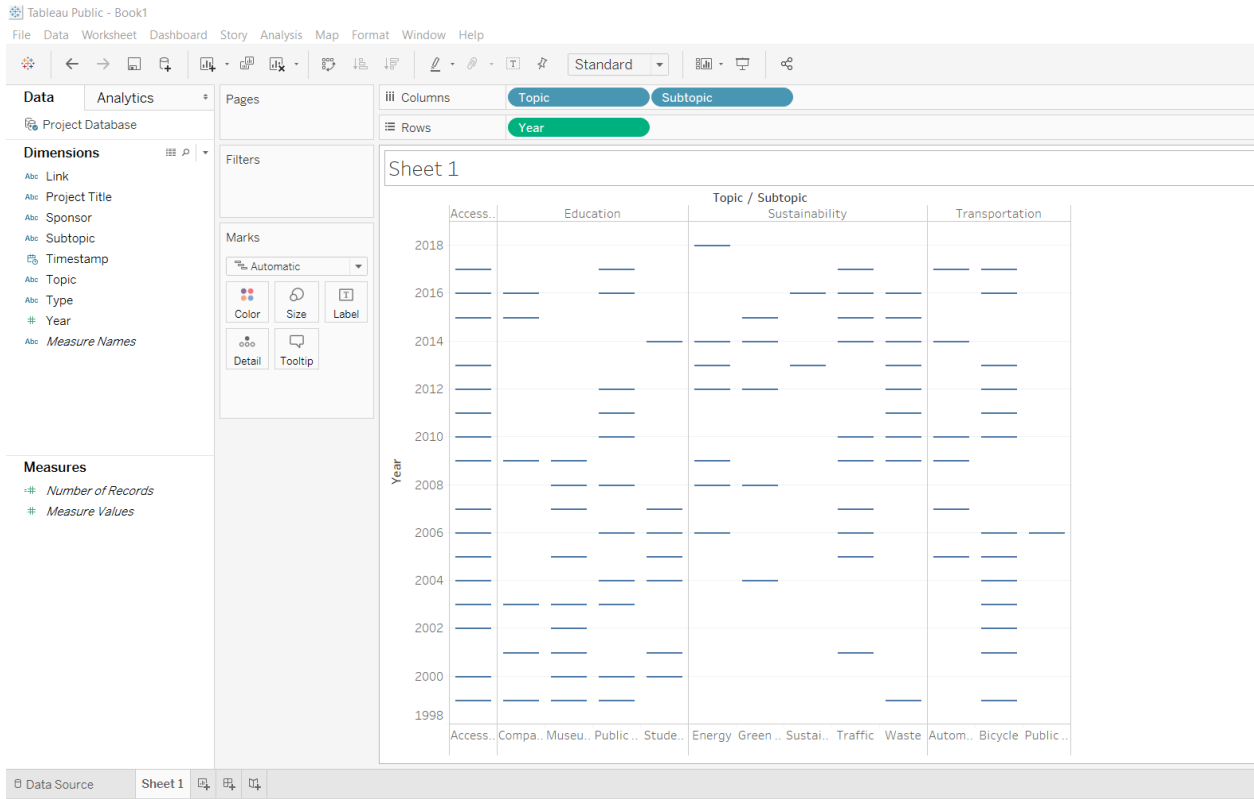
Figure 3.1

To eliminate the subtopic labels in the axis, uncheck the Show in Header option in the drop down menu (Figure 3.2).
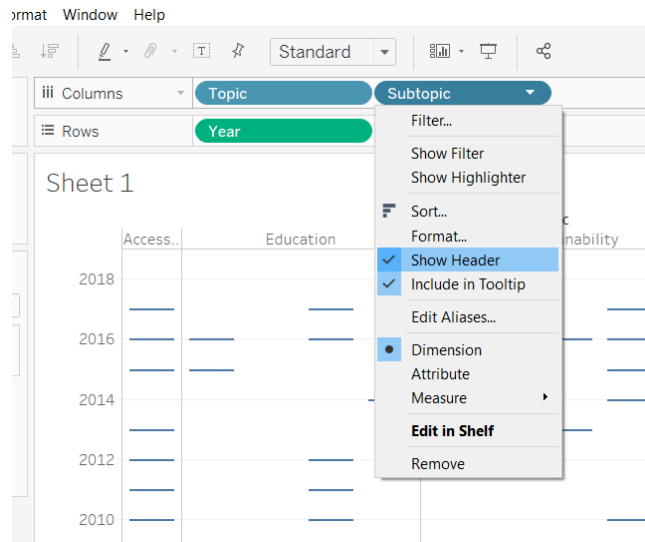
Figure 3.2

In the Marks box, click on the dropdown and change the selection from Automatic to Shapes (Figure 3.3).
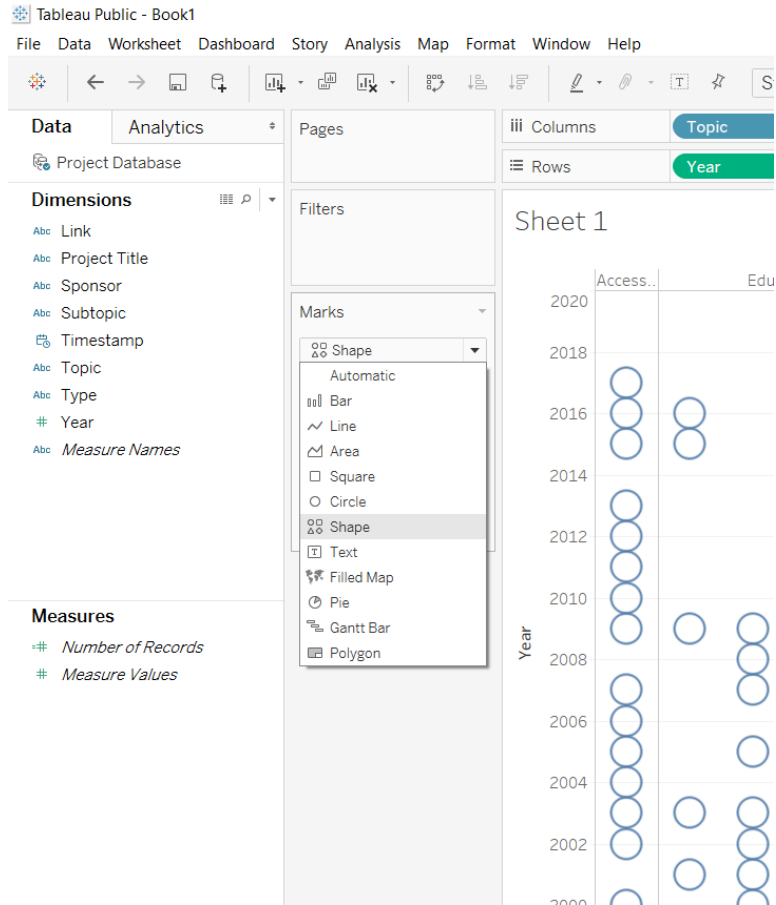
Figure 3.3

To make the shapes in the graph correlate to a field, drag that field from the Dimensions sidebar to the Shape box in the Marks menu (Figure 3.4). The shapes should represent the type of work completed in the project, so use the Type dimension in this step. The resulting graph will look similar to Figure 3.5.
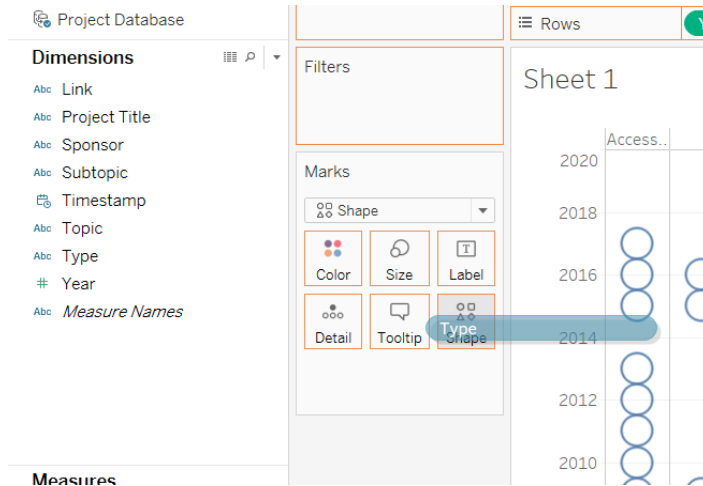
Figure 3.4
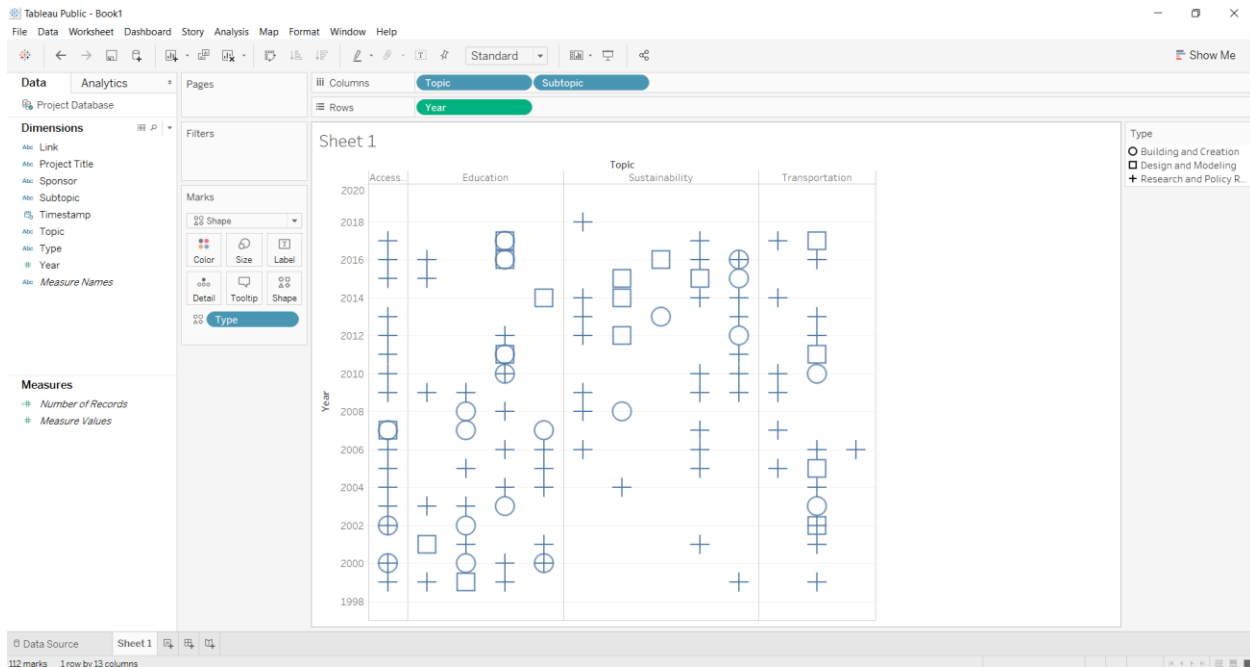
Figure 3.5

Using this same process, drag the subtopic field from the Dimensions sidebar to the Color box in the Marks menu.

Find the Year pill in the Rows bar and click on its drop down menu (Figure 3.6). Select the Discrete option to show every year on the y-axis (Figure 3.7).
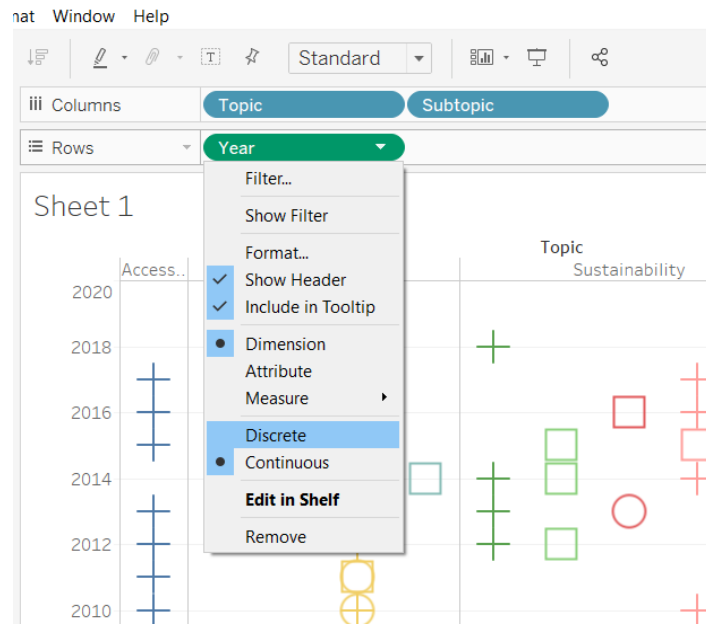
Figure 3.6
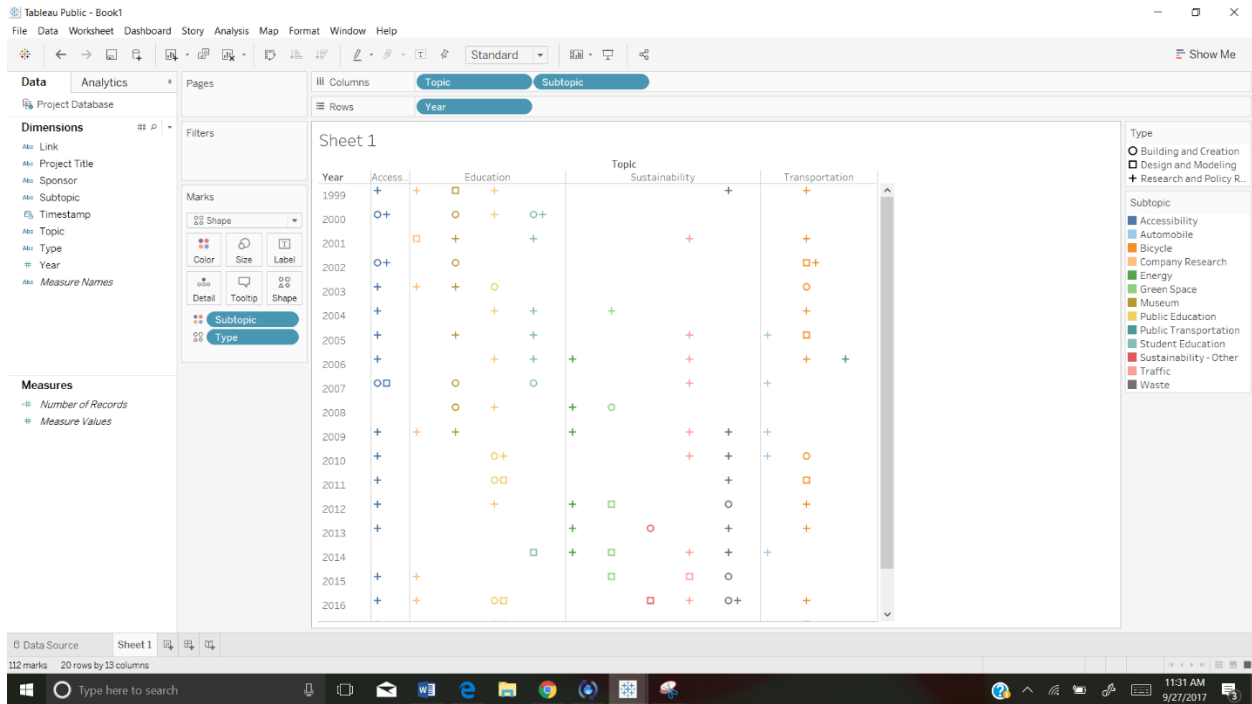
Figure 3.7

To change the order of years so that the most recent years appear at the top of the graph, open the drop down in the Year pill and select Sort (Figure 3.8).
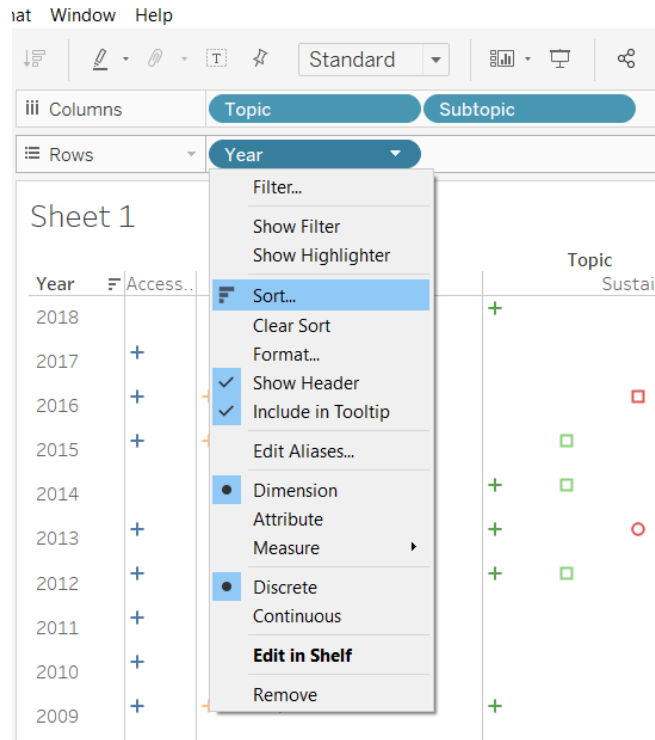
Figure 3.8

In the Sort window, select Descending and click OK.
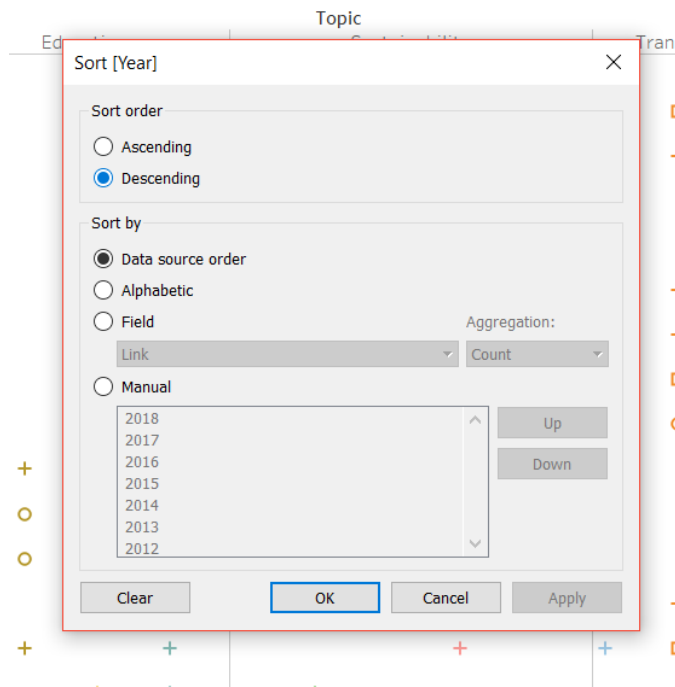
Figure 3.9

Drag the Project Title and Link fields from Dimensions to the Detail box in the Marks menu (Figure 3.10). This will cause them to appear in the tooltip of a project when you mouse over its shape in the graph (Figure 3.11).
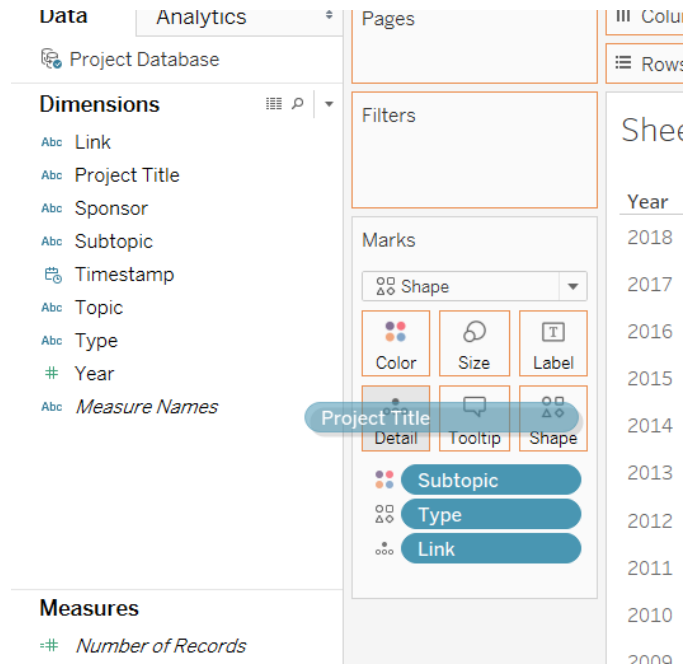
Figure 3.10

Figure 3.11

4. Styling the Report

To change the appearance of the graph, several changes can be made within the Marks menu. To link each shape to its project report, you need to move the Link field to the Detail box; however, having the URL appear in the mouse-over tooltip does not look professional. To remove the Link from the tooltip, click on the Link drop down and uncheck Include in Tooltip (Figure 4.1).
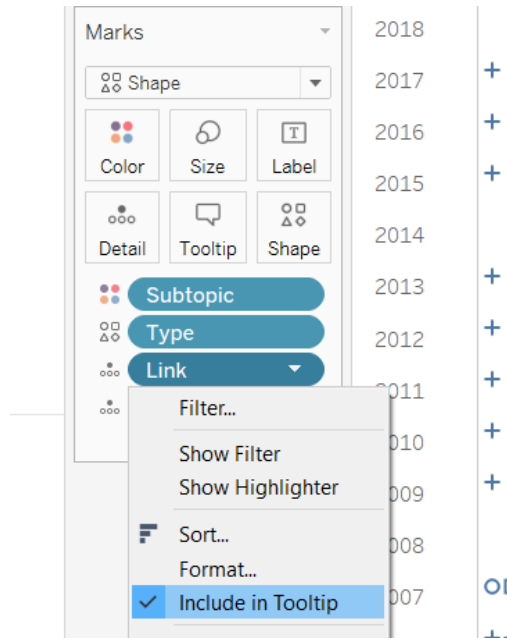
Figure 4.1

To change the shapes used in the graph to filled, click on the Shape box in the Marks menu. Click the Select Shape Menu dropdown and choose Filled. From here, you can change all of the shapes at once by clicking Assign Palette. You can also change individual shapes by selecting the shape on the left in the Select Data Item menu and choosing a new shape from the palette. Click Apply and then OK (Figure 4.2).
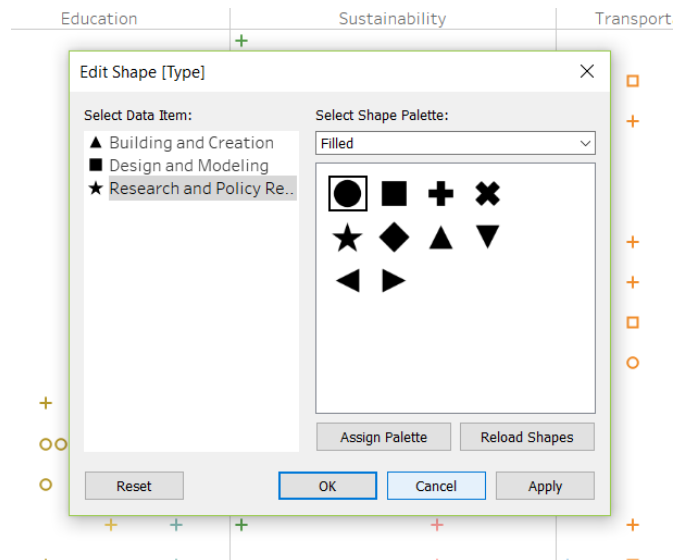
Figure 4.2

To change to size of the shapes in the graph, click on the Shape box in the Marks menu and use the slider to see how different sizes will look (Figure 4.3).
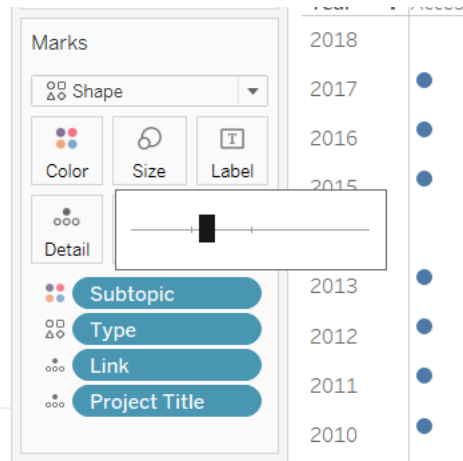
Figure 4.3

To give the color key a clean look, it should match up with the order the colors appear in the graph. To reorder this key, click the Subtopic drop down in the key on the right-side panel and select Sort (Figure 4.4).
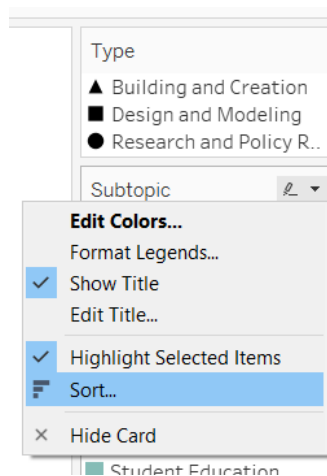
Figure 4.4

In the Sort window, select Manual and rearrange the subtopics by dragging them to new positions or selecting them and clicking the Up and Down buttons (Figure 4.5).
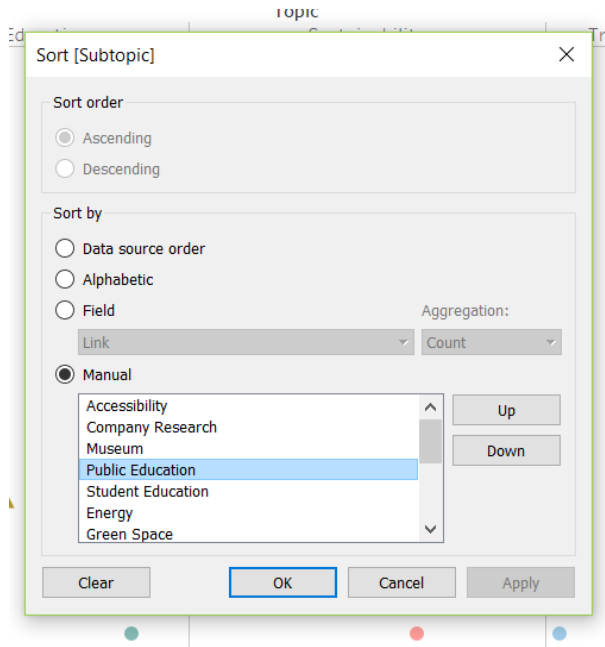
Figure 4.5

To create better organization in the report, assign each topic a color and each subtopic a different shade of the topic color. To change the subtopic colors, click the Color box in the Marks menu and then the Edit Colors button (Figure 4.6).
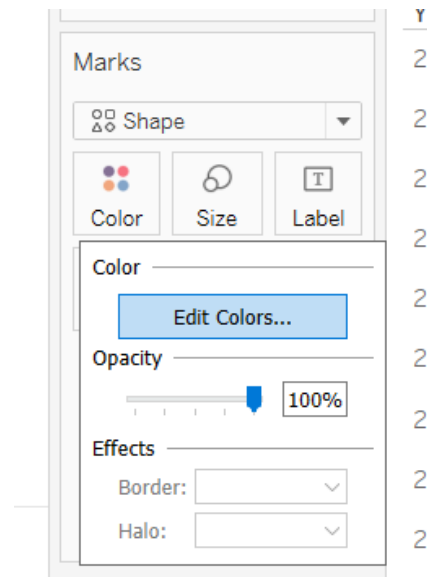
Figure 4.6

You can easily select multiple shades of the same color in the Edit Colors window by clicking the Select Color Palette dropdown and choosing one of the one color options. Click OK once you finish assigning colors (Figure 4.7).
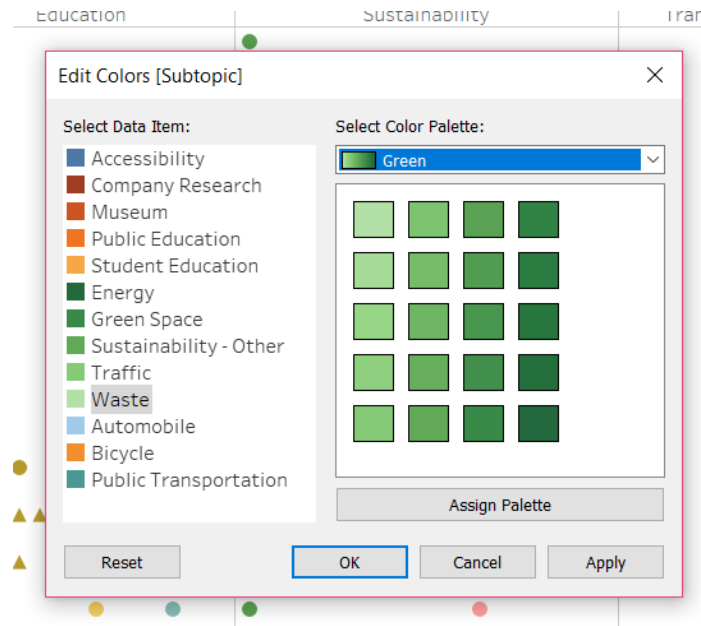
Figure 4.7

Currently in the tooltip Subtopic appears above Topic. To switch this order, making it more logical, click on the Tooltip box in the Marks menu (Figure 4.8).
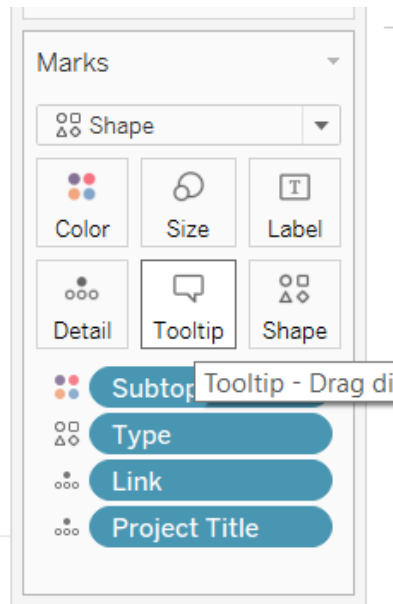
Figure 4.8

In the Tooltip window, cut and paste the lines of text to reorder them to your liking and click OK (Figure 4.9).
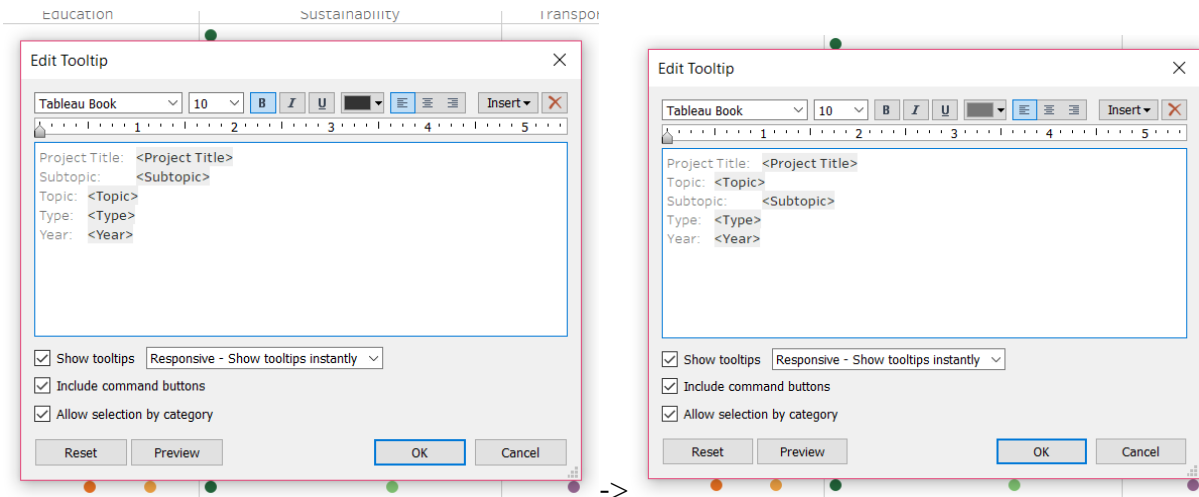
Figure 4.9

To name your sheet, double click in the Sheet 1 tab at the bottom left of the page and type in a new name (Figure 4.10).
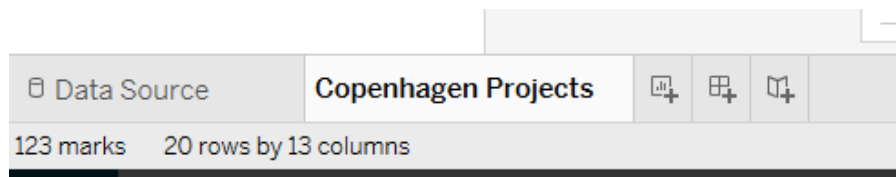
Figure 4.10

Since the width of the report does not allow the full Topic headers to display, you should turn them to a vertical orientation. To do this, right click on one of the labels and select Rotate Label (Figure 4.11).

Figure 4.11

45
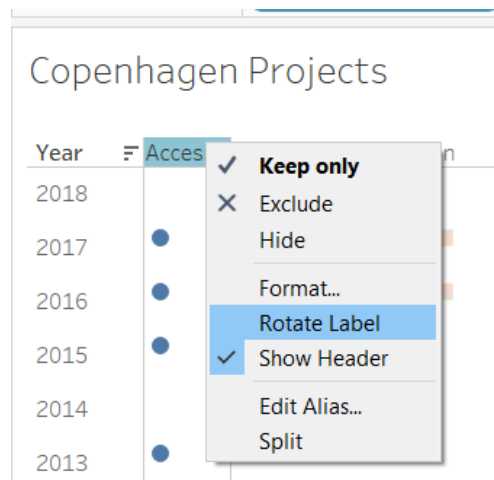
To adjust the height allocated to the labels and ensure they fit, drag the line below the labels down (Figure 4.12).

Figure 4.12

To fix the display of the worksheet so that the whole thing appears without scrollbars, click on the Fit dropdown and select Entire View (Figure 4.13).
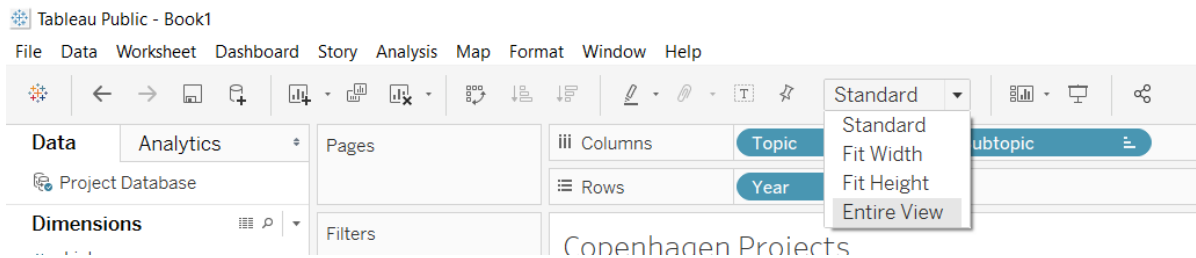
Figure 4.13

5. Creating Filters

To create interactive filters, drag the field that you want a filter for from the Dimensions menu into the Filters box (Figure 5.1)
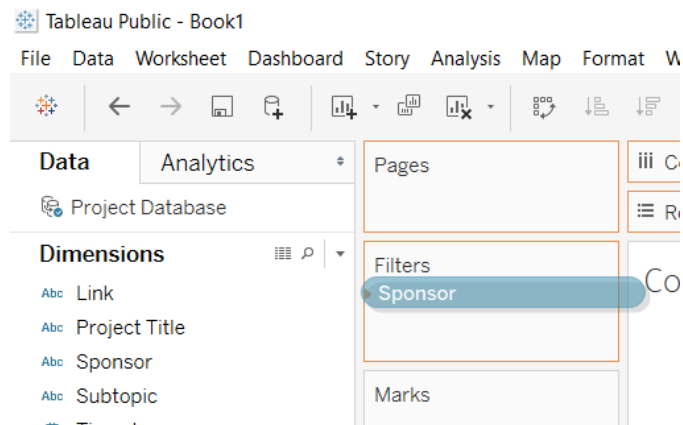
Figure 5.1

In the Filter window, click All and then OK (Figure 5.2).
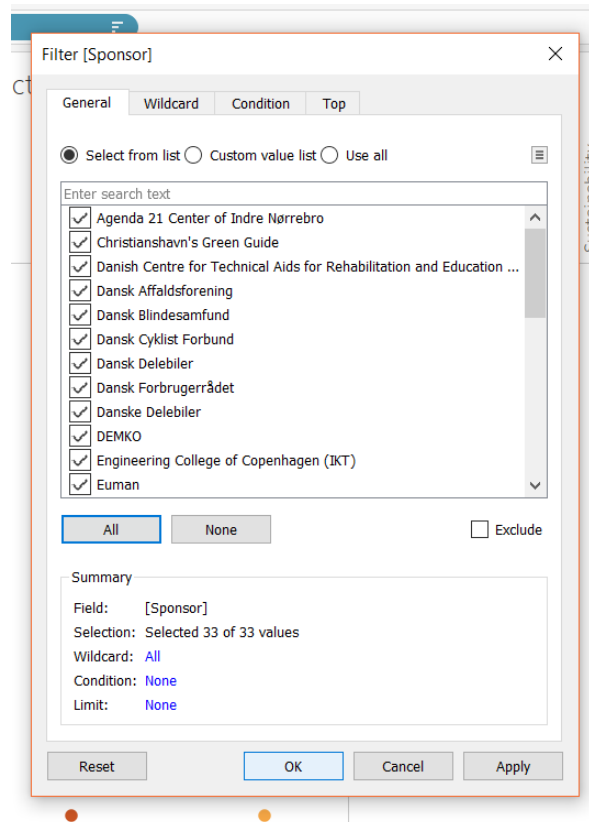
Figure 5.2

Open the dropdown in the newly created pill in the Filters box and select Show Filter (Figure 5.3).
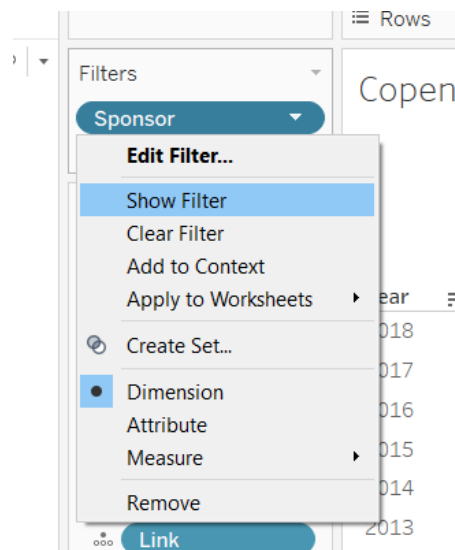
Figure 5.3

To edit the appearance of the filter, open the dropdown in the Filter on the right sidebar. For a more compact filter, select the Multiple Values (dropdown) option (Figure 5.4).
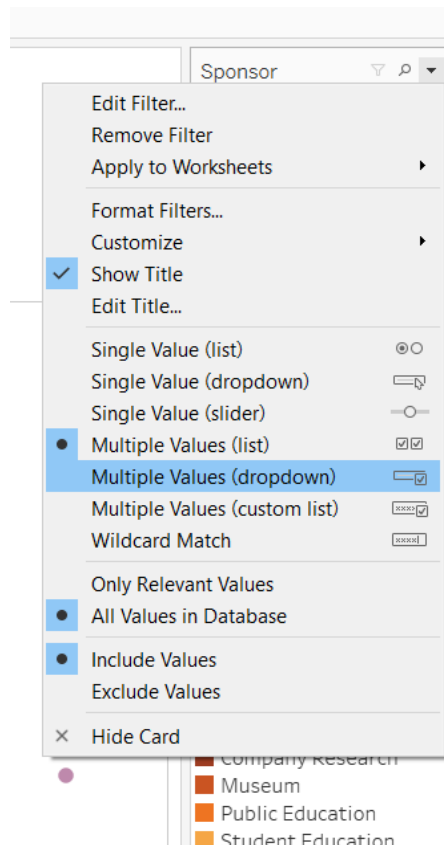
Figure 5.4

Repeat this process for all of the filters that you desire to add. The CPC graph has filters for Topic, Subtopic, Type, and Sponsor. To make the options in a filter respond to active filters, click the Only Relevant Values option in the filter's dropdown. Select this option for every filter you create (Figure 5.5). Change the order of filters by clicking and dragging them into a new order.
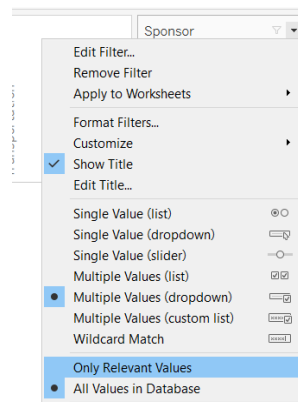
Figure 5.5

6. Moving to a Dashboard

When embedding a Tableau report on a website, using a Dashboard instead of a Work-sheet improves its appearance. To create a Dashboard containing the Worksheet you created, click the New Dashboard tab at the bottom left corner of the display (Figure 6.1).
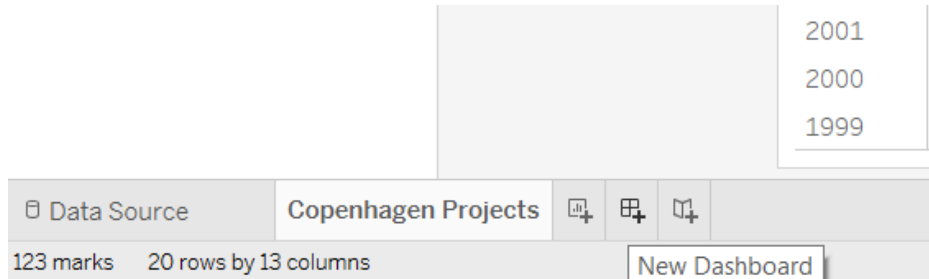
Figure 6.1

Drag the sheet you created into the Drop sheets here area. Open the Size dropdown in the left side panel and select Automatic (Figure 6.2).
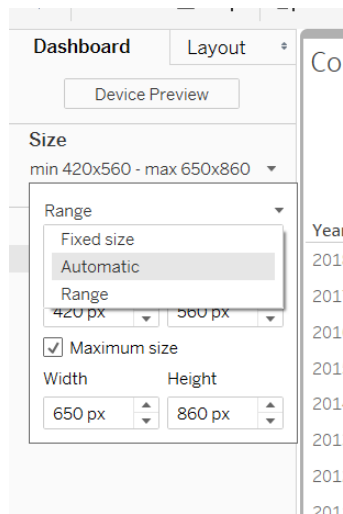

Figure 6.2

Your final Dashboard will look similar to Figure 6.3.

Figure 6.3

Once you have completed creating your Dashboard, be sure to save it and publish it to your Tableau Public account. On the Tableau Public website, which will open after you save and publish, you have the option to share your report. Use the Share button to get a URL for your report or share it somewhere else (Figure 6.4).
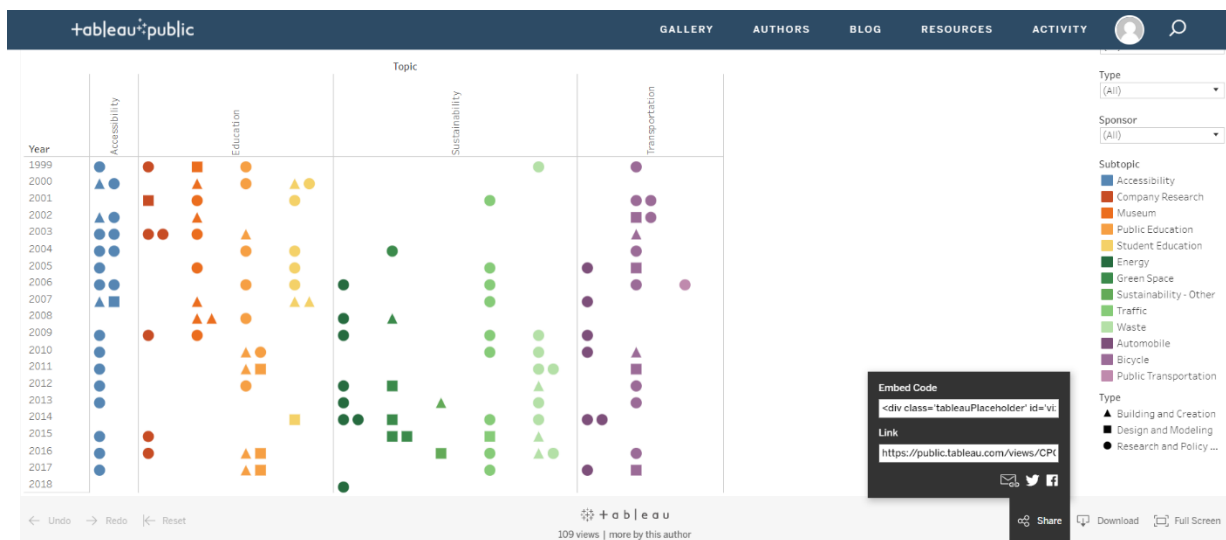

Figure 6.4

To embed the report in a WordPress site, download an iFrame plug in and use the URL provided by the share button. Make sure to write the src portion of the iFrame code in the following format: src="URL:embed=y&:display_count=yes&publish=yes:showVizHome=no".

7 Updating the CPC Project Database

In order to update the CPC database, the Google Form linked here should be sent to each project team upon the completion of their project: https://goo.gl/forms/qRcdxyMAbt1tRvzA3. This form will send each team's responses to a Google Sheet that is linked to the Tableau report. After the responses have all been added, open Tableau Public and select File>Open from Tableau Public. Login to Tableau public:

- Email:
- Password:

Select CPC Projects and click Open.

In the dashboard, select Data > Form Responses 1 > Refresh, or press F5 (See Figure 7.1).
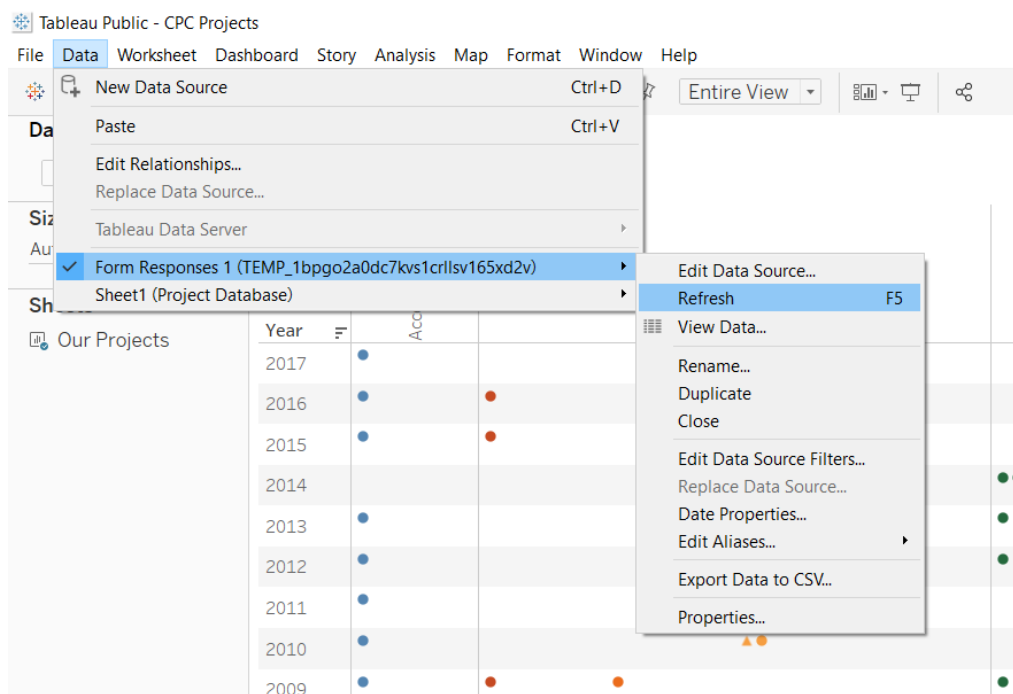

Figure 7.1

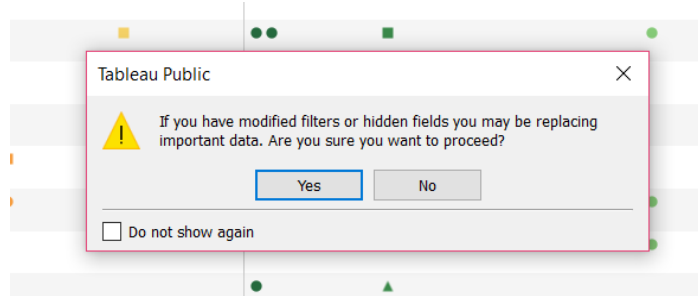If the window shown in Figure 7.2 appears, click Yes.

Figure 7.2

When prompted for the Google Account login, enter the following login information:

- Email:
- Password:

A window will pop up asking for viewing access to the accounts information. Click Allow. After following these steps, Tableau will sync to the Google Sheet, and its data will be updated.

Emails and passwords omitted for security. See the CPC director for the Handbook with this information.

APPENDIX F: STUDENT INTERVIEW QUESTIONS (9/15/17 - 10/10/17)

<u>Student Interview Questions</u>
What are your goals for the projects?
Why did you pick Copenhagen?
What have best your favorite parts of working here?
How has your sponsor been helping you in this process?
What have been some challenges your team has overcome here?
Why do you think this project is important? How do you think it impacts Copenhagen?

APPENDIX G: STEVEN TAYLOR INTERVIEW QUESTIONS (4/3/17)

Video Interview Questions

1. What would you consider to be the mission of the Copenhagen Project Center?
2. What do you look for in a potential sponsor?
3. What do you believe sets the CPC apart from other project centers?   ,
4. What have been some of your favorite projects during your time as the CPC Director?
    a. Which ones do you believe have provided the greatest impact on the Danish community?
    b. Why were these projects so successful?
5. What do you believe is necessary for a project to be successful?
    a. From the sponsor's side?
    b. From the student side?
    c. For yourself?
6. What do you believe sponsors gain from hosting projects?
7. What advice would you give to potential sponsors looking to host projects?
8. How has the CPC's sponsor base changed over the years?
9. What do the students gain from this experience abroad?

APPENDIX H: CPC FOUNDERS INTERVIEW QUESTIONS (4/6/17)

- Why did you decide to establish the CPC? Why Copenhagen?

- What picture/idea did you have in mind when developing the CPC?

- How did the WPI plan impact your development of the Copenhagen project center?

- What hurdles/obstacles were there to overcome when establishing the CPC?

- How did you find sponsors in the early years the CPC was founded?

- What sets the CPC apart from the other project centers?

- How has the CPC evolved over the years?

- What does the CPC mean to you/what impact has it had on your life?

- What advice would you give to a student planning on choosing the CPC as their top project center?

- Why do you think it's important for student to do their IQP abroad?

- What projects would you consider to have had the biggest impact?

APPENDIX I: CONSENT SCRIPT FOR SPONSORS (8/30/17-10/13/17)

We are a group of undergraduate students at the Worcester Polytechnic Institute (WPI) who are conducting a project in Copenhagen. We are asking that you participate in a (time interval here) interview to gather information. This information will primarily be focused on the impact of WPI projects completed at the Copenhagen Project Center (CPC) on local communities. We will be publishing information gathered from this interview to both a website aimed at promoting the CPC and in our final report for this project. We will include as much information in the report regarding your name and business as you are comfortable with us sharing.

Please do not feel that you have to answer every question asked during our interview process, only answer those that you feel comfortable doing so. If you have any questions please feel free to ask us at anytime.

Signature: _____   Date: _____

APPENDIX J: STEVEN TAYLOR INTERVIEW QUESTIONS (8/28/2017)

What resources do we have here at WPI that we should use?

Why has this project been created?

What kind of content do you want on this website?

What Materials do you currently give sponsors?:

In the long run how do you want the website to be updated?:

Long term Sponsors

1. What is the mission of your organization?
2. When did you first sponsor a project with the CPC and how many have you sponsored in total (including current projects)?
   a. What are some reasons that you have stayed with the CPC for so long?
3. What was your favorite project you have worked on with WPI Students?
   a. When was this project?
   b. Why do you think this project went so well?
   c. What were some of the impacts this project had?
      i. On the community?
      ii. On your organization?
4. Are there any other projects you really enjoyed working on? (loop back to Q5)
5. During your time sponsoring a project, how often and for how long would you meet with the team?
   a. What did you get out of these team meetings?
6. From your own experience what is necessary to have a successful project?
7. Have you or your organization done projects with Danish students in the past?
8. Why did you decide to work with WPI rather than Danish students? Have there been any noticeable differences?
   a. What are some pros and cons of working with WPI students?
   b. *How would you compare and contrast working with WPI students with Danish students?*
9. How would you recommend that we reach out to potential Danish sponsors?
10. Do you have any references we should look into so that we can more accurately assess the impacts of past projects?
11. Are there any comments or questions you have for us?

Short Term Sponsors

1. What is the mission of your organization?
2. When did you first sponsor a project with the CPC and how many have you sponsored in total (including current projects)?
   a. Why did you choose the CPC?
3. *What was your favorite project you have worked on with WPI Students?*
   a. *When was this project?*
   b. *Why do you think this project went so well?*
   c. *What were some of the impacts this project had?*
      i. *On the community?*
      ii. *On your organization?*
4. What impacts do you see this project having-
   a. On the community?
   b. On your organization?
5. *Are there any other projects you really enjoyed working on? (loop back to Q5)*
6. During your time sponsoring a project, how often and for how long do you meet with the team?
   a. What do you get out of these team meetings?
7. What do you think of the progress you are seeing so far on current projects?
8. From your own experience what is necessary to have a successful project?
9. Have you or your organization done projects with Danish students in the past?
10. Why did you decide to work with WPI rather than Danish students? Have there been any noticeable differences?
    a. What are some pros and cons of working with WPI students?
    b. *How would you compare and contrast working with WPI students with Danish students?*
11. How would you recommend that we reach out to potential Danish sponsors?
12. *Do you have any references we should look into so that we can more accurately assess the impacts of past projects?*
13. Are there any comments or questions you have for us?

*Italics indicates that the question may or may not apply to a newer sponsor*

Handbook sections
- How to Update the Counter
- How to Update the Liaison Content
- Updating the CPC Project Database

How to Update the Counter
To change the counter you must first be logged into the cp17-cpc@wpi.edu WordPress account for the website. The next step is to make sure you are logged into the "my site" tab with the wpicpc.org option selected. Next you need to click on the "themes-customize" button that is located underneath the personalize tab.
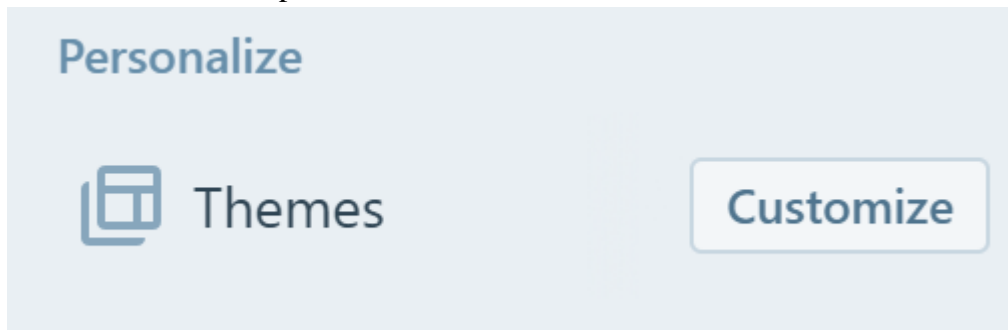
Once clicked a new tab should open that says "You are customizing Copenhagen Project Center" on the top right of the screen. From here you can scroll the page down toward the counter. Once you are at the counter a blue pencil will appear in each of the counter boxes.
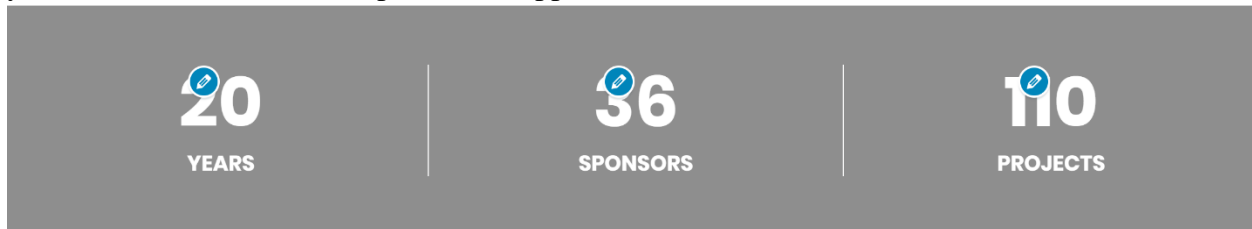
Click on the pencil of the counter that you wish to change and input the new updated value. There are various elements that can be edited but the only one that is necessary will be the "counter should end at" section seen below.

Within this should be the new updated number. Repeat this for each of the other counter boxes and when finished click the "save & publish" tab.
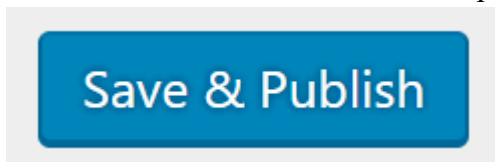

How to Update Liaison Content

To update the liaison content we first need to upload an image of the new liaison onto WordPress. A good image choice is a square image that captures the Liaison's face. To do this we will start at the dashboard. On the left sidebar hover your mouse over the media option and it will open up two options to the right, choose the second option, "add new." Now the screen should look like this.
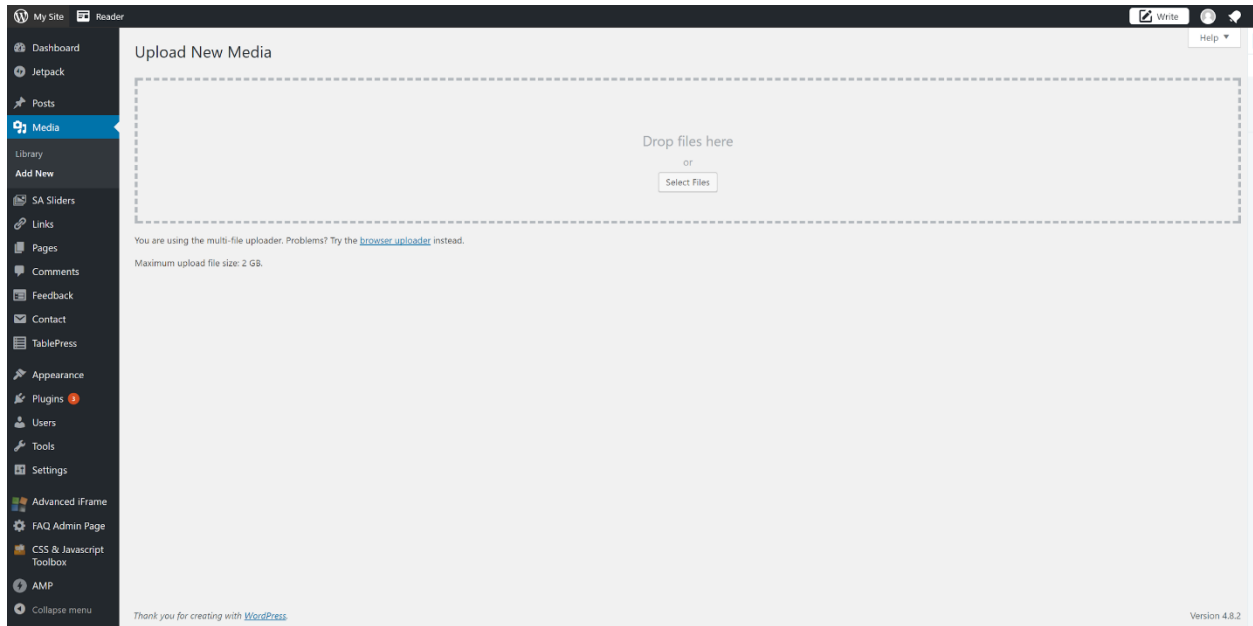
Once you are on the screen above, you can choose to either drag and drop the image into the box or click on the "Select files" option and navigate to the image and select it. Once you have chosen the image it will show up below and your screen should look like this.
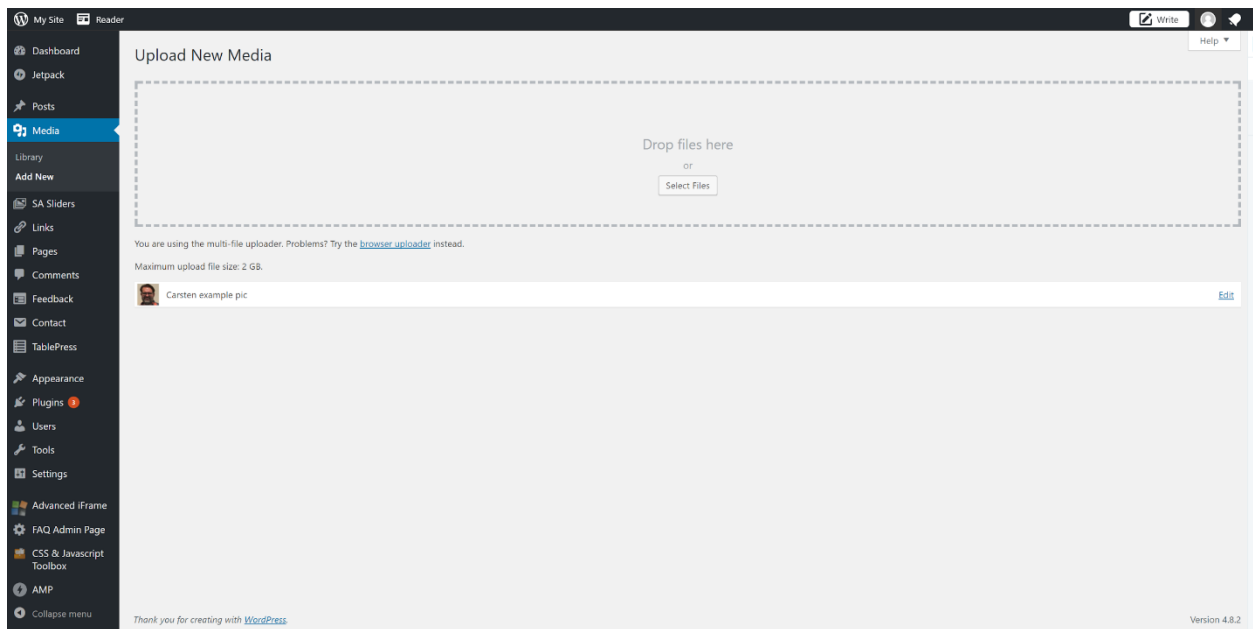
Next, click on the "edit" all the way to the right side of the screen. That will open a page that looks like this.
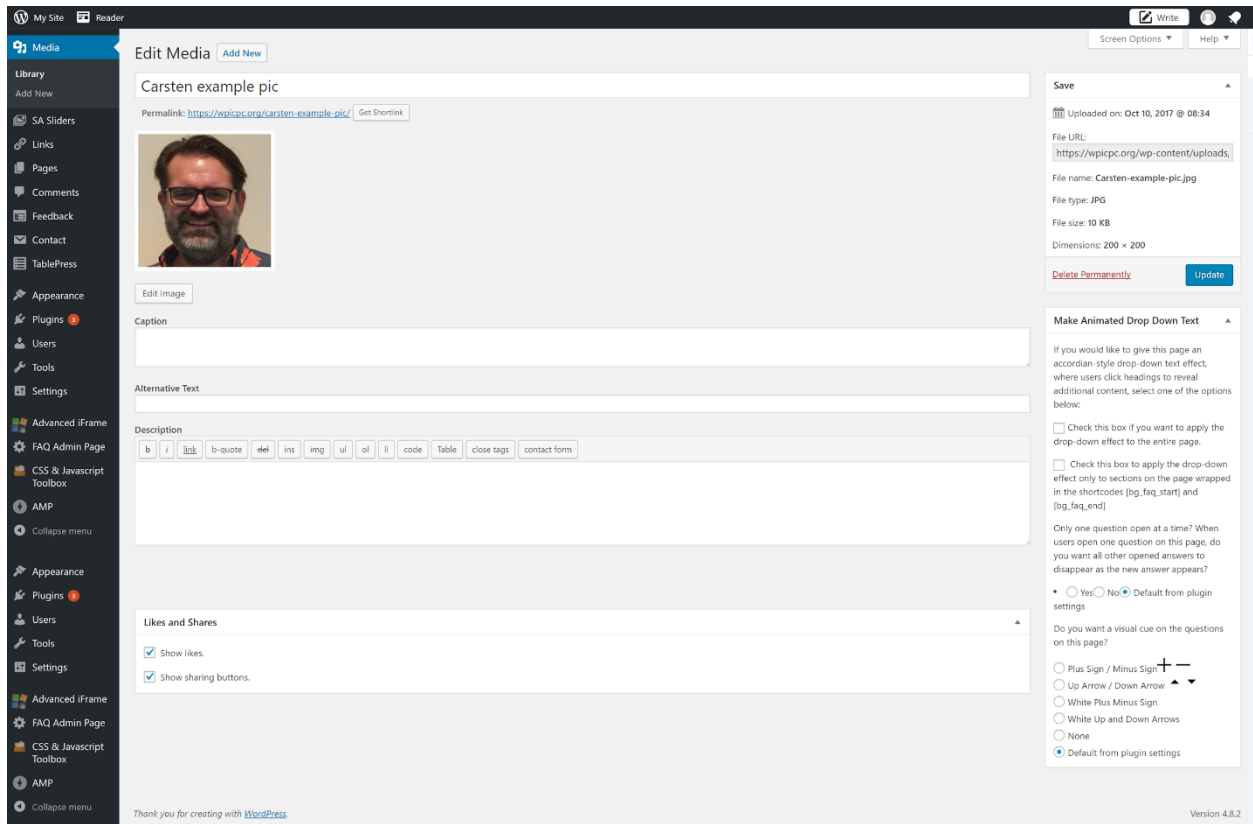
In the top right of the screen find the "File URL" and copy it. We will need that later. Now we are ready to begin the editing. Again starting from the dashboard hover the mouse over the "Appearance" option on the left, and when the options appear to the right click on "Customize." This will open up a page that looks like the home page with a sidebar on the left. Scroll down and click on the blue pencil that is next to the text "Send him an Email." Your screen should look like this.
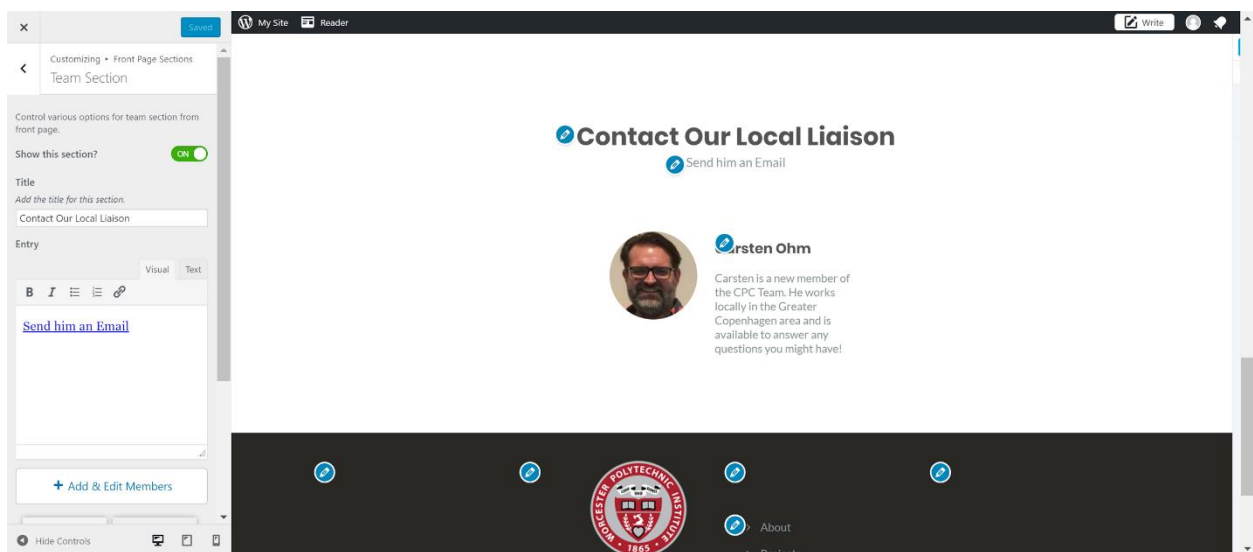
On the bar on the left there is a section called "Entry" and below that is a editor box. On that editor box select the tba that says "text." Inside the box you will see this text:

<a href="mailto:<mark>carstenohm@carstenohm.dk</mark>?subject=Inquiry about The CPC"> Send him an Email

You will need to edit the highlighted portion above. This is the Email for sponsors to contact Make sure you only touch the content between the colon (:) and the question mark (?). Add the new email between these marks.

Next click on the blue pencil that is closest to the name "Carsten Ohm." this will open up a different sidebar on the left. It will look like this.
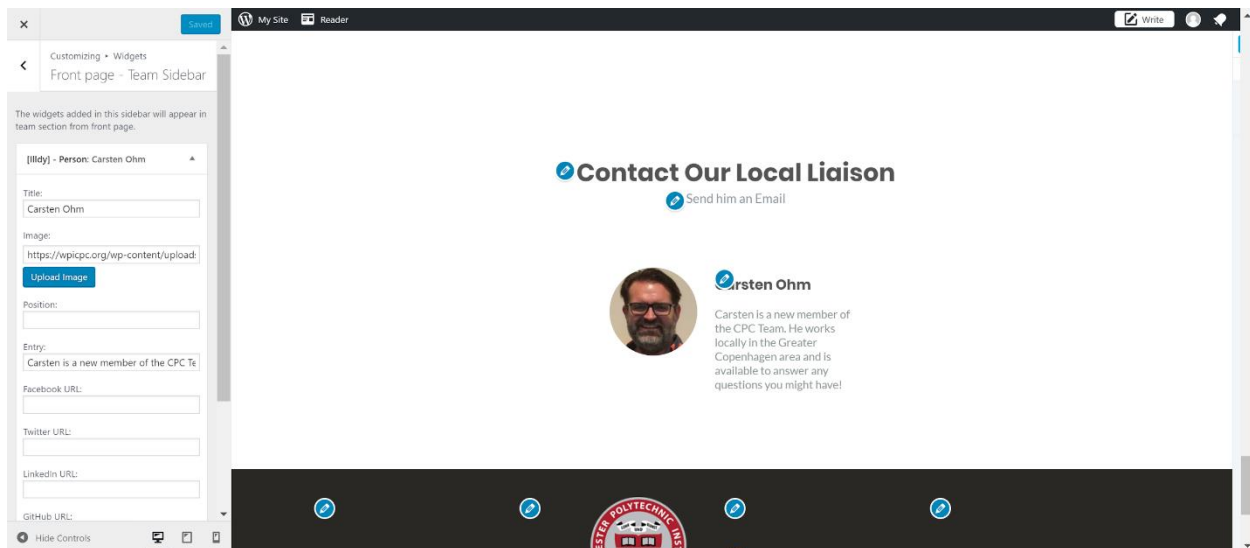
Under "Title" replace it with the new Liaison's name. Under "Image" paste the URL that we saved from earlier. Under entry write a short 2 sentence biography about the Liaison. Once that is finished click the blue "Save & Publish" button at the top of the left sidebar.

Updating the CPC Project Database

In order to update the CPC database, the Google Form linked here should be sent to each project team upon the completion of their project: https://goo.gl/forms/qRcdxyMAbt1tRvzA3. This form will send each team's responses to a Google Sheet that is linked to the Tableau report. After the responses have all been added, open Tableau Public and select File>Open from Tableau Public. Log into Tableau public:

- Email:

64

- Password:

Select CPC Projects and click Open.

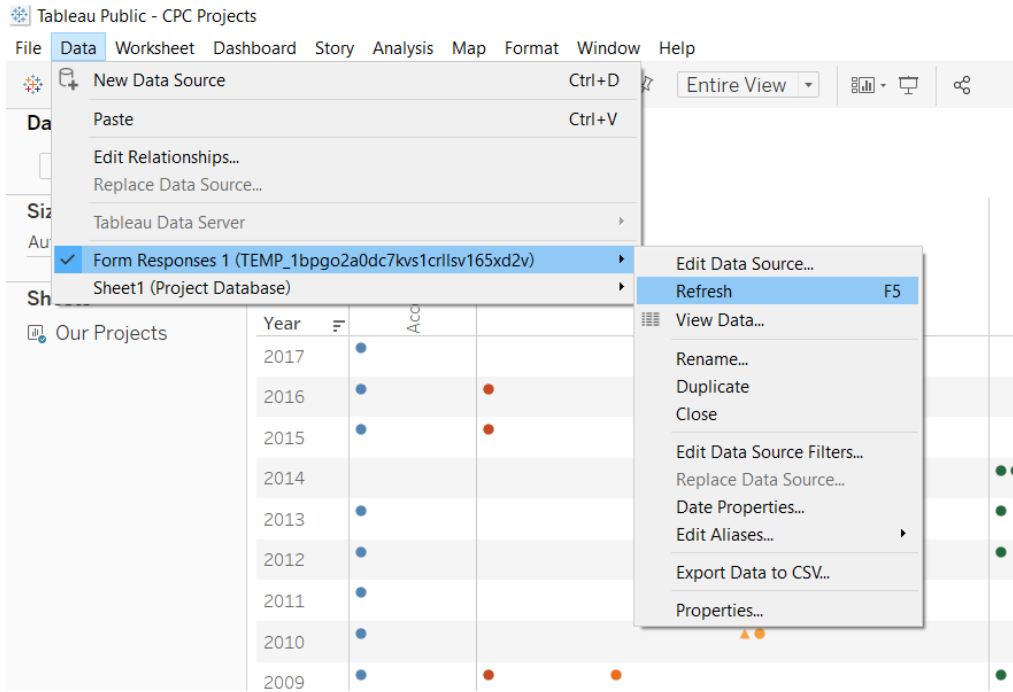In the dashboard, select Data > Form Responses 1 > Refresh, or press F5 (See Figure 7.1).

Figure 7.1

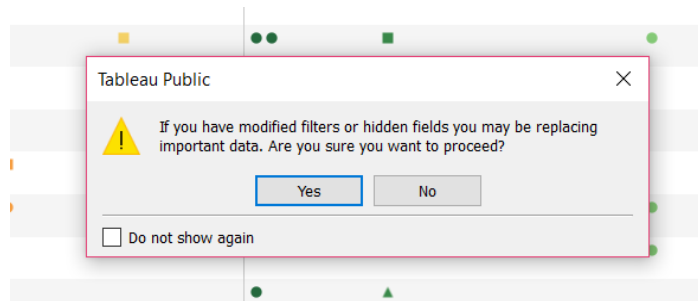If the window shown in Figure 7.2 appears, click Yes.

Figure 7.2

When prompted for the Google Account login, enter the following login information:

- Email
- Password:

A window will pop up asking for viewing access to the accounts information. Click Allow. After following these steps, Tableau will sync to the Google Sheet, and its data will be updated.

Emails and passwords omitted for security. Ask the CPC director for more information.

APPENDIX M: WEBSITE SCREENSHOTS

This appendix includes screenshots of the website. They are broken up by web page in the order:

- Home
- About
- Porjects
- FAQ (questions collapsed)
- FAQ (questions open)

Home Page 1

Project Topics

♿
Accessibility

🚲
Transportation

🌿
Sustainibility

📕
Education

Contact Our Local Liaison

Send him an Email

Carsten Ohm

Carsten is a new member of
the CPC Team. He works
locally in the Greater
Copenhagen area and is
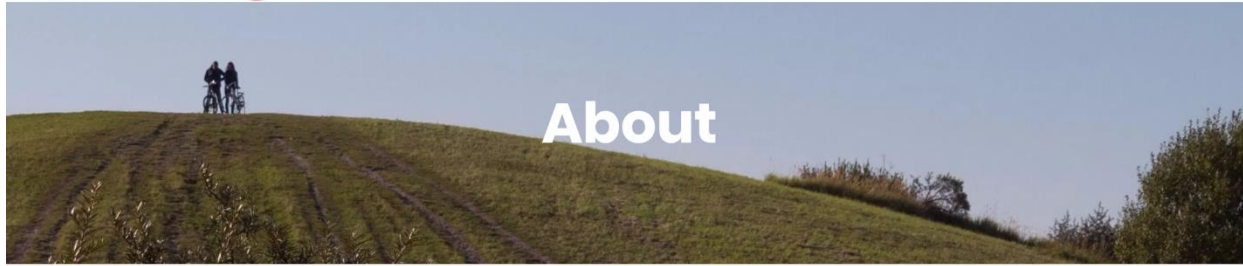available to answer any
questions you might have!

WPI

> About
> Projects
> FAQ

Home Page 2

About   Projects   FAQ

About

What we do

Students work in teams, advised by two professors to collaborate with your organization, completing a project. Approximately 14 weeks are spent on each project, totaling over 2,000 hours of dedicated work. Our projects cover a wide range of topics, so almost anything is possible!

How we work

We complete six projects in the Fall and six in the Spring. Technical students spend seven weeks researching to prepare for the collaboration that occurs when they arrive in Copenhagen. Once here, there work with your organization for an additional seven weeks to complete the work. These projects require students to design and model, build and create, or research and recommend policies for your organization.

Who we are

Worcester Polytechnic Institute (WPI) is a leader of project based learning in the United States. The Copenhagen Project Center is one the most popular of WPI's 40 project centers world-wide. The Copenhagen Project Center was founded in 1997 and over the course of its 20 years over 100 projects have been completed with 36 different organizations. The students of the Copenhagen Project Center change every year, but our Director and Liaison do not.

> About
> Projects
> FAQ

About Page

Projects Page 1

− **Using the Project Infographic**

Above, each shape represents a project completed by WPI students in Copenhagen. Information about each project includes: Project Title, Type, Sponsor, Topic, Subtopic, and Year. If you want to learn more about a project you can click on the shape and then on "Go to project."

Filters

To narrow down what projects appear in the report, select the values you would like to see from the filters in the side-panel.

Type

Project Type indicates the type of work the done. These categories include Building and Creation, Design and Modeling, and Research and Policy Recommendation. Project Type is represented by icon shape.

Topic

Project Topic indicates the focus of the project. These categories include Accessibility, Education, Sustainability, and Transportation.

Subtopic

Project Subtopic shows a more exact idea of the focus of projects. Subcategories for Education include Company Research, Museum, Public Education, and Student Education. Subcategories for Sustainability include Energy, Green Space, Traffic, and Waste. Subcategories for Transportation include Automobile, Bicycle, and Public Transportation. Colors in the graph represent the Topics of projects and shades of each color represent subcategories.

Resetting

To make the graph return to its original state, simply press the Reset button in the lower left corner.

> About
> Projects
> FAQ

Projects Page 2

WPI

About   Projects   FAQ

FAQ

click on a question to learn more

What **kinds of projects** are typically completed?

How much **time** do students put **into a project?**

What does an **organization gain from sponsoring** a project?

How do students and organizations **collaborate** throughout a project?

What are the **backgrounds and qualifications of the students** who come to the center?

What **responsibilities** does a **project sponsor have?**

Can organizations become **long term sponsors** of the Project Center?

WPI

> About
> Projects
> FAQ

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FAQ Page (Questions Collapsed)

FAQ Page (Questions Open) 1

How much **time** do students put **into a project?**

Preparatory Term   **Project Term**

4 Students

25 hours per week

700 hours

1800+ Hours

40 hours per week

1120 hours
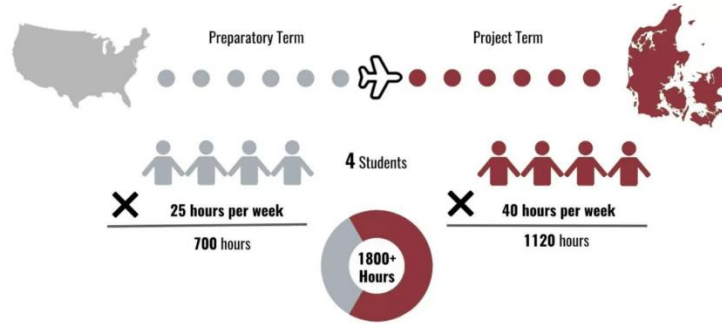
Between the preparatory term and the work done in Copenhagen, student groups of 4 spend over 1800 total hours on their projects.

What does an **organization gain from sponsoring** a project?

Onsite Term

Implement Proposal Concepts

Week 8

Published Project Report

Week 14

40 hours per week

1120 hours

1232 Total hours

8 hours per week

112 hours
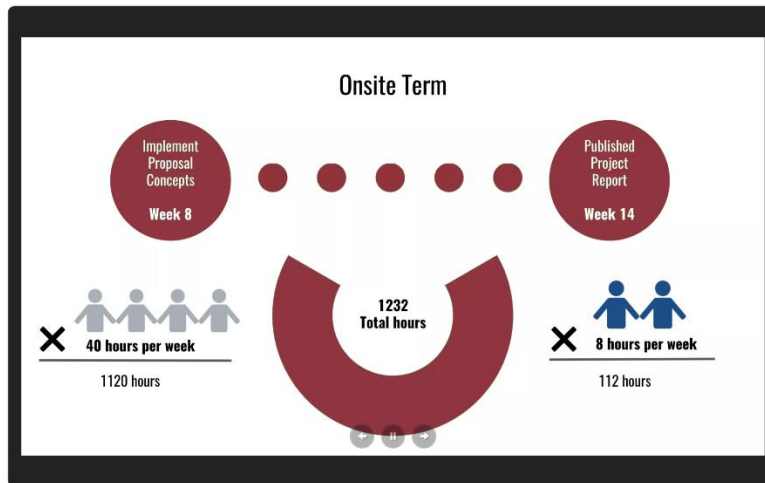
The students begin working on their projects for seven weeks before arriving in Denmark. During this time, they write a formal project proposal and investigate issues with respect to the project. Once they arrive in Copenhagen, the students work for another seven weeks, collaborating with your organization to produce some form of solution.

FAQ Page (Questions Open) 2

How do students and organizations **collaborate** throughout a project?

Before arriving in Copenhagen, students will contact their sponsors periodically though email or video calls. After the students arrive, the group works on the project independently from the sponsor, with meetings several times a week to check in on the progress being made.

What are the **backgrounds and qualifications of the students** who come to the center?

WPI recruits active, project oriented individuals who learn to work in a fast-paced environment. These students are in their third year and typically study science and engineering, while still being well rounded in other areas. They spend 7 weeks before coming to Copenhagen researching the project and its surrounding issues.

FAQ Page (Questions Open) 3

What **responsibilities** does a **project sponsor have?**
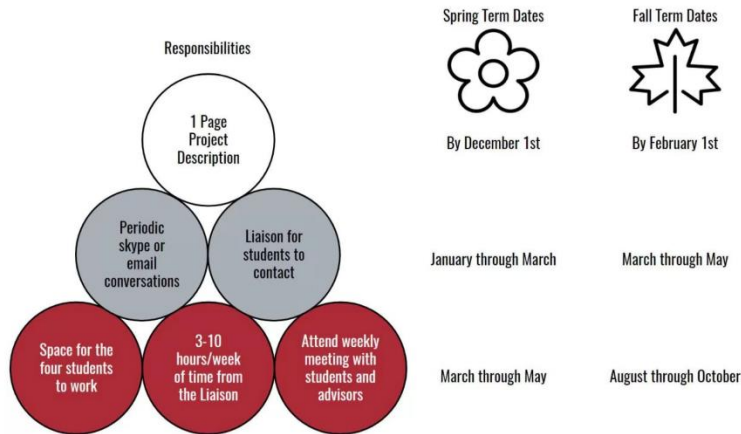
Responsibilities

1 Page Project Description

Periodic skype or email conversations

Liaison for students to contact

Space for the four students to work

3-10 hours/week of time from the Liaison

Attend weekly meeting with students and advisors

Spring Term Dates

By December 1st

January through March

March through May

Fall Term Dates

By February 1st

March through May

August through October

Sponsor responsibilities include:

• Providing a short (one-page) description of the project, prior to its start.
• Providing a Liaison for students to contact.
• Engaging with the student team through video call or email while they are preparing for the project.
• Providing a space for the students to work during their 7 weeks in Copenhagen.
• Providing guidance, supervision, and support for the project during the 7 weeks students are in Copenhagen.
• This includes weekly meetings with the team and faculty advisors and almost daily contact with the team. This typically adds up to about 3-10 hours per week.

Can organizations become **long term sponsors** of the Project Center?

Typically organizations only sponsor one project at a time, but some have sponsored two simultaneously. Many organizations have worked with the Project Center for multiple years, sometimes sponsoring continuation projects for larger issues.

FAQ Long term sponsors at the CPC

Jacob H Simonsen
DANISH WASTE ASSOCIATION

> About
> Projects
> FAQ

WPI

FAQ Page (Questions Open) 4