25 Years of Venice Knowledge Online

An Interactive Qualifying Project
Submitted to the faculty of

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Degree of Bachelor of Science

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The opinions expressed in the report do not necessarily represent those of the sponsors

AUTHORSHIP

Statement from the team: All team members shared equally in the creation of this report.

ABSTRACT

This project prepared for the Venice Project Center's 25th anniversary by publicizing data collected by WPI project teams. We facilitated the creation of the Venice Project Center data repository, which were published to the 25th anniversary website and Venipedia, the center's wiki. We produced a dashboard to show Venice statistics in real-time. We created a VPC mobile smartphone application. Lastly, our team prepared a campaign to fund PreserVenice, originated from past VPC projects for the restoration of public art.
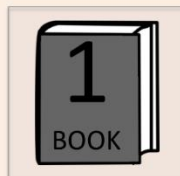
VENICE PROJECT CENTER 2.5

25 TOTAL YEARS

179 PROJECTS

645 STUDENTS

MORE THEN 300,000 HOURS

11 AWARDS

10 WEB APPS

1 BOOK

11,960 VENIPEDIA ARTICLES

442,878 BOATS COUNTED

OVER 7,000 PIECES OF ART

MORE THEN 1,000 CANAL MEASUREMENTS

34 YEARS OF WORK

145 WORKING MAN YEARS

PROJECT THEMES

PRESS

TABLE OF CONTENTS

LIST OF FIGURES

1 INTRODUCTION

In 1970, Worcester Polytechnic Institute founded the "WPI Plan". This plan was WPI's way of joining the university's motto, "theory and practice" into its curriculum. The plan highlights the student's ability to apply their knowledge learned in classrooms to solve real-world problems. This plan established offshore project centers for students to perform project-based learning. Currently there are 24 project centers. Students are given a problem and challenged to propose and implement a solution at the project's location.

One of the project centers was established in Venice, Italy. The Venice Project Center (VPC) was established in 1988, the third oldest center to date. Hosting 179 projects and 645 students, a lot has been done in the VPC. Students have covered a wide variety of themes, ranging from Archaeology to Wetland Management. Celebrating its silver jubilee, seven project groups are traveling to the floating city this fall to improve the quality of life.

Students have performed research projects in Venice focusing on preserving the city, analyzing the tourism that overwhelms Venice, developing websites to share data on Venice, and much more. The success of these projects have been published by *National Geographic*, *BBC Radio*, *Smithsonian*, and other news outlets. Technology has played a major role in the Venice projects since the center's opening in 1988. Recent projects have utilized web and computer applications to collect and share information with the public.

The Venice Project Center (VPC) has grown substantially in the past twenty five years. With WPI's use of technology, Venice has become a better place. Students at WPI have focused their energy on preserving and enhancing Venice. The VPC has done work on many of Venice's problems. From redesigning boat traffic flow to studying tourists, each IQP has done its part to help Venice become a better place. Through the increase of technology the VPC has gotten the projects into a workable state. They have been shared publicly, so all can benefit from the findings.

Although much work has been done at the Venice Project Center, there is not yet a full and complete presence of everything on the web. The research performed over the years has been used for special projects such as uScript, PreserVenice, and Venipedia, but these special projects are incomplete. The projects need more work to be done to implement features that are currently set up as a prototype. In addition, there is not yet a system to make the datasets themselves from the research and Venipedia explicitly available to the public.

2 THE VENICE PROJECT CENTER WEBSITE

The top of the Venice Project Center website consists of the Venice Project Center logo, a Worcester Polytechnic Logo, and a short blurb. Beneath is a set of menus and a horizontal bar of photos referred to as the filmstrip. These items exist on each page at the Venice Project Center domain, with the main content below. The filmstrip contains photos pertaining to the main content of the page and can scroll left or right to reveal more. When selected, information specific to that photo appears. The main page displays data on a map as well as a left panel contains Venipedia statistics and a short blurb about the Venice Project Center's accomplishments.

2.1 DATA

The data view shows datasets by location on a map. The film strip holds photos corresponding to the data points, and the map has a marker for each corresponding point. If you select a photo from the film strip, it will bring you to the corresponding marker as though you have selected it. When a marker is selected, either through the film strip or directly on the map, more information is displayed on the left. You can see the title of the data point, a larger view of the photograph, and a small selection of information. From there you also have the option to choose 'more info' to see all of the information we

have collected about that data point. This setup is the same for every dataset. However, the public art dataset has some exclusive functionality including a bar showing how much money is required to restore the piece and a feed on the right showing recently made donations. There are currently 22 datasets available on the website linked to this map.

2.2   VISUALIZATIONS

The Visualizations menu contains applications that allow the user to see and interact with the data. For example, in the Canal Hydrodynamics visualization, you can watch the data change over time. These visualizations navigate away from the main Venice Project Center page and take up the full view of the screen.
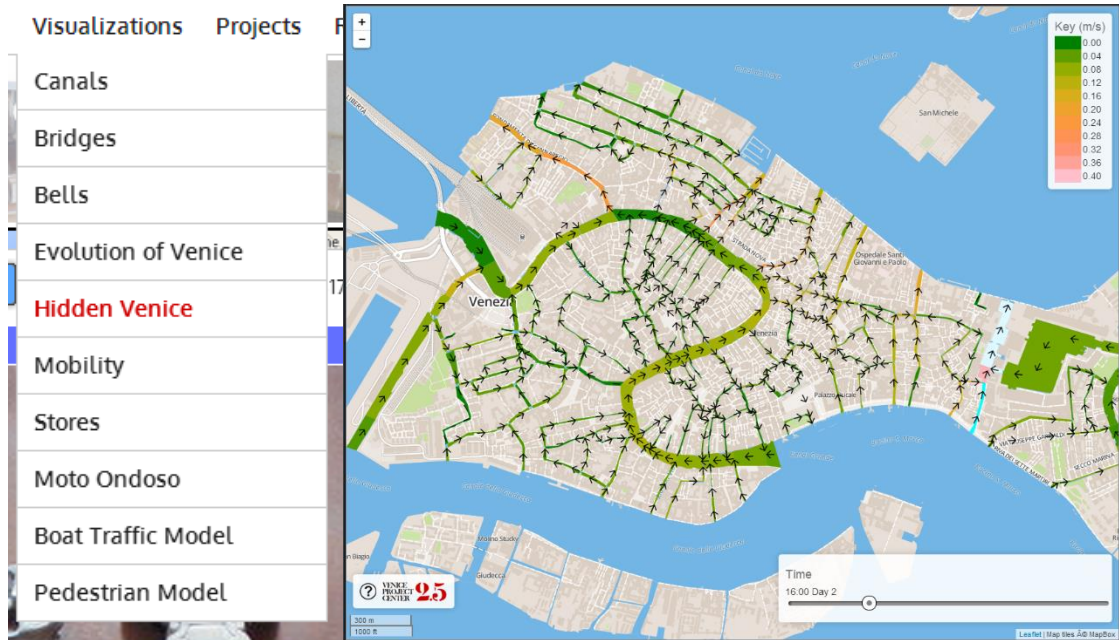
2.3 PROJECTS

Over the years some projects have accumulated so much work and data, that they have really taken on a life of their own. One example of this is the public art data. We have created such an extensive catalog of the public art in Venice, that we have been able to use it to create a non-profit organization for art restoration. These spin-offs are located in the Projects menu.

2.4 REPORTS

The Reports menu links to the list of WPI Reports. The WPI reports are held in a Venipedia page with links to PDFs of the full reports. This menu is set up to be able to house reports in addition to WPI Reports, but does not currently.

WPI student projects in the VPC office in Venice

2.5 ACCOMPLISHMENTS

The Accomplishments page contains information on the Venice Project Center's accomplishments. This page uses the film strip. The main content of the page is a list of accomplishment links. When an accomplishment is selected, text information as well as a larger version of the corresponding photo appears.

2.6 ACCOLADES

The Accolades page contains information about media attention that the project center has received. This page also utilizes the film strip, which shows pictures of magazine covers and media logos. It matches the setup of the Accomplishments page with a menu of accolades on the left. When an accolade is selected, a PDF reader of the article and any other additional information appears.
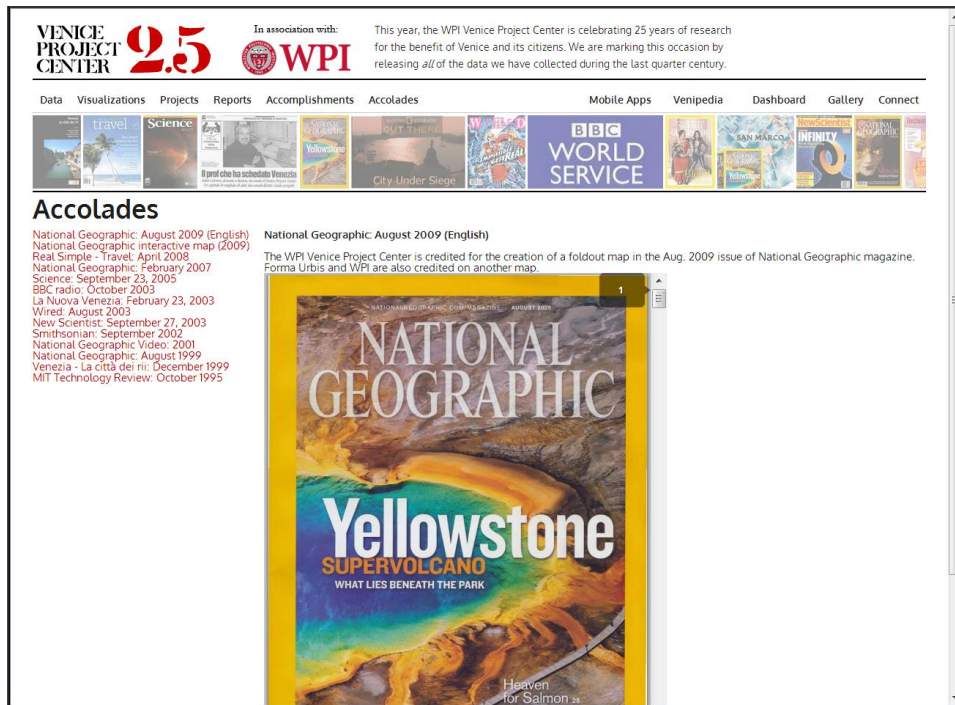
2.7 MOBILE APPS

The mobile applications menu shows all of the mobile applications that have been made by the Venice Project Center.

2.8 VENIPEDIA

This links directly to Venipedia, our wiki-based catalog of our data. Here you can view an object-by-object representation of the data.

2.9 DASHBOARD

This links directly to the Dashboard, where you can view live information about Venice.

2.10 GALLERY

The gallery is separated into three different categories- photographs, audio, and video. Here we keep media taken at the project site that may not be related to data, such as images of the teams working.

2.11 CONNECT

The connect menu contains different ways to connect with the project center itself, not just the data. You can access alumni information as well as all of the WPI teams' website and the preparation tools for the projects.
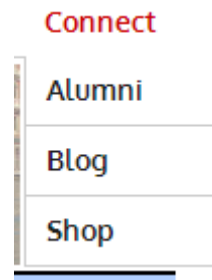
3 VENICE PROJECT CENTER DATA REPOSITORY

The Venice Project Center website displays all of the work that has been done at the center. It has links to each of the special projects such as the Dashboard, Venipedia, and various mobile applications that have been created. It also provides links to all WPI reports by the VPC. This website showcases the center and all of its work. Updates to the website will add automated sections such as a news widget or a blog to keep the website always changing and the center having a lively web presence.

3.1 THE CITY KNOWLEDGE CONSOLE

The City Knowledge Console is a tool that we created to manage our data. With this tool, you can upload your data all in one place and then access it from multiple. For example, you can upload all of your data on convents to the console. Once the convent data is on the console, you can use that data on the website in the data view, in your mobile application, and in the corresponding Venipedia pages.

3.2 UPGRADING THE DESIGN

The first step in upgrading the website was to convert pages still held by the Venice 2.0 domain to the Venice Project Center domain. There were two pages that needed conversion: Accolades and

Accomplishments. Each of these pages was created using AngularJS and the City Knowledge Console. The information for each page was uploaded into the console with a title, a description, photos for the film strip, and the corresponding PDF or image. The website then pulls the datasets from the console, and automatically generates the code for each Accomplishment or Accolade. Since there is no accomplishment or accolade specific code, the contents of these pages can be changed and maintained directly on the console.

Then we prepared the website to have all of the new work added to it. Originally we primarily just had Public Art data sets on the website, viewable on a map. From this view you could donate to the restoration of the art piece, view photos, and view recent donations made to nearby art. After 25 years of research, we have collected many other types of data in addition to the catalog of Public Art pieces. However, the current formatting did not easily allow for other datasets. A canal segment does not receive donations for restoration and therefore a restoration bar and info box for recent donations is not appropriate. To support these additional types of data, the map view needed to be changed. We worked with Benny Lichtner and our advisor Fabio Carrera on trying to create a new design.
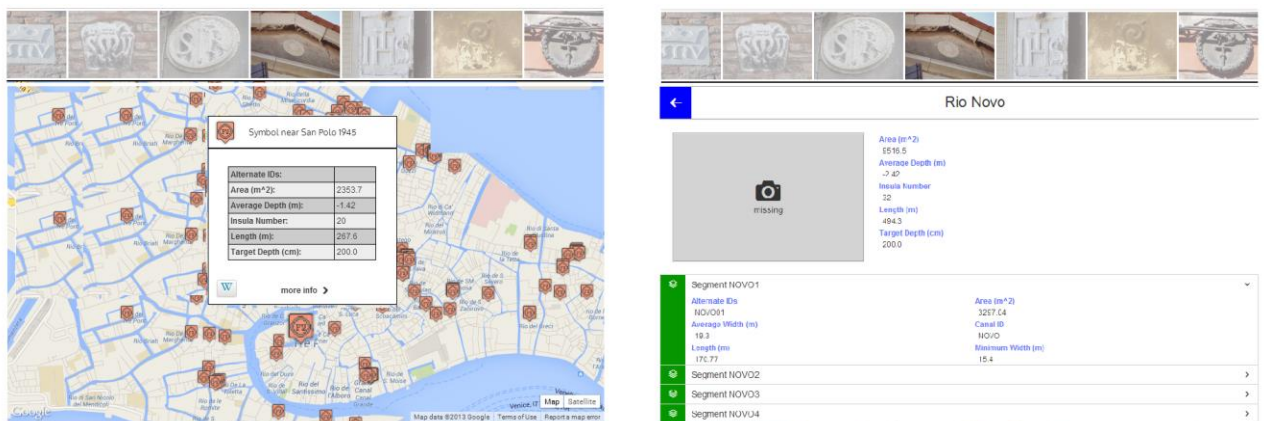
3.3 ASSISTING OTHER TEAMS

Our team acted as a resource to the other teams. We organized the addition of content to the console and to the Venice Project Center website in coordination with Kyle Miller and Benny Lichtner. If teams needed help uploading their data to the console we assisted and, once the data was uploaded, we approved it and officially added it to the website. In addition, we managed the distribution of necessary subdomains and web credentials held by the Venice Project Center, and set up Google Analytics for the website and the Venice City Dashboard.

We also created and distributed a standard for how to add the appropriate acknowledgements and information to the web applications that were created this year. This consisted of placement of the Venice Project Center logo, the WPI logo, and a pop-up for information about the application. We wrote and distributed the code so that it would be consistent across applications and other students could easily add the functionality on their own.

3.4 CREATING APPLICATIONS

The team also assisted the Demographics team by creating a Venice Stores Application. This application shows different stores data throughout the years. The user can filter through the data by type or year the data was collected. The user also has the option to "View Current Stores" which shows stores that were known to exist in 2011 and 2012. At any point while viewing the stores data, the user can toggle on an off a heat map. The heat map shows where the concentration of stores is greater.
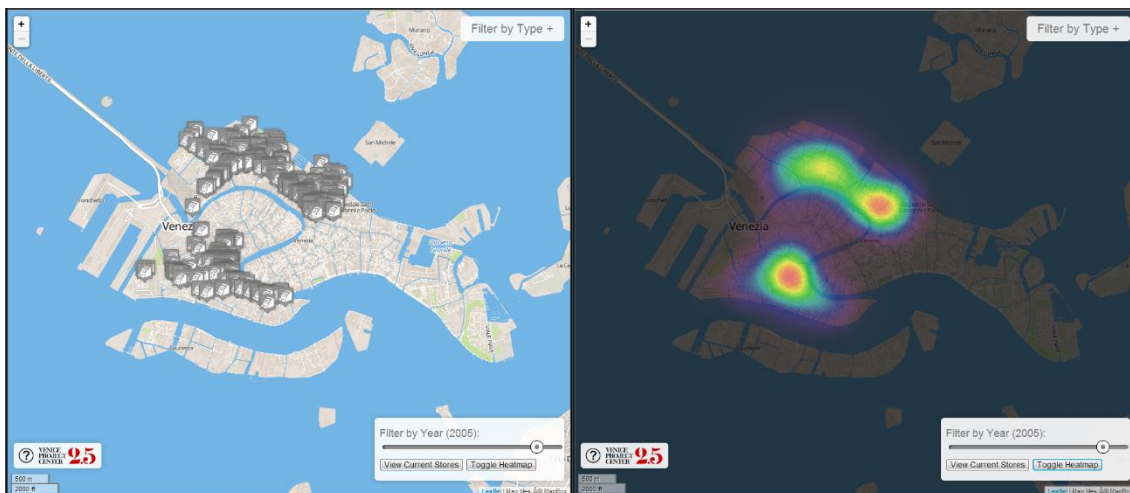
The team also created an application that shows the raised walkways throughout Venice. The application shows a map of Venice. A slider in the bottom right of the screen displays the tide. As the

slider changes, the map shows how flooded Venice would be at the current tide level. It also shows what walkways would be up throughout Venice at the current tide level.
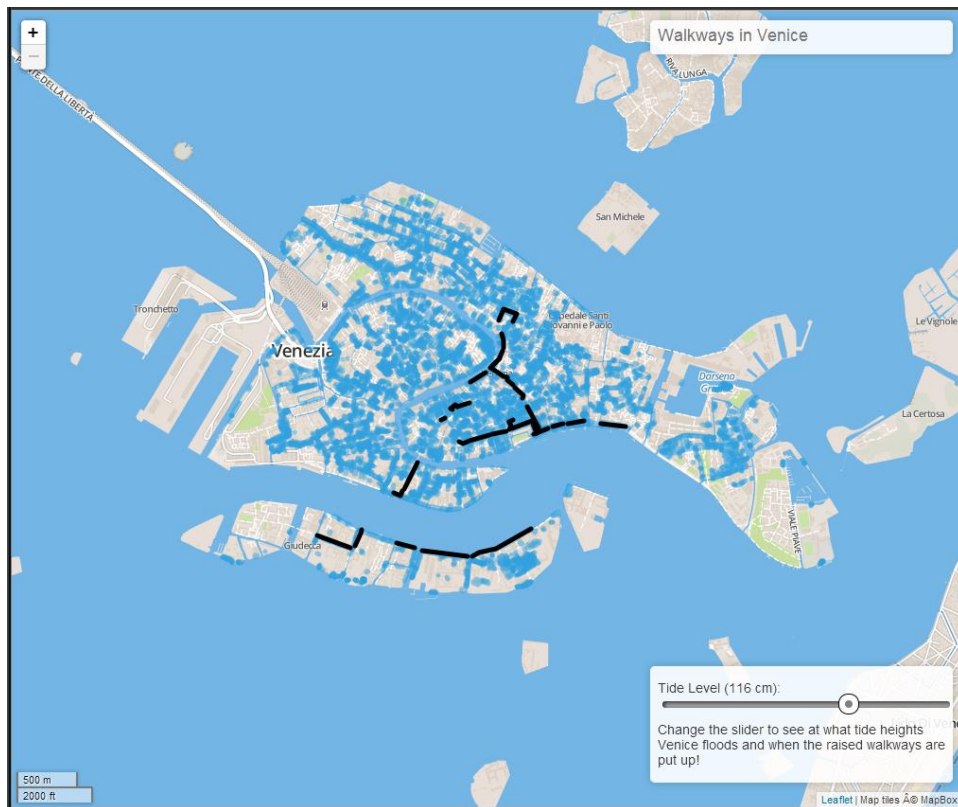
3.5   RESULTS AND RECOMMENDATIONS

Many changes were made to the website. The menu system was restructured, the map view was redesigned, and two new pages were created. In addition, we were able to add 11 visualizations, 9 datasets, 2 projects, and 1 mobile application to the site, but there is still more that can be done.

3.5.1   Homepage

Currently the homepage has a pane containing Venipedia statistics and some information about the Venice Project Center overlaid on the map. This information is static and could be replaced with something more interesting and dynamic. One suggestion is to put a blog feed there, combining the feeds from all of the current teams blogs as well as the blogs of the advisors. This can be done by creating a combined feed. The Venice Project Center has an account on FeedRinse which can be used for this purpose.

3.5.2   Reports

The reports link currently goes to a Venipedia page list of projects that have been done. This list includes a link to a PDF version of the report, if there is one. Now that the teams are creating google sites for their projects, the list should include links to these sites as well.

3.5.3   Accomplishments

The Accomplishments page has a very small list of accomplishments with very limited information. The accomplishments should be reviewed to see if more information can be added or if there are more accomplishments that could be added to the page. The filmstrip on this page either needs more photos or to repeat the photos. There are not enough to fill the bar with one photo per accomplishment and it leaves white space. Currently there are placeholder photos to remedy this.

3.5.4   The Gallery

The gallery on the website currently goes to a Venice 2.0 page. This gallery should be converted to a Venice 2.5 page. This will require either moving the gallery, or entirely redesigning it. A suggestion would be to display the gallery in a Venice Project Center page instead of a separate site. The filmstrip would pull photos from a random albums or a selection of photos from all of the albums. The content would should the album covers and if you selected a cover, the photos would appear, all within the main content area of a Venice Project Center page.

4 DASHBOARD
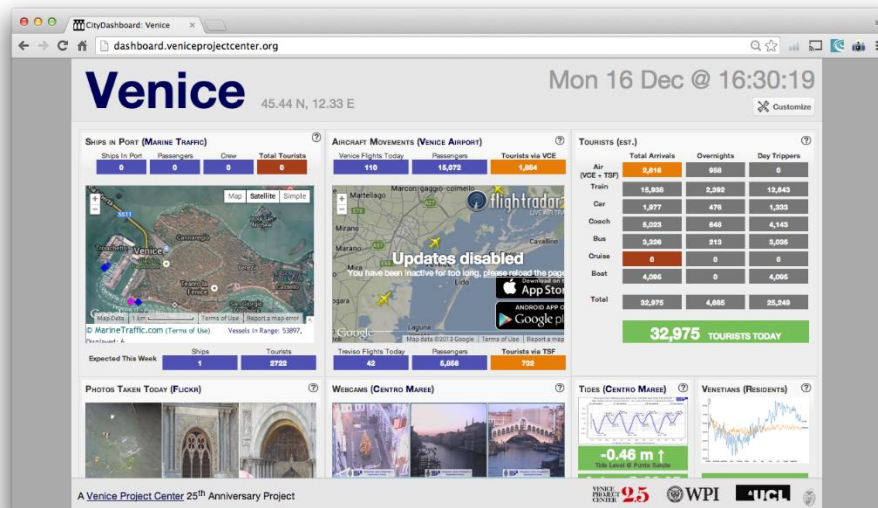
The Venice Dashboard is an online web application developed in order to display information about Venice in real time. Its inspiration comes from London's Global University (UCL) who created a real time online dashboard for the city of London, which can be seen at http://citydashboard.org. Our dashboard is like a live digital newspaper for use by both Venetians and tourists.

The dashboard is composed of individual modules, or widgets, that each display different pieces of real time information about Venice. Along with the widgets, a banner can be displayed across the top of the page to alert the user of an important event such as Actv boat cancellations. Details on the internal structure of the dashboard can be viewed in the appendix.

4.1 DEMOGRAPHICS

The ships widget, developed by the B13 Demographics Team, displays information about ship arrivals in Venice. It shows the number of cruise ships that have arrived for the day, the number of crew members on that ship, and the number of passengers. It also looks ahead and shows the number of cruise ships and passengers expected for the rest of the week. The information is gathered by querying a cruise ship itinerary stored on the server to determine which ships have arrived or are expected. These ships are then cross referenced with another table that contains each ship's crew and passenger count. Along with this information about cruise ships, the widget contains an embedded interactive

map that shows other ship types currently in Venice. This map can be zoomed and panned around and clicking on a ship icon reveals more information about it.

Also developed by the B13 Demographics team is this widget that displays information about aircraft arrivals for Marco Polo Airport (VCE) and Treviso Airport (TSF). For each airport it displays the number of flights that have arrived so far for the day, the number of passengers on those flights, and the estimated number of tourists going to Venice. This widget gathers this information by scraping data from different web resources every hour. For the Marco Polo flights it first gathers a list of flights from FlightRadar24.com and determines which flights have arrived so far. The plane type from the flight data is then cross referenced with a table of known flight capacities gathered from SeatMaestro.com to determine the number of passengers on board. The number of tourists going to Venice is calculated by multiplying the passenger count by a ratio determined by past IQP groups that performed studies at Marco Polo airport. The data for Treviso Airport is estimated by using a ratio determined from a Coses tourism report that compares arrival statistics from both airports (see Appendix B for report). Along with the flights data, there is an interactive embedded map similar to the ships widget, that shows the planes flying to and from Marco Polo airport in real time.

TOURISTS (EST.)			
	Total Arrivals	Overnights	Day Trippers
Air (VCE + TSF)	2,587	946	0
Train	15,938	2,392	12,643
Car	1,977	476	1,333
Coach	5,023	648	4,143
Bus	3,326	213	3,035
Cruise	0	0	0
Boat	4,095	0	4,095
Total	32,946	4,675	25,249

32,946 TOURIST ARRIVALS TODAY

The arrival counts from the ships and flights widgets are compared to data from the Coses tourists report to estimate the tourist arrivals by other means of transportation as well. The tourists widget displays the tourist arrivals via cruise ship, flights, train, car, tour bus, local bus, and boat for the current day. Along with the arrivals is the portion of those that stay overnight and the number of tourists who only stay the day.
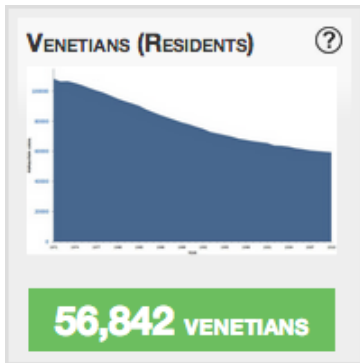
The population widget simply displays the current population of Venice. This is interesting to know because the population has been steadily declining since the 1970's, while the number of tourists is rising. The City of Venice's Statistics Office has an online interactive map that allows you to select a region and view the current population. The dashboard has a script that runs every morning to gather the current population of Venice from this map. Above the displayed population is a graph of past population data which shows the trend of the declining number of Venetians.

4.2   VENICE PHOTOS
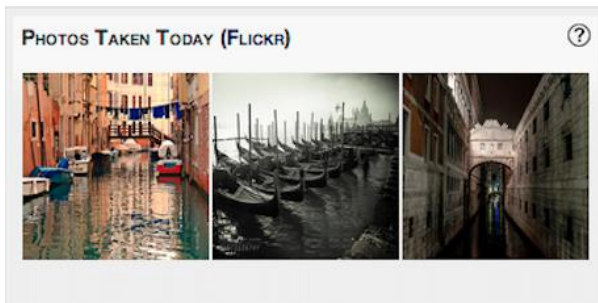
The photos widget contains a slideshow of photos taken recently in Venice. Every hour a script is run that grabs the latest 20 photos from Flickr.com that were taken in Venice and stores them on the dashboard server. These thumbnails of these photos are displayed three at a time and are cycled through every 5 seconds. Clicking on a photo enlarges it to its full size as a popup over the dashboard.

Similar to the photos widget, the webcams widget displays different webcam feeds from throughout Venice. Displayed three at a time, webcam stills are shown from San Marco, Salute, Murano, and Rialto. These allow people to get a glimpse of what is going on throughout the city. The webcam images are taken directly from the City of Venice's website. Similar to the photos widget, clicking on a webcam thumbnail enlarges it to its full size.

4.3   TIDE AND WEATHER FORECASE
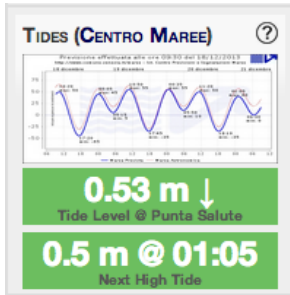
Perhaps one of the most useful widgets on the dashboard is this one that displays live information about the tides in Venice. The tide levels are important to know because Venice floods occasionally, and it is useful to be prepared for the flooding. On the contrary, tide levels can drop to dangerously low levels. If the tide level is too low then boats cannot move through the canals, which is especially hazardous for emergency boats.

The top of the widget contains a detailed graph of a 72-hour forecast of predicted tide levels. Clicking this graph enlarges it to its full size. Under this the current tide level is displayed in reference to Punta Salute, which is the sea level recorded in 1970. Since this number may be hard to interpret, the box is color coded according to the severity. For example, a normal tide level is colored green while higher tide levels may be colored yellow, orange, or red. In cases of high tides, some public transportation boat routes can be suspended or rerouted so a banner is shown across the top of the page to indicate this information. Low tide levels are indicated by blue, or white in extreme cases. Along with the tide height is an arrow pointing up or down to indicate if the tide level is currently rising or falling. Underneath this box is a similar box indicating the time and height of the next highest tide for the day, which is also color coded. All of this information is gathered every five minutes from the Centro Maree website, which monitors and forecasts the tide levels.
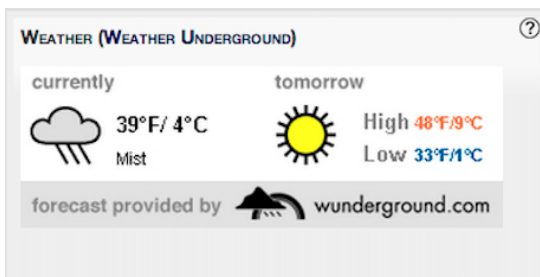
There is also a weather widget that displays a graphic containing the current weather and the forecasted weather for the next day. This is a widget provided by WeatherUnderground.com. In addition to this widget, a banner is displayed across the top of the page if the visibility is too low. This causes some public boat transportation routes to stop running and the dashboard warns users

accordingly. The visibility information is scraped from IlMeteto.com every 20 minutes and the notice is displayed if the visibility is below 150 meters.

4.4   WHAT'S HAPPENING IN VENICE

The news widget contains the latest articles from the Venice section of IlGazzettino.com. The website provides an RSS feed which the dashboard parses the articles from. The latest five articles are displayed one at a time and are rotated through. Each article displays its title as a link as well as the article's main image. This is useful to see any important news reported in Venice.

In addition, there is a that widget highlights some trending topics that show up in the daily Venice news. The trending topics are displayed as a word cloud, highlighting frequently used topics. Each morning the dashboard grabs all the Venice articles from the previously mentioned Il Gazzettino RSS feed. The script visits each article URL and extracts the tags associated with each article. Once it has a list of tags gathered it uses a data visualization Javascript library called D3.js to produce a word cloud form the list of article topics. This allows readers to know what's going on in the news at a glance.
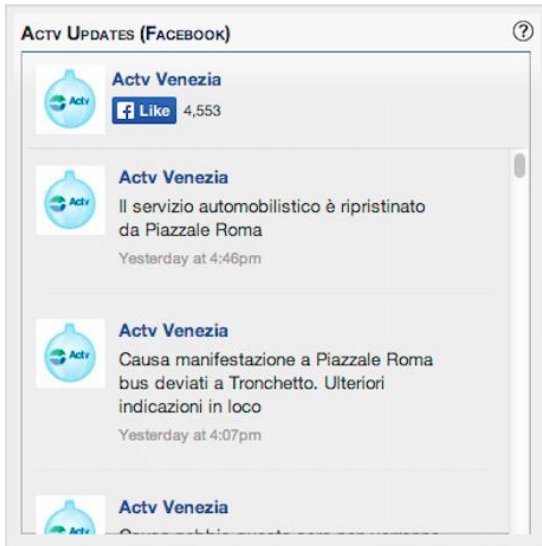
Another widget contains the Facebook timeline of the Actv, the company that runs public transportation in Venice. This is useful to see any important announcements made, such as boat route cancellations due to low visibility or high tide. Occasionally the Actv also performs strikes and shuts down transportation for several hours, and this is useful to catch on their Facebook feed so you can find out more details. This uses the official Facebook embedded HTML widget.

Similar to the Actv widget, there is a widget that contains updates from the City of Venice but from their Twitter feed. Here you can find any important announcements from the city such as special events going on. This uses the official Twitter embedded HTML widget.
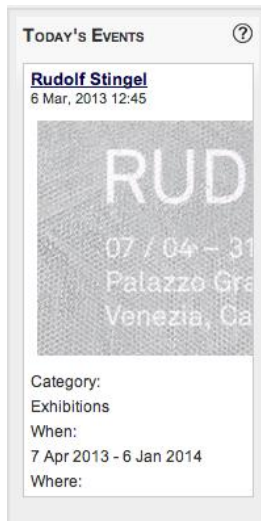
Lastly the events widget highlights any cool events going on in Venice in the near future. These events are taken from an RSS feed provided by the City of Venice. The events are displayed using a tool from RSSInclude.com rotates through RSS feed entries.

4.5 RECOMMENDATIONS

Our group has laid the groundwork for the Venice dashboard, but there are still features that should be implemented in the future. Below is a list of such recommendations.

- Allow a user to save a custom layout configuration. The widgets are draggable and can save their configuration using Gridster.js but this has not been implemented.
- Allow the user to add additional widgets to the dashboard and remove unwanted widgets.
- Develop a script to gather the current number of hotel stays in Venice, to make the tourists report more accurate.

5 VENICE PROJECT CENTER MOBILE APPLICATION

To promote what the VPC does we created a mobile application that tourists and Venetians can use in and around Venice. Our hope with this application is to make all of the VPC's mobile applications available all in one place.

5.1   PREVIOUS MOBILE APPLICATIONS MADE AT THE VENICE PROJECT CENTER

Mobile applications has changed how users interact with technology. The Venice Project Center has taken advantage of this by creating many different mobile and web applications. Each of these applications have changed how the VPC has been able to collect information from people. With the use of applications such as VeniceNoise and PreserVenice people can contribute directly to the VPC with their smartphone or any other internet device.

VeniceNoise is a tool developed by the Venice Project Center in 2011 which analyzes the sound in and around Venice. This tool allows citizens to report noise problems in the city. A mobile application was created to allow users to upload noise to the VeniceNoise website. The website then analyzes the noise sample to display an interactive version of the sound. This interactive version can be played directly from the website. With the use of the mobile application the user can contribute to the VPC[1].

"PreserVenice is a nonprofit organization dedicated to the restoration of Venetian public art"[2]. This organization was created in 2009 and updated in several different projects. One of these updates was creating a mobile application that allows a user view and donate to different pieces of art. This application uses a user's location to provide them with information about what art pieces are around them and what pieces can be donated to.

5.2   MAKING THE VENICE PROJECT CENTER MOBILE

5.2.1   Designing VPC Mobile

The primary objective of the mobile application design is to provide the user with the exact data they want as soon as possible. Our secondary objective is to obtain data from the users that would be not be obtrusive to the user and beneficial to the VPC.

5.2.1.1   The Home Page

The vision of the home page is to have a similar content as the VPC dashboard. A page with customizable cards that would provide the user with the exact data they are interested in. These cards would pull data from the dashboard's widgets such as the tide information and boat routs. From a settings menu the user can decide what card(s) will appear on the home page.

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[1] (Calamari, et al. 2011)
[2] (Bezek, et al. 2009)

5.2.1.2   *Notifications*

The user will be able to set notifications that are useful to them individually. There will be notifications that provide information about the tide changes and changes in boat routs. Notifications allow users to benefit from the application by giving the user exact information they need.

5.2.1.3   *Getting User Data*

One future project is to get user data that would benefit the VPC. Getting data from users would allow the VPC to collect more information that could be used in future projects. One example would be if a user of the mobile app gets into a boat the app would be able to send the user asking to collect data about the water in that canal. There are many different situations where the VPC could use data provided by users.

5.2.1.4   *Positive Adds*

Another future project for the app is to incorporate adds to benefit the VPC and other special projects. PreserVenice is one special project that could benefit from this use. When a user is near a piece of art that exists in the PreserVenice app the user will get a pop up message asking them if they would be interested in donating to help preserve the piece. The user could choose to help donate which would in turn launch the PreserVenice app or the user could choose not to donate.

5.2.2   Making the App

VPC Mobile was designed to make a user experience that allowed someone to view data created by the VPC in a mobile platform. To create this experience we used JQuery Mobile as a template and added upon it.

5.2.2.1   *Mobile Dashboard*

We took the dashboard and incorporated it for a mobile view. Each widget was given a mobile view. Then we choose which widgets worked best on the mobile view.
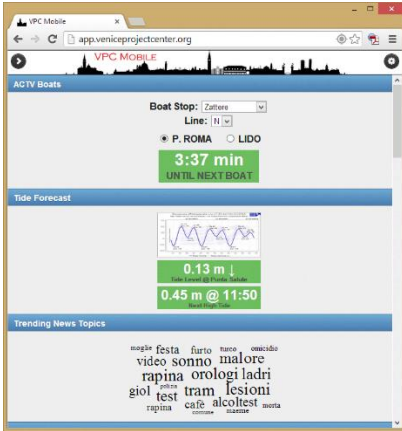
Figure 1 Screenshot of VPC Mobile Dashboard

5.2.2.1.1   Demographics

We revised the tourist widget, aircraft widget, ship widget, and population widget. Each of these widgets have been styled to fit better on smaller screens.

The aircraft widget and ship widget do not have the maps within the widget. However each of them show the same information. This allows the user to receive only the information that they would need not any extra.

Figure 2 Screenshot of Aircraft and Ship widget

The tourist widget and population widget have also been changed to provide a better view. As you can see from the figures, each widget is extremely easy to read.
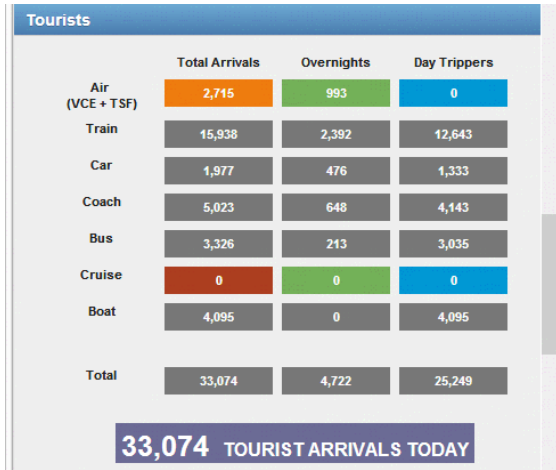
Figure 3 Screenshot of Population Widget
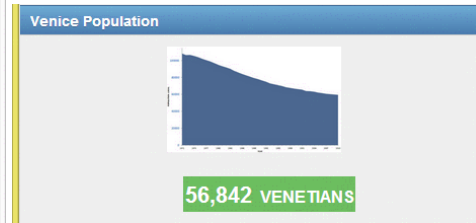
Figure 4 Screenshot of Tourists Widget

5.2.2.1.2   Tide and Weather Forecast

The widgets that we chose to place on Mobile Dashboard were chosen because of their importance. Two of these widget are the tide widget and the weather widget. These are of extreme importance due to the flooding in Venice. The weather or the tide can drastically change one's day. That is the reason the tide widget is the second widget in the list.
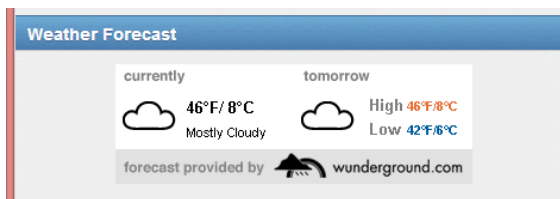
Figure 5 Screenshot of Weather Widget

Figure 6 Screenshot of Tide Forecast Widget

5.2.2.1.3   What's Happening in Venice

It is very important for people to know current events in Venice, not to just stay informed but to know if there are any announcements. Announcements can inform people about boat changes as well as city events. Having news headlines and trending news topics allow users to know brief information about the city. Looking at ACTV's Twitter and the city of Venice's Facebook feeds are a great way for this information to be transferred directly to the user.

Figure 7 Screenshot of News and Trending News Topics Widgets

Figure 8 Screenshot of Twitter Widget

Figure 9 Screenshot of ACTV Facebook Widget

5.2.2.1.4   ACTV Boat Widget

One widget that is on the mobile dashboard is the ACTV boat counter. This widget counts down the time until the next boat at a given stop for a given line. Working in tandem with other VPC apps this widget gives the user the precise information they need to get to the correct boat.
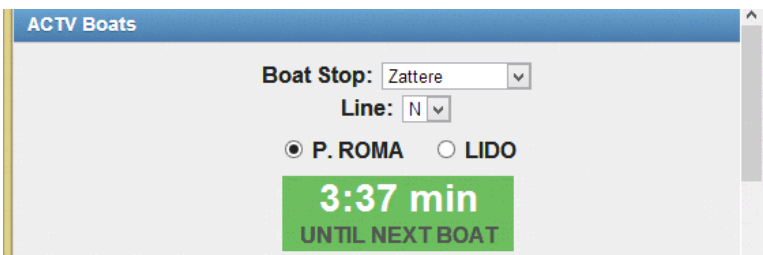
Figure 10 Screenshot of ACTV Boat Widget

5.2.2.2   *Side App Menu*

As the VPC creates more applications it is necessary to place them in a single location for easy access. The Side App Menu is just for that. This Menu has a complete list of apps that have been created

at the VPC. Each app on the list has its own icon and will bring the user to the app's page. Each app when loaded will still be within the VPC Mobile app.
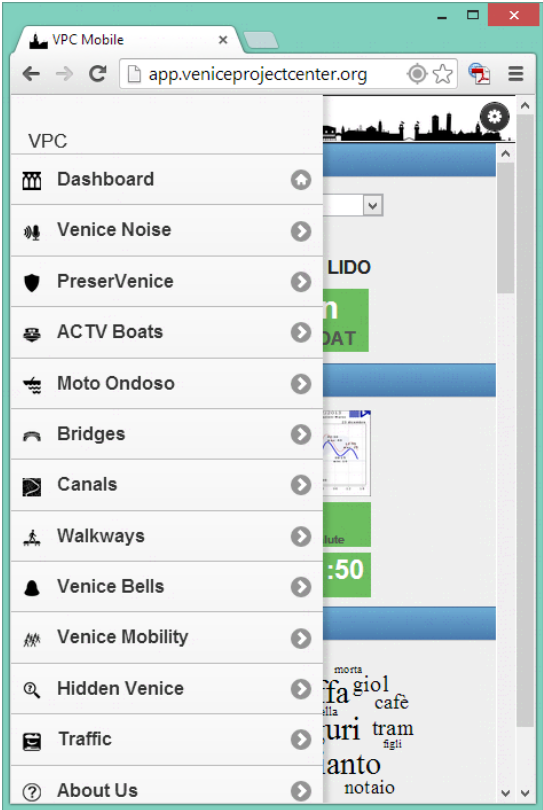
Figure 11 Screenshot of Side App Menu

5.3 RECOMMENDATIONS

Even with the large amount of work we did there is always more to do and there is even more where the application can improve. With the use of JQuery and JQuery-Mobile, it is imperative that the application remains up to date with newer versions and other changes. Work can be made on creating a general settings menu and page that would control all app settings. In the Mobile Dashboard something that could be done is making the widgets removable. Making VeniceNoise into a web app would allow VeniceNoise to work successfully within the VPC app.

6 CROWDFUNDING CAMPAIGN

Goal: To develop a plan for the sustainable upkeep of the Venice Project Center's applications and other special projects.

Over the past 25 years, the Venice Project Center has hosted 179 projects performed by 645 students. Our group realizes the importance of the tools past projects have started to develop. Unfortunately, with our organization's current standing we lack the funds to support such a useful endeavor. These projects need the financial backing to become developed into a self-sufficient application. Through crowdsourcing, our team focused on funding PreserVenice and uScript. Though Venipedia falls under 'Special Projects', our Center plans to crowdfund the useful wiki in the future. Our group identified crowdfunding sources, developed a proposal, and then completed everything necessary to launch the PreserVenice crowdfunding platform.

6.1 SPECIAL PROJECTS

6.1.1 PreserVenice

PreserVenice is a non-profit organization based in Venice, Italy that focuses on the preservation and restoration of art in Venice. The organization strives to identify at-risk public art objects and raise sufficient funds to restore them. Twenty-two projects completed through the Venice Project Center have contributed to this effort. The organization has been building and maintaining a catalog of public art pieces since 1991 in conjunction with Venipedia and the data from this catalog has been available since 2004. Gabriele Zortea, a Venetian graduate, has volunteered to be the one-man staff of the organization. He has the job of monitoring and accepting donations, hiring a contractor, and then making sure the work is completed.
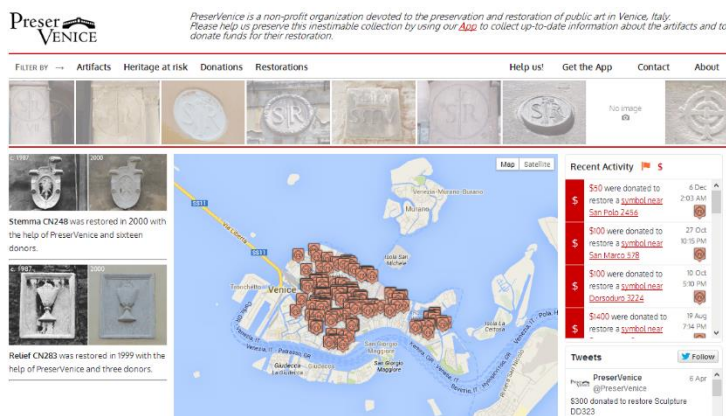
Figure 12: Screenshot of PreserVenice

Currently the organization has both a website and a mobile application. Through these tools, the goal is to allow users to see information on each artifact, how much money is still needed for restoration, and donate to the project. A prototype of this system has been created that works as an interactive map. The map contains markers for each piece of public art categorized by type of object. The user can click on a marker and

see a photo of the artifact if one is cataloged as well as how much money is needed to fund restoration and how much has already been donated. From this place, there are four possible actions that can be taken: the user can mark it as a 'favorite' artifact, the user can find directions to or from the artifact, more information can be viewed through the related Venipedia page, or the user can donate to the project. The system does not yet support real donations, but mimics a live donation system instead.

Our team mainly focused on PreserVenice, given is the most feasible campaign to launch. We first determined the needs of the project. Our conclusion was that PreserVenice needs a crowdfunding platform as a catalyst to pay for the starting costs of such a demanding job. A minimum of €20,000 had to be collected so that Mr. Zortea, the main beneficiary, can perform his duties for the project. Given the needs, our team developed a proposal that broke the project into 14 weeks: 8 were to prepare and identify the needs of both PreserVenice and the crowdfunding platform, 4 weeks were to prepare crowdfunding content, and the last 3 weeks would focus on launching the campaign.

6.1.2 UScript

uScript is a piece of software designed to digitize handwritten transcripts. The goal of this software is to implement a mechanism that captures the entirety of written records. This system will provide the world with an electronic repository of transcriptions that can be shared, searched, and analyzed. As technology increases many printed books and large manuscripts are manually transcribed or scanned as images. However with uScript historical research will advance significantly. Many individual documents that may seem unimportant day-to-day affairs such as birth and death records, reports, and other local events have been left out of this technological advantage. These manuscripts taken as a whole can provide great information on entire civilizations. Currently uScript has been underfunded and has not been completed. With the current status the software is in uScript still has a promising future. The system can recognize words in the handwritten text. After ten years of development uScript still is not quite ready for optimized usage.
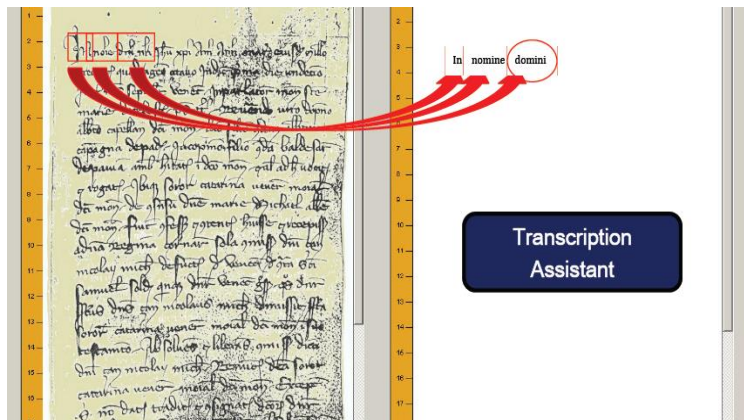
Figure 13: Screenshot of uScript

Our team focused less on uScript, given Gabriele Zortea has committed to PreserVenice. We first determined the needs of the project. Our conclusion was that uScript needs a crowdfunding platform as

a catalyst to pay for the starting costs of such a demanding job. A minimum of $300,000 had to be collected so that a software engineer could fix the many issues with uScript. Given the needs, our team developed a proposal that broke the project into 14 weeks: 8 were to prepare and identify the needs of both uScript and the crowdfunding platform, 4 weeks were to prepare crowdfunding content, and the last 3 weeks would focus on launching the campaign.

6.1.3   Venipedia

Venipedia is an "English language data-driven wiki dedicated to Venice"[3]. This website is a content management system that utilizes a wiki engine to provide specific information and data about Venice, Italy. This resource promotes collaboration and provides in-depth information relevant to scientists, academics, professionals, and public officials that goes beyond general information found in other websites. The site is designed to continue to develop according to the needs of its users by allowing them to be contributing members[4]. Information provided under a Non-Commercial ShareAlike License provides the public with detailed data organized using over 200 categories that are group by portals including: economy & society, history & geography, people & institutions.

Venipedia was created in April 2008 as part of the 20th year anniversary of the VPC. Over the twenty years, the VPC had accumulated a considerable amount of information from the numerous projects that had been completed. This was the catalyst for the launch of Venipedia. The new site allowed for specific data collection and collaboration among the English speaking public. In 2010, the website was restructured to provide a systematic user-friendly layout[5]. In 2012, the site was again re-visited by an IQP team. The focus of the project was to elevate the site of spam and inconsistencies. The website was moved to a different domain, templates were created for consistent layout, and a plan was established to validate contributions to the site[6].

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[3] (Bobell, et al. 2012)
[4] (Finelli, O'Brien and Scannell 2010)
[5] (Finelli, O'Brien and Scannell 2010)
[6] (Bobell, et al. 2012)

Since the creation of Venipedia, the site has provided detailed information to its target users and

has been utilized by Venice IQP teams to share raw data and collaborate on their discoveries. As of October 2013, Venipedia has over 8,000 individual pages and 12 registered users. The continued use of the site is illustrated by the 273,871 times it has been viewed. The site continues to develop as shown by the 32,709 times it has been edited.[7]

Figure 14: Screenshot of Venipedia

Our team focused less on Venipedia, given the need of automating the wiki is outweighed by PreserVenice and uScript. We first determined the needs of the project. Our conclusion was that Venipedia needs a crowdfunding platform to pay for the programming involved. A minimum of $15,000 had to be collected so that Ben Lichtner could fix the issues with Venipedia. Given the needs, our team developed a proposal that broke the project into 14 weeks: 8 were to prepare and identify the needs of both uScript and the crowdfunding platform, 4 weeks were to prepare crowdfunding content, and the last 3 weeks would focus on launching the campaign.

6.2   THE CROWDFUNDING PROCESS

6.2.1   Completing PreserVenice

In order to identify the crowdfunding platform, the team made an Excel spreadsheet to compare 11 different services. This included how the site works, success rate of the projects, popularity, topics covered, and much more. After recording and explaining the statistics, we made the spreadsheet interactive so that colleagues could pick a weight depending on each category. These weights would be calculated along with the statistics to scientifically select the best platform. 3 of our 4 team members filled it out to show how
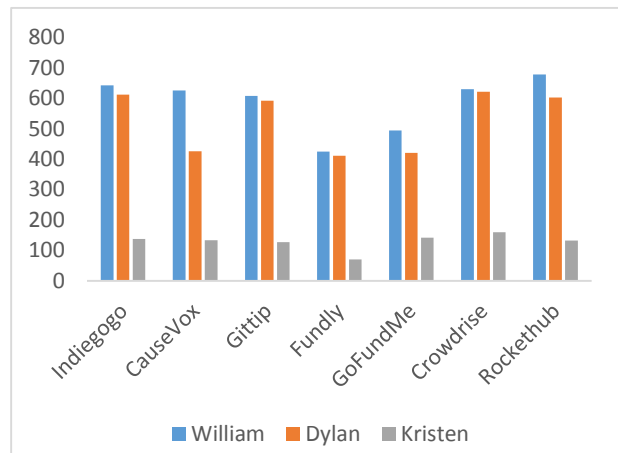
Figure 15: PreserVenice Crowdfund Selection

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[7] (Venipedia Statistics n.d.)

each crowdfund faired. Crowdrise had the most positive results, getting most of the vote. As you can see, though the form was filled out differently from all 3 team members, the trend continued.

In the Excel Spreadsheet, the group also made a category of projects similar to PreserVenice. We found 10 art restoration projects that are similar, a lot of which were able to raise over $5,000. No direct match was made, as PreserVenice is a particularly unique project. Our group realized that €20,000 was unreasonable to ask of a crowdfunding project. We decided that in order to raise the success rate of our campaign to ask for $5,000. It is a reasonable offer and asking for less money brings a greater chance of being able to fund Gabriele's PreserVenice endeavors. To further increase the chance of success, rather than choosing Crowdrise, our team to keep it simple and host PreserVenice on Kickstarter. The most well-known and successful crowdfunding platform, the site has competitive rates and has hosted a number of "crowdfunding as a catalyst" projects.
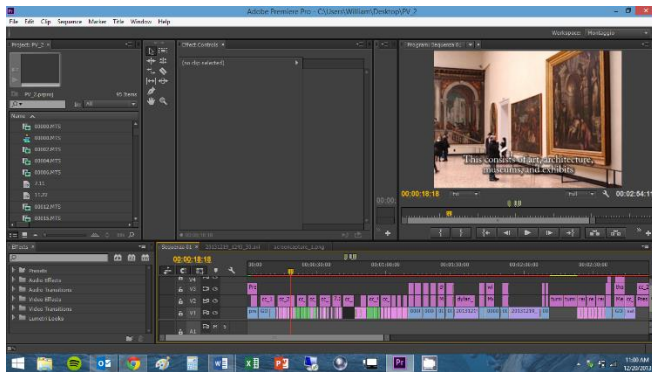
Figure 16: Screenshot of Adobe Premier Pro CC

Given the platform and the demands of both PreserVenice and Kickstarter, our team went to develop content that is suitable for our campaign. This involved a pitch detailing the information and needs of PreserVenice, along with an "About Me" for Gabriele Zortea. The group also determined rewards for donating at certain amounts. Kickstarter requires a video in order for the project to be published, so our team went about creating one. With research, our team found that filming artifacts from an angle of the audience, and an angle from the artifact will give an interesting perspective to the crowdfunding video. This was based off of an idea seen on Hello Lamp Post, an interesting insight to everyday objects.[8] Through over 10 revisions and 90 hours of work, the video was finally produced. Complete with background music and voice overs, our team used Adobe Premier Pro Creative Cloud.

Though our team went 3 weeks over schedule with developing a video and content for the PreserVenice with the many tedious revisions, all of the content needed to launch a crowdfund was successfully developed . Though we are not able to see the results before completing our project, we cannot wait to see how it turns out. When presented with an incomplete draft with only background

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[8] http://www.hellolamppost.co.uk/

music at the UNESCO presentations, the audience received the video quite well. Chris Wayman, a retired investment banker from England called the crowdfunding plan, "Brilliant".[9]

6.2.2   Building uScript

In order to identify the crowdfunding platform, the team made an Excel spreadsheet to compare 11 different services. This included how the site works, success rate of the projects, popularity, topics covered, and much more. After recording and explaining the statistics, we made the spreadsheet interactive so that colleagues could pick a weight depending on each category. These weights would be calculated along with the statistics to scientifically select the best platform. 3 of our 4 team members filled it out to show how each crowdfund faired. Indiegogo and Razoo had the most positive results, with Rockethub coming in at third. As you can see, though the form was filled out differently from all 3 team members, the trend continued.
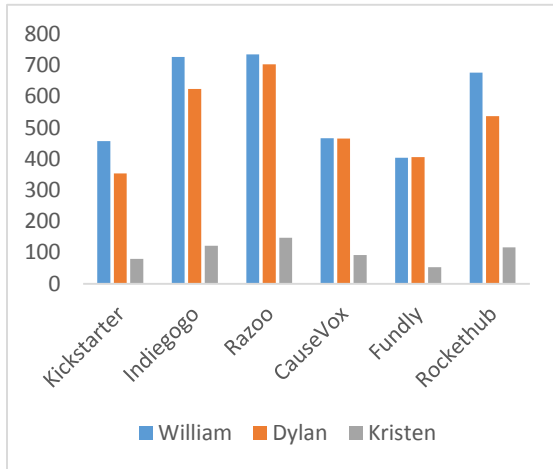
Figure 17: uScript Crowdfund Selection

In the Excel Spreadsheet, the group also made a category of projects similar to uScript. We found similar transcription projects, coming from the University of Delaware and University College London. Unfortunately, we could not get funding information as these were privately sponsored by their respective universities. Our group realized that $300,000 was unreasonable to ask of a crowdfunding project. We decided that in order to raise the success rate of our campaign to ask for $5,000. It is a reasonable offer and asking for less money brings a greater chance of being able to fund the project. The $5,000 will go towards paying a third-party company to create crowdfunding video. To further increase the chance of success, rather than choosing Indiegogo or Razoo, our team to keep it simple and host PreserVenice on Kickstarter. The most well-known and successful crowdfunding platform, the site has competitive rates and has hosted a number of "crowdfunding as a catalyst" projects.

Given the platform and the demands of both uScript and Kickstarter, our team went to develop content that is suitable for our campaign. This involved a pitch detailing the information and needs of uScript, along with an "About Me" for Fabio Carrera. Kickstarter requires a video in order for the project to be published, so our team went about creating one. With advice from our advisor, we decided to

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[9] (Wayman 2013)

make a "stop picture" animation that would creatively capture the uniqueness of uScript in an entertaining way. With the script, storyboard, and some scenes completed, our team provided effort in providing a vision and content.

6.2.3 Preparing Venipedia

In order to identify the crowdfunding platform, the team made an Excel spreadsheet to compare 11 different services. This included how the site works, success rate of the projects, popularity, topics covered, and much more. After recording and explaining the statistics, we made the spreadsheet interactive so that colleagues could pick a weight depending on each category. These weights would be calculated along with the statistics to scientifically select the best platform. 3 of our 4 team members filled it out to show how each crowdfund faired. Rockethub was the clear outlier of the three appropriate websites. As you can see, though the form was filled out differently from all 3 team members, the trend continued.
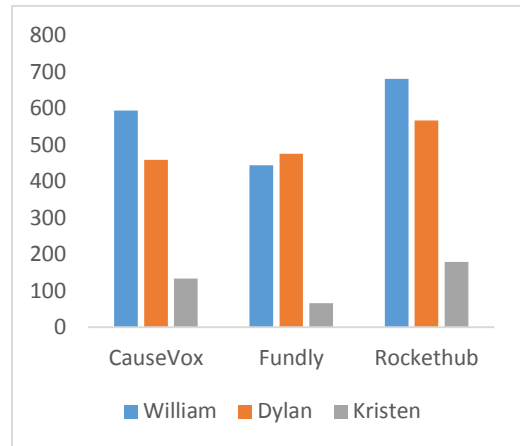
Figure 18: Venipedia Crowdfund Selection

In the Excel Spreadsheet, the group also made a category of projects similar to Venipedia. We found 5 similar wiki-based information platforms. Given the time constraints and a priority to finish PreserVenice and uScript, our advisor requested that we focus on the former projects. Our team developed a pitch detailing the information and needs of Venipedia, along with an "About Me" for Ben Lichtner and Kyle Miller. We expect Venipedia to be handled by a future group.

6.2.4 Publicizing the Crowdfunding

In order to spread the awareness of the PreserVenice, uScript, and Venipedia crowdfunding campaigns our team planned to utilize existing tools. The Venice Dashboard, developed in recent times,

will have a banner or widget to direct users to our website to "Help Us". The website will have a page in which users can briefly learn about our crowdfunding campaign, and the importance to our organization and its users. There will be pictures and links to each respective website. Highlighting the sacrifice of

Figure 19: Venice Project Center Facebook/Twitter

Gabriele Zortea, the project director, in leaving his employment for such a cause will provide added substance. A possible blog of Gabriele and PreserVenice will help extend knowledge to the community. Given the time constraints of our team members doing their respective work on the Website and Dashboard, the plan became unfeasible.

Social media will serve as a way to communicate with as many users as possible. Our team utilized the services of Facebook and Twitter. Employing the help of Kyle Miller, he developed profile pictures and cover photos for the pages. The Facebook and Twitter pages are linked both ways, meaning if one were to post to one site it will also be posted to the other site. As the crowdfunding plans developed, our team realized the importance of using social media as a means of appearing legitimate and raising more money. Given the trendiness of Facebook and Twitter, we will be able to send out updates on the progress of the center, the crowdfunding campaigns, and connect with donors.

6.3 RECOMMENDATIONS

Given the unique characteristics of the project and the time constraints, our team anticipates future groups to observe our work and make major improvements. The goal will be to eventually launch uScript and Venipedia campaigns. Though it may be a tedious process, reviewing our proposal and methodology in our Appendix will be the best way to go about it. Building upon our team will provide insight to follow a method, guided by the advisor.

6.3.1 Launching PreserVenice

Given a finished crowdfunding product that was launched on Kickstarter, people will be able to analyze the way in which our team performed the work and build upon it. A lot of time was taken in wading through the process of determining a crowdfund and finding a strategy. Once our team focused on one project's video, we were able to accomplish such a feat. Expanding through social media will help in expanding PreserVenice's credibility.

6.3.2 Developing uScript

The transcription service has all of the potential to be a superior service that will be offered to public and private archives. Given the forward-thinking vision of the project, a lot of the success rate is held in communicating with the public the ideas of uScript in a practical way. Through further research, our team found a well-made video would potentially cost anywhere from $2,500[10] to $30,000[11]. Our recommendation is to crowdfund for $5,000 and hire a professional service. This will ultimately provide the best return, giving the project center a clear and concise message of uScript.

6.3.3 Adding Venipedia

Given the content (albeit without a video) that Venipedia has, there is a possibility of launching the crowdfunding campaign in a single IQP. Given the background research that our team has performed, one simply needs to build off of our methodology. A great benefit will be the Appendix in order to see where our team may have fallen short.

6.3.4 Advertising the Projects

Using the web not only as a crowdfunding platform, but as a means of expanding recognition of the Venice Project Center's special projects will ultimately only benefit the pursuits to fund these projects. Our recommendations are that the website has a tab entitled "Help Us" or "Fund Us", in which our pursuits of funding these special projects can be broadcasted. Adding a toolbar or widget will only help users be redirected to this page. Given the anticipated popularity of the dashboard, it is suggested that there is a widget or notification bar redirecting users to the veniceprojectcenter.org's tab of crowdfunding.

Social media is another way to reach out. The profile pictures and cover photos are already made for each special project: PreserVenice, uScript, and Venipedia. Reaching out to the public through these services will be encouraged. Facebook offers a service in which paying money for advertisement provides "Likes". Crowdfunding for this, or simply paying a small amount of money will help spread awareness in a more direct way. Connecting with those interested in donating will make the projects appear legitimate and worthy of a donation.

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[10] http://www.mairperkins.co.uk/how-much-does-an-animation-cost/
[11] http://www.cartoonbrew.com/ideas-commentary/72508-72508.html

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Apendix A Venice Project Center Data Repository

A.1 The Venice Project Center Website

The Venice Project Center website is located at veniceprojectcenter.org. The code is held in the "cityknowledge/veniceprojectcenter" repository on GitHub.

A.1.1 Adding to the Data Menu

The Venice Project Center website utilizes the console to generate content. All of the data in the data view of the website resides on the console and content can be added to the website through the console. Once a data set that includes latitude and longitude fields is uploaded to the console, you can follow these steps to add it to the data menu on the website.

On the console:

1. Select the Group you would like to add under the "Groups" tab
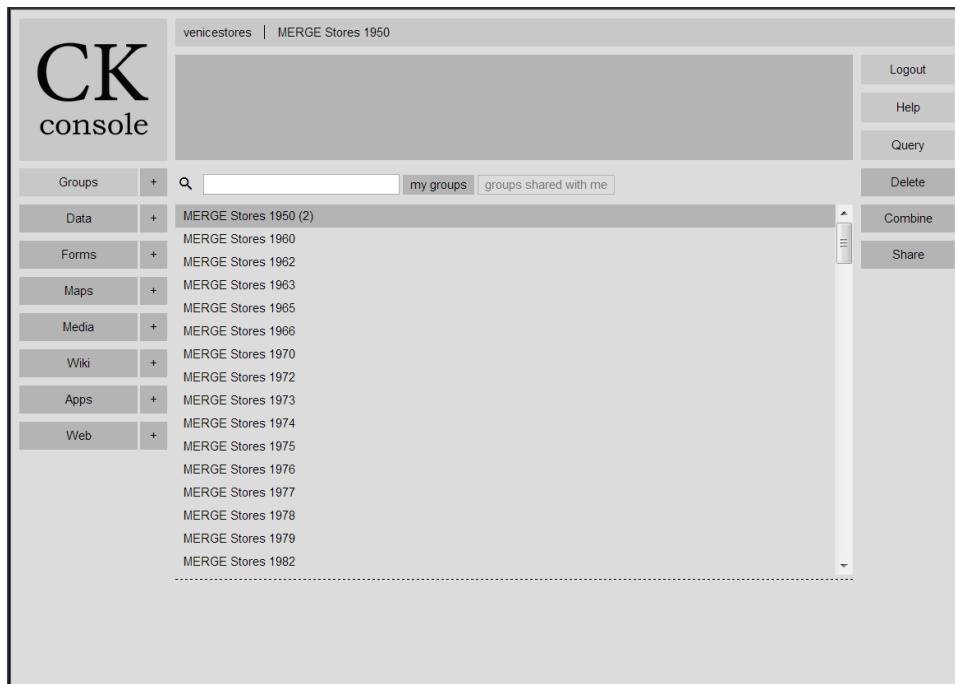
2. Go to the "Map" tab

3. On the right side of the screen, select "Bubble"

4. Choose a form
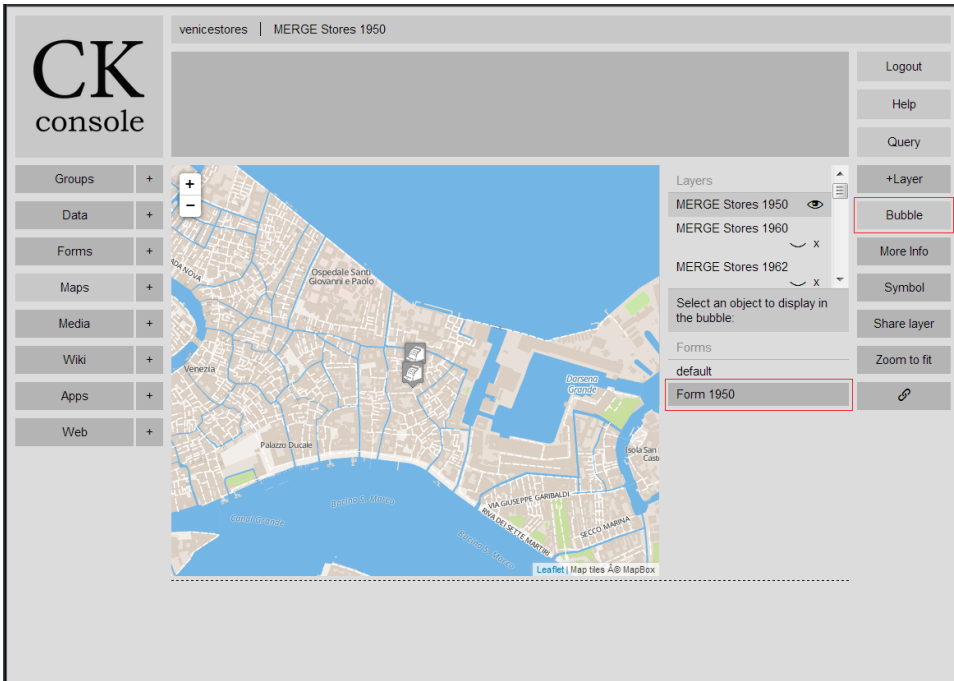
5. On the right side of the screen, select ""More Info"

6. Choose a form
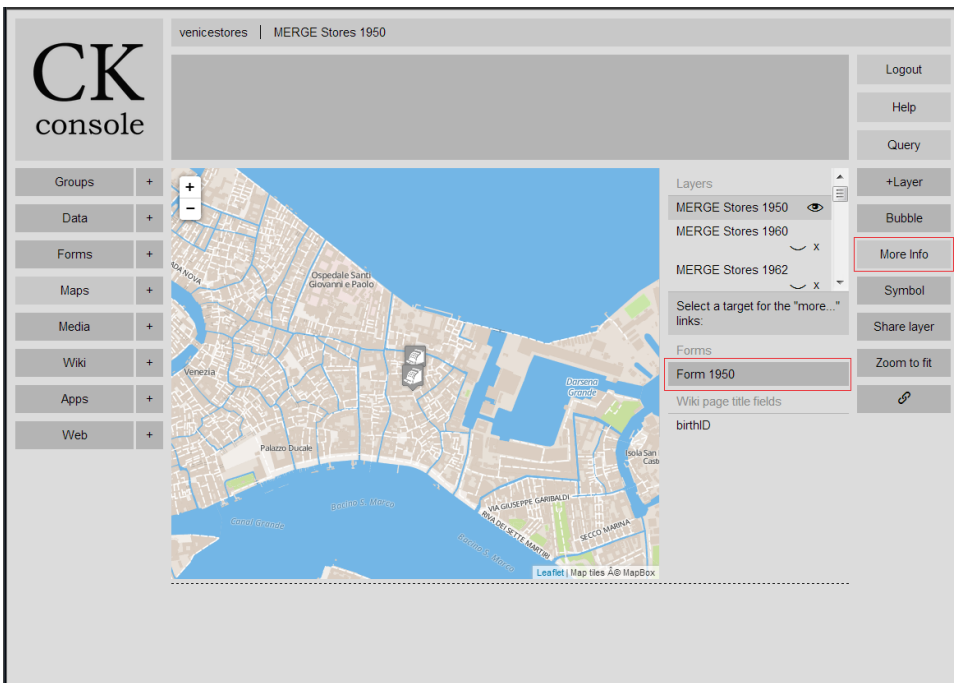
7. On the right side of the screen, select "Symbol"

8. Choose a symbol
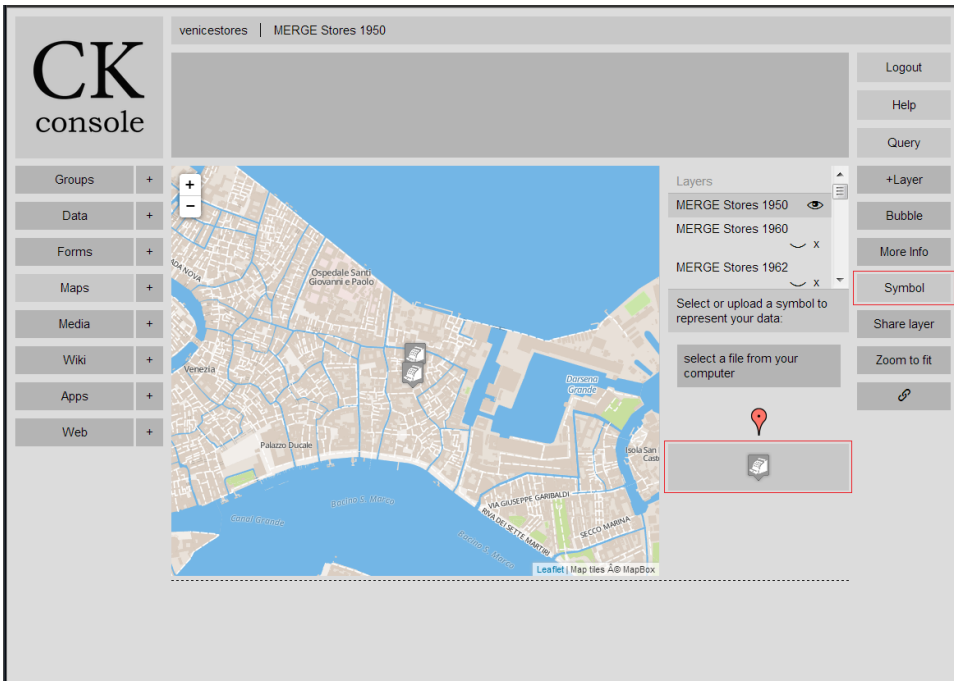
9. Go to the "Web" tab

10. Select a group from the left column
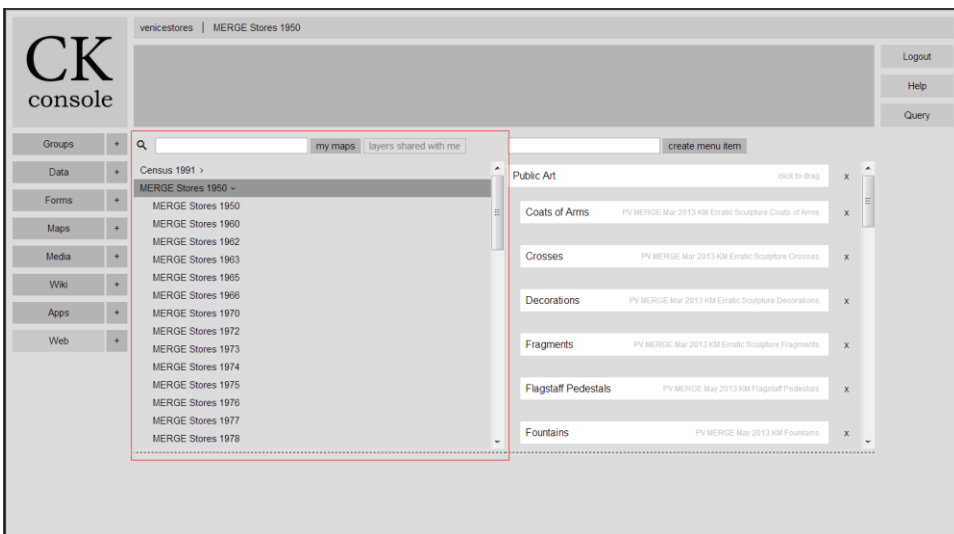
11. Once the group is expanded, select a map layer from the list

12. Drag this layer to the right column where you would like it in the menu structure
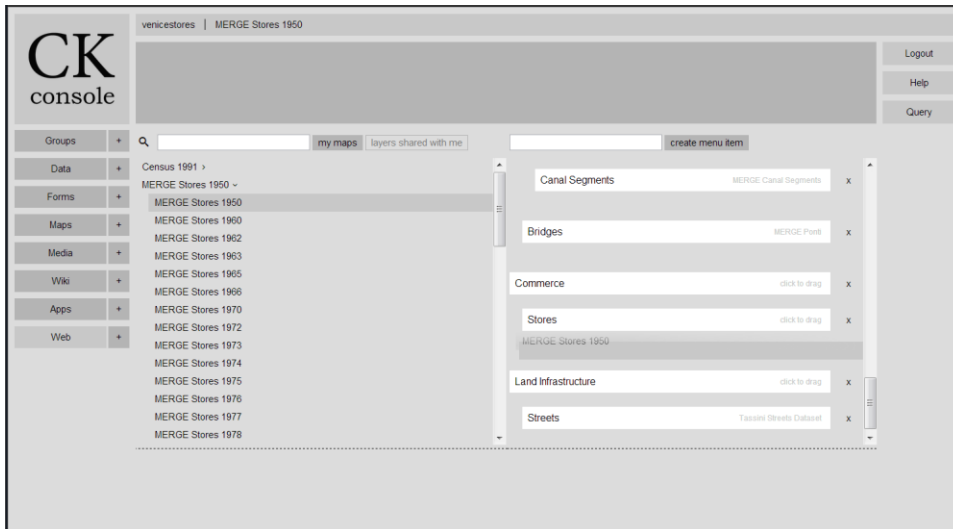
13. Click on the title and type in an appropriate title

To create a greyed-out place-holder menu item without an associated map layer, you can type one in at the top of the right column and click "create menu item". This will create a menu item which you can then drag into the appropriate place in the menu structure.

A.2 THE VENICE STORES VISUALIZATION

The Venice Stores Visualization can be gotten to through the Venice Project Center website. The code for the Venice Stores Visualization can be found on GitHub in the "github.com/kristenbrann/venicestores" repository. The application is built using the leaflet library, a ck-console library written by Mitchell Wills, and a heatcanvas library that can be found at "github.com/sunng87/heatcanvas". The data is uploaded on the console in year by year groups (MERGE Stores 1950, MERGE Stores 2960, etc). The groups have a defined bubble form and symbol. All of these layers are combined onto a map under the group MERGE Stores 1950. The application pulls this entire map group of layers along with the data,bubble forms, and symbols.

APPENDIX B THE VENICE FLOODING VISUALIZATION

Appendix C Dashboard

C.1 Structure

The dashboard is composed of individual modules called widgets. The web application is written in PHP, Javascript, and HTML. Widgets themselves are written as individual PHP files that get included into an index PHP file. Javascript is used in most widgets to keep the information updating live without the user having to refresh the page. The data displayed on the dashboard is mostly stored in a database called Firebase. On a continuous basis there are scripts that are run on the dashboard's server to retrieve the information needed and stores it in the Firebase database. The widgets are notified when the database changes and the page is updated instantly using Javascript. These widgets are organized using a Javascript library called Gridster.js, which allows content to be separated into individual tiles. These tiles can be moved around the page and are based around a base size. The dashboard widgets can be one unit tall and wide (150px x 150px), 1 unit tall and 2 units wide, 2 units tall and 1 unit wide, or 2 units tall and 2 units wide. Together they provide an insight to what's going on in Venice in real time.

C.2 Files

The dashboard files are on the venice2point0.org FTP server. There is an index.php file that is the core of the dashboard. This includes the individual widgets which are separated into separate PHP files, stored in the /widgets folder. Each widget file contains the code needed to display within a widget box. The sizes of the widgets are determined by the include line in the index file. Another important directory is /scripts that contains scripts that run periodically to scrape and save data, which is usually written to Firebase. These files are run at different time intervals on the server's hosting service.

C.3 COSES TOURISM REPORT

Tab. 3.1 - Stima dei visitatori della città antica per porte di accesso (2007)

Venezia - porte di accesso 2007	Arrivi	Presenze (A)	Escursionisti in città antica (B)			Totale visitatori (A+B)
			da lido	da terraferma	da regione turistica	
Aereo (Ve e Tv)	1.262.000	3.450.000	-	-	-	3.450.000
Treno	509.000	1.347.000	-	450.000	6.670.000	8.467.000
Auto	95.000	268.000	-	-	751.000	1.019.000
Bus turistico	131.000	365.000	-	547.000	1.787.000	2.699.000
Bus di linea*	44.000	120.000[10]	-	1.110.000	600.000	1.830.000
Nave	239.000	843.000[11]	-	-	-	1.278.000[12]
Natante**	-	-	466.000	160.000[13]	2.235.000	2.861.000
Totale visitatori	2.280.000	6.393.000[14]	466.000	2.267.000	12.043.000	21.604.000
Pop. equivalente***	6.247	17.515	1.277	6.211	32.995	59.189

* dato stimato
** vaporetto e lancione GT
*** Visitatori annui / 365 giorni.
Elabora: COSES, 2008

APPENDIX D VPC MOBILE

Adding new pages can be done by creating a new page and placing the app within an iframe. Place the iframe in a content div on the page. You then can add the banner through a header div and attach the side menus with the include function. All files are located in the venice2point0 server under the folder vpc_mobile.

APPENDIX E

E.1 WEBSITE AND DASHBOARD

E.1.1 Proposal

In order to spread the awareness of the uScript, PreserVenice, and Venipedia crowdfunding campaigns our team will utilize existing tools. The Venice Dashboard, developed in recent times, will have a banner or widget to direct users to our website to "Help Us". The website will have a page in which users can briefly learn about our crowdfunding campaign, and the importance to our organization and its users. There will be pictures and links to each respective website. Highlighting the sacrifice of Gabriele Zortea, the project director, in leaving his employment for such a cause will provide added substance. A possible blog of Gabriele and PreserVenice will help extend knowledge to the community.

E.1.1.1 About Us

E.1.1.1.1 Venice Project Center

Since 1988, the Venice Project Center of the Worcester Polytechnic Institute has been at the forefront of the exploration of the causal relations that cumulatively produce the physical damage that is visible everywhere in Venice. The Project Center works with influential conservation organizations, such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), Archeoclub d'Italia, and the National Council of Research (CNR). Aligning with the goals of the different organizations, the center has a direct benefit to the city and its lagoon.

E.2 SOCIAL MEDIA

E.2.1 Proposal

Social media will serve as a way to communicate with as many users as possible. We will utilize the services of Facebook and Twitter, with the possibility of adding Google+ and LinkedIn to appear universal and professional. All posts will be posted through a third-party source in order to make it easier for administrators to connect. Our team is currently working on an RSS feed for each of the respective sites and our advisor so that individual blogs and information can be filtered and shared directly without any problem or extra work.

E.2.2 Data

Our team produced a "Venice Project Center" Facebook page and Twitter account. The profile picture and cover page were produced with the help of Kyle Miller. We asked our students to "Like It on

Facebook!" We will be sending an email to alumni to engage them and invite them to share their experiences and pictures on our social media.

E.2.3 Content

E.2.3.1 Help Us
For 25 years, the Venice Project Center has been a reliable and city of Venice. As the center looks to expand its ability to help others, please consider helping us out!

E.2.3.2 About Us
Venice Project Center, Fabio Carrera, Gabriele Zortea, Ben Lichtner, Kyle Miller

E.3 EMAIL
Though our website and social media are great tools to expand the news about our projects and crowdfunding, it was suggested by our adviser to email past alumni. The contents of the email list are kept by either Kyle Miller or Ben Lichtner.

E.3.1 Proposal
An email is to be constructed and sent out to over 600 alumni of the Venice Project Center. This will be sent by Fabio, but to be constructed by the team. It will inform alumni of recent happenings, the current crowdfunding campaign, and invite them to check out our website, dashboard, and apps. Lastly, it will encourage the alumni to connect on Facebook and Twitter.

E.4 PRESERVENICE

E.4.1 Proposal

E.4.1.1 Needs

E.4.1.1.1 Crowdfunding platform

A unique trait of PreserVenice is the involvement of Gabriele Zortea. This produces the possibility of crowdfunding for two separate entities: PreserVenice and the upkeep done by Gabriele. There is a possibility of having two campaigns occurring at one time to increase the amount of donations. There is the development of PreserVenice, as well as the funding of Gabriele's salary.

E.4.1.1.2 Skill of Team

To appear legitimate and professional, a short write-up of our Gabriele Zortea and Ben Lichtner should be posted in the crowdfunding website. This will be completed by them, with the assistance of our adviser and the team. We will also explain the history of PreserVenice and WPI's role in contributing to it.

E.4.1.1.3 Familiarity with Applications

PreserVenice has been a work in progress for a couple of years now. Ben Lichtner's technical experience combined with Gabriele Zortea's enthusiasm will help propel PreserVenice into a finished product.

E.4.1.2 Cost

The estimated minimum salary for Gabriele Zortea will be €20,000. Paired with a 20% overhead cost for paperwork and the amount of labor hours necessary, it will be sufficient to fund all entities involved.

E.4.1.3 Timeline

The total time for our project is fourteen weeks. The first seven were spent coming up with identifying the needs of PreserVenice. The next week was spent creating a matrix to identify, compare, and pick different crowdfunding platforms. Three more weeks will be spent developing a plan to crowdfund, along with making the content needed to fill the platform. This will include pictures and written content. The remaining three weeks will be spent launching the crowdfunding campaign. Since the allotted
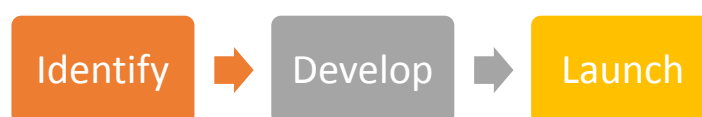
Figure 20: PreserVenice Timeline

time for our project is so small, we are unable to see the results of how much is raised for PreserVenice.

E.4.1.4 Process

The launch will consist of getting the PreserVenice crowdfunding platform up and fully running. We may need to make minor alterations to our project, but it will have to be in the 14 week time span allotted.

E.4.1.5 Define product and goals

The deadline to launch the project will be by the end of the 13th week of our project. This will allow time for the team to make any last-minute changes. The length of the crowdsourcing campaign is currently undetermined, and our team will determine an appropriate length when necessary.

To make the vision of PreserVenice clear, our team will develop a video to showcase PreserVenice's usefulness. The video will consist of pictures and video taken of deteriorating public art, as well as the interviewing Gabriele, Ben, and our project adviser. Infographics will be published to show the amount of artifacts that need restoring, and the beauty of the Venice.

E.4.1.6 Why Donate?

An important factor in the success of the PreserVenice crowdfunding campaign is to convince people to donate. The video, infographics, and any other information is crucial in showing people the need and practicality of PreserVenice.

A reward will be placed in which those that donate over a specified amount will receive a thanks letter and a spot on the contributors list. At a certain amount the users should be rewarded with a logo or picture putting them as "Platinum Donators".

An important point that our team needs to get across to the potential donators is the scarcity of public restoration. Giving the background of what artifacts need fixing, the history behind them, as well as WPI's credibility will solidify this.

E.4.1.7 Updates

Our team will do updates once a week for PreserVenice. It will recap the past week's success in crowdfunding, and talk in detail about either a unique trait of PreserVenice, how the money will be spent, or an advantage to donating a particular amount.

E.4.2 Data

PreserVenice is the most feasible crowdfunding project to launch, given the help of Gabriele Zortea.

E.4.2.1 Crowdfunding Spreadsheet

Given the amount of crowdfunds, differences among them, and having to pick a crowdfund, we developed a Microsoft Excel spreadsheet to compare the different websites. The is file named *VE13.25^th^_CrowdfundingSpreadsheet.xlsx*

E.4.2.1.1 Crowdfunds

At first, our team made a tab called 'Crowdfunds', in which 11 different crowdfunds are compared. Different attributes of the crowdfund, ranging from a fee charged to a payment style, are all accounted for. 31 different attributes of each crowdfund were recorded. This data was acquired last on October 30, 2013. An explanation can also be found in the 'CategoriesExplained' tab.

Figure 21: Crowdfunds Tab in VE13.25th_CrowdfundingSpreadsheet.xlsx

E.4.2.1.1.1 Fees, Limits, and Payments

Unfortunately, a lot of the data was not easily accessible on the crowdfund's website or a 3rd party website. Our team emailed all 11 websites asking for the missing information. Very few obliged, stating that the information was not public. (See Appendix for more information)

E.4.2.1.1.1.1 Fees

For all of the fees involved, we found that percentages involved were around 4-5%, but ranged from 2.9% (Gittip) to 7.9% (Fundly). Some crowdfunds did not have any fee to process a donation, (process and constant fee) which would indicate they did not use Amazon Payments or Paypal. Only one crowfund had a limit, and that was CauseVox. If one wanted to pay more money for a premium plan, there is no limit on CauseVox. Given the advisor's desire to not pay any unnecessary money for such a plan, our team decided to not use CauseVox altogether.

E.4.2.1.1.1.2 If Goal Unreached

An interesting column is the "If Goal Unreached". Depending on the crowdfund, one could find 1 of 3 results:

1) All or nothing. This simply means if you reach your goal, you are able to keep the money raised. Otherwise, the money is returned to the donator with no fee associated.

2) Keep what you get. Regardless of if a crowdfund is successful or fails, the host keeps the money. This can be beneficial for ambitious projects.

3) Option to keep money. Depending on the progress of the crowdfund or the amount raise, one might want to have the option to give the money back, or to keep the money. If one raises very little money from a crowfund, then it may be desirable to give the money back for a future crowdfund. However, if one comes close to raising the desired money, they may keep the money.

E.4.2.1.1.1.3 Payment Style

Payment style is straightforward: if a payment is charged to a person's account, the money is handled by the company listed. Most crowdfunds prefer to use Paypal due to their straightforward plan and because of their established reputation. Others use Amazon Payments, or give you an option of a type of payment style. Lastly, some crowdfunding platforms have their own payment system, which can sometimes lead to lower or higher process and constant fees.

E.4.2.1.1.2 Statistics of Dollars and Users

As mentioned before, a lot of statistics were surprisingly unavailable to the public. The two most popular crowdfunds, Kickstarter and Indiegogo were the ones to deliver the most amount of data.

E.4.2.1.1.2.1 Total Dollars

Total dollars is the total amount raised by the crowdfunding website, regardless of if the project was successful or unsuccessful.

E.4.2.1.1.2.2 Avg Raised

The average amount raised by a crowdfund. This includes both successful and failed crowdfunds.

E.4.2.1.1.2.3 Success Dollars

The total amount of dollars raised by successful crowdfunds.

E.4.2.1.1.2.4 Unsuccess Dollars

The total amount of dollars raised by unsuccessful crowdfunds.

E.4.2.1.1.2.5 Total Backers

The total amount of backers for all crowdfunds that were successful.

E.4.2.1.1.2.6 Repeat Backers

The amount of backers for all crowdfunds that have donated more than once.

E.4.2.1.1.2.7 Total pledges

The total amount of people who pledged to a crowdfund.

E.4.2.1.1.3 Statistics of Projects

The statistics of projects covers a variety of statistics for each project. Like The Statistics of

Dollars and Users, this category did not have a lot of public information available.

E.4.2.1.1.3.1 Avg Length

The average length of a crowdfunding project. Through independent research, we found most

projects lasted from 30-45 days. (See 'Related Projects' tab in *VE13.25th_CrowdfundingSpreadsheet.xlsx)*

E.4.2.1.1.3.2 # of Projects

The number of projects the crowdfunding website has hosted.

E.4.2.1.1.3.3 # Successful Projects

The number of successful projects a crowdfunding website has hosted.

E.4.2.1.1.3.4 Success Rate

How successful a crowdfunding website's projects are. We found with Kickstarter's strict

application process, it would promote projects to be more successful. Other crowdfunding websites like

Indiegogo had more relaxed applications or no application at all, thus making the possibility for a

crowdfund to be successful less likely.

E.4.2.1.1.4 Content, Features

The content and features section is easily the more subjective of the sections. Instead of dealing

with raw numbers, the section deals with categories, subjects, and "Yes and No" questions.

E.4.2.1.1.4.1 Topics

The topics category deals with which possible category uScript, PreserVenice, and Venipedia fit

under. In each respective tab, "uScript", "PreserVenice" and "Venipedia", the categories are fit to the

project.

E.4.2.1.1.4.2 Geography

Where the crowdfund can be hosted. Most were either worldwide or limited to North America.

E.4.2.1.1.4.3 Rewards

If the crowdfund project can provide incentives to those donating. Examples of these rewards

can be found in "Crowdfunding Projects", under GoogleDocs in the Crowdfunding folder of the B13-25th

team's folder, as well as in Fabio's document entitled, "PreserVenice Crowdsourcing Script".

E.4.2.1.1.4.4 Updates

Whether the crowdfunding project can provide updates to those donating or thinking about

donating.

E.4.2.1.1.4.5 Video

If video is necessary for the crowdfunding website or optional. We found in our research that most successful crowdfunds had a video, which is a better explanation and more appealing to those donating.

E.4.2.1.1.4.6 Charity

Whether the crowdfund supports charities. Due to Kickstarter's strict application process that focuses on a finished product, they do not support charities.

E.4.2.1.1.4.7 Causes

The column stating whether a crowdfunding website supports causes.

E.4.2.1.1.4.8 Salaries

If the crowdfunding website supports paying a salary of someone or not. "1-time" is meant to indicate that it will pay someone's salary for one time period.

E.4.2.1.1.4.9 Big Picture

If a crowdfunding website supports something that is part of a bigger picture. Due to the vagueness of these particular projects, most did not support it.

E.4.2.1.1.4.10 Application

As mentioned earlier, applications for the most part were relaxed. This leads to less success by a project because they do not fit the higher standards of most successful projects.

E.4.2.1.1.4.11 Facebook, Twitter, Google+

If the project can be spread on Facebook, Twitter, or Google. Due to the advantageous aspects of social media, all can be shared in one way or another. As seen in Section 0 "Social Media Proposal", our plan is to use an RSS Feed to post to each respective social media platform.

E.4.2.1.2 Projects

The projects tab is to establish how much money is needed to be raised for each respective project. uScript, PreserVenice, and Venipedia have their own unique traits and demands.

E.4.2.1.2.1 uScript

As laid out in Section 0 of the uScript Proposal, uScript needs a substantial amount of money to be completed. This amount is going at a cheap rate for an independent computer programmer.

E.4.2.1.2.2 PreserVenice

As laid out in Section 0 in PreserVenice's Proposal, a salary of €20,000 is needed each year for Gabriele, as well as a 20% sur-charge associated with each donation to cover the costs of filing paperwork and carrying out the task.

E.4.2.1.2.3 Venipedia

Our programmer, Ben Lichtner has offered to make Venipedia automated. As mentioned in the Venipedia Proposal in Section 0, it will take approximately $15,000 to undertake. This is at a discounted rate.

E.4.2.1.3 Related Projects

Per request of our advisor, we compared different projects to the ones we are trying to fundraise money for in the "Related Projects" tab. Other examples of crowdsourcing projects can be found in Fabio Carrera's Google Doc entitled "PreserVenice Crowdsourcing Script". We found that with all successful crowdfunds, the page and content appears professional, comes with a video, and clearly defines goals with a potential for direct or indirect rewards.

Figure 22: Related Projects Tab in VE13.25th_CrowdfundingSpreadsheet.xlsx

E.4.2.1.4 PreserVenice

This tab has all of the relevant information for crowdfunds that will potentially support PreserVenice. Their characteristics can be described in Section 0 "Crowdfunds" tab.

E.4.2.1.5 pBreakdown

Due to the advisor's request the person in charge of crowdfunding, William Richtmyer, filled out the pBreakdown tab with his own opinion of how each crowdfunding website performed according to the advisor's "scientific method". After being presented, it was suggested that the values could

Figure 23: pBreakdown Tab in VE13.25th_CrowdfundingSpreadsheet.xlsx

be edited to each person's opinion, or "weight" of a category.

To operate the pBreakdown tab, one simply needs to fill out a scale from 1-10 in the green horizontal boxes under "Weight of Category". 10 is the highest, or most important a category can be. There may be multiple categories with the same weight. For the green vertical tabs, depending on a person's previous weight results in the boxes in the row, one can judge how much the "Unreached Fit" or "Topic Fit" weigh. Due to the unique nature of the category, there are examples of how to fill it out under "will_crowdfunding", "kristen_crowdfunding", and "dylan_crowdfunding". The results are to be explained in Section 0, Crowdfunding Results.

E.4.2.2 Crowdfunding Results

To avoid confusion with *CrowdfundingSpreadsheet.xlsx*, a separate spreadsheet entitled *CrowdfundingResults*.xlsx was made to show the results of the groups' choices in the "pBreakdown" tab. The "PreserVenice" and "pBreakdown" tabs are the same in both *CrowdfundingSpreadsheet.xlsx* and *CrowdfundingResults*.xlsx, but the difference lies in the "pResults" tab. 3 of our 4 team members filled it out to show how each crowdfund faired. Crowdrise had the most positive results, getting most of the vote. As
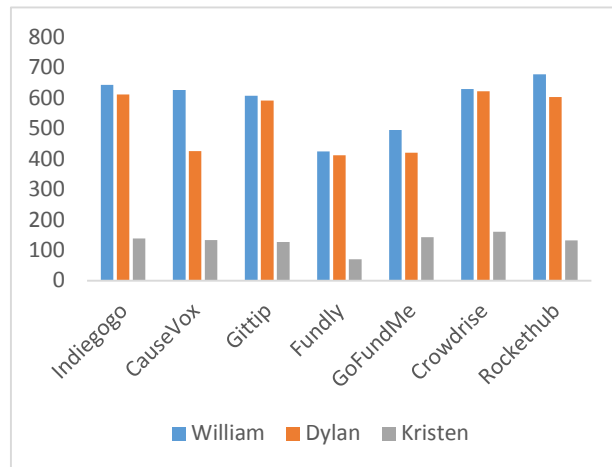
Figure 24: PreserVenice Crowdfund Selection

you can see, though the form was filled out differently from all 3 team members, the trend continued.

E.4.2.3 Video

With research, our team found that filming artifacts from an angle of the audience, and an angle from the artifact will give an interesting perspective to the crowdfunding video. This was based off of an idea seen on Hello Lamp Post, an interesting insight to everyday objects.[12] Our team created a storyboard with the help of Mr. Zortea to showcase the beauty of Venice's public art, and how it is crumbling. Our team spent 3 days filming and taking pictures of artifacts, using a six-foot pole and a GoPro attached to it. We found stock-photos to add to the video, from Kyle Miller's website[13] and from the Venice 2.0 website.[14]

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[12] http://www.hellolamppost.co.uk/
[13] http://www.navigamus.net/gallery3/index.php/Venice-stock-photos
[14] http://venice2point0.org/gallery

E.4.3 Content

In order to build the content for PreserVenice, a lot of time and effort was put in for each category. A combination of trimmed past content and newly created content, it provides most of what is needed for the crowdfunding project.

E.4.3.1 Help Us

PreserVenice is a non-profit organization dedicated to the preservation of Venice's public art. Thanks to a recent UNESCO grant, the web site and app are now functional, but some work remains to be done to actually launch the non-profit. A Venetian graduate, Gabriele Zortea, is ready to be the one-man staff of the organization, provided we can get some sort of seed funding to support the first year of operations.

The PreserVenice initiative is dedicated to obtaining funding, providing documentation, and increasing awareness of material culture to contribute toward preservation.

This project was conducted under the auspices of UNESCO for the purpose of promoting the preservation and restoration of Venetian material culture. Consisting of over 7,000 individual pieces compiled by WPI project teams over the past 20 years, this collection constitutes the most complete and comprehensive catalog of Venetian material culture to date.

E.4.3.2 About Us

E.4.3.2.1 Gabriele Zortea

Gabriele Zortea was born in and grew up in Venice, where he studied Economics and Cultural Management. He has worked for the Biennale di Venezia, Istituto Veneto di Scienze Lettere ed Arti, and the Venice International Foundation doing event organization and cultural promotion environment. He has worked also as a logistic operator and production assistant in some films and events like The Tourist and Swatch Art.

Related to the PreserVenice project, he is in charge of fundraising, relations with companies and institutions, and also of the organization and the administration of the restoring works.

Something about him: he has lived in Spain, where he studied the Spanish language. Some of his interests are cinema, documentary, bricolage and design.

E.5 USCRIPT

E.5.1 Proposal

E.5.1.1 Needs

E.5.1.1.1 Skill of Team

To appear legitimate and professional, a short write-up of our adviser should be posted in the crowdfunding website. We will also explain the history of uScript and WPI's role in contributing to it. There is a possibility of also adding in a member of the archives' history, as he seems to be the one coming up with the idea of uScript.

E.5.1.1.2 Familiarity with Applications

The Venice Project Center has spent over a decade working in programming uScript. Seniors majoring in Computer Science at the university wishing to complete a capstone project have the opportunity to sign up for it.

E.5.1.2 Cost

The total cost of funding uScript is a staggering $300,000. This number was provided to us by our project adviser.

E.5.1.3 Timeline

The total time for our project is fourteen weeks. The first seven were spent coming up with identifying the needs of uScript. The next week was spent creating a matrix to identify, compare, and pick

Identify → Develop → Launch

8 weeks   4 weeks   3 weeks

Figure 25: uScript Timeline

different crowdfunding platforms. Three more weeks will be spent developing a plan to crowdfund, along with making the content needed to fill the platform. This will include pictures and written content. The remaining three weeks will be spent launching the crowdfunding campaign. Since the allotted time for our project is so small, we are unable to see the results of how much is raised for uScript.

E.5.1.4 Process

The launch will consist of getting the uScript crowdfunding platform up and fully running. We may need to make minor alterations to our project, but it will have to be in the 14 week time span allotted.

E.5.1.5 Define product and goals

The deadline to launch the project will be by the end of the 13th week of our project. This will allow time for the team to make any last-minute changes. The length of the crowdsourcing campaign is currently undetermined, and our team will determine an appropriate length when necessary.

To make the vision of uScript clear, our team will develop a video to showcase uScript's usefulness. The video will consist of pictures and video taken at the Venice Archives, as well as the interviewing of our project adviser and any other necessary people. Infographics will be published to show the size of the archives, and compare it to the amount of work scanned and actually transcribed.

E.5.1.6 Why Donate?

An important factor in the success of the uScript crowdfunding campaign is to convince people to donate. The video, infographics, and any other information is crucial in showing people the need and practicality of uScript.

A reward will be placed in which those that donate over a specified amount will receive a thanks letter and a spot on the contributors list. The next step is a discount for uScript. Larger donators at a certain point will have effectively "bought" uScript once it is developed.

An important point that our team needs to get across to the potential donators is the scarcity of public documents, and how the current system is outdated and inefficient. Giving the background of who uses the archives and the amount of information available will help. Establishing the credibility of the Venice Archives and of WPI will be another tool in which users will feel motivated to donate.

E.5.1.7 Updates

Our team will do updates once a week for uScript. It will recap the past week's success in crowdfunding, and talk in detail about either a unique trait of uScript, how the money will be spent, or an advantage to donating a particular amount.

E.5.2 Data

uScript needs a large crowdfunding campaign, needing over $300,000 to make it fully functional.

E.5.2.1 Crowdfunding Spreadsheet

Given the amount of crowdfunds, differences among them, and having to pick a crowdfund, we developed a Microsoft Excel spreadsheet to compare the different websites. The is file named *VE13.25th_CrowdfundingSpreadsheet.xlsx*

E.5.2.1.1 Crowdfunds

Figure 26: Crowdfunds Tab in VE13.25th_CrowdfundingSpreadsheet.xlsx

At first, our team made a tab called 'Crowdfunds', in which 11 different crowdfunds are compared. Different attributes of the crowdfund, ranging from a fee charged to a payment style, are all accounted for. 31 different attributes of each crowdfund were recorded. This data was acquired last on October 30, 2013. An explanation can also be found in the 'CategoriesExplained' tab.

E.5.2.1.1.1 Fees, Limits, and Payments

Unfortunately, a lot of the data was not easily accessible on the crowdfund's website or a 3rd party website. Our team emailed all 11 websites asking for the missing information. Very few obliged, stating that the information was not public. (See Appendix for more information)

E.5.2.1.1.1.1 Fees

For all of the fees involved, we found that percentages involved were around 4-5%, but ranged from 2.9% (Gittip) to 7.9% (Fundly). Some crowdfunds did not have any fee to process a donation, (process and constant fee) which would indicate they did not use Amazon Payments or Paypal. Only one crowdfund had a limit, and that was CauseVox. If one wanted to pay more money for a premium plan, there is no limit on CauseVox. Given the advisor's desire to not pay any unnecessary money for such a plan, our team decided to not use CauseVox altogether.

E.5.2.1.1.1.2 If Goal Unreached

An interesting column is the "If Goal Unreached". Depending on the crowdfund, one could find 1 of 3 results:

1) All or nothing. This simply means if you reach your goal, you are able to keep the money raised. Otherwise, the money is returned to the donator with no fee associated.

2) Keep what you get. Regardless of if a crowdfund is successful or fails, the host keeps the money. This can be beneficial for ambitious projects.

3) Option to keep money. Depending on the progress of the crowdfund or the amount raise, one might want to have the option to give the money back, or to keep the money. If one raises very little money from a crowfund, then it may be desirable to give the money back for a future crowdfund. However, if one comes close to raising the desired money, they may keep the money.

E.5.2.1.1.1.3 Payment Style

Payment style is straightforward: if a payment is charged to a person's account, the money is handled by the company listed. Most crowdfunds prefer to use Paypal due to their straightforward plan and because of their established reputation. Others use Amazon Payments, or give you an option of a type of payment style. Lastly, some crowdfunding platforms have their own payment system, which can sometimes lead to lower or higher process and constant fees.

E.5.2.1.1.2 Statistics of Dollars and Users

As mentioned before, a lot of statistics were surprisingly unavailable to the public. The two most popular crowdfunds, Kickstarter and Indiegogo were the ones to deliver the most amount of data.

E.5.2.1.1.2.1 Total Dollars

Total dollars is the total amount raised by the crowdfunding website, regardless of if the project was successful or unsuccessful.

E.5.2.1.1.2.2 Avg Raised

The average amount raised by a crowdfund. This includes both successful and failed crowdfunds.

E.5.2.1.1.2.3 Success Dollars

The total amount of dollars raised by successful crowdfunds.

E.5.2.1.1.2.4 Unsuccess Dollars

The total amount of dollars raised by unsuccessful crowdfunds.

E.5.2.1.1.2.5 Total Backers

The total amount of backers for all crowdfunds that were successful.

E.5.2.1.1.2.6 Repeat Backers

The amount of backers for all crowdfunds that have donated more than once.

E.5.2.1.1.2.7 Total pledges

The total amount of people who pledged to a crowdfund.

E.5.2.1.1.3 Statistics of Projects

The statistics of projects covers a variety of statistics for each project. Like The Statistics of Dollars and Users, this category did not have a lot of public information available.

E.5.2.1.1.3.1 Avg Length

The average length of a crowdfunding project. Through independent research, we found most projects lasted from 30-45 days. (See 'Related Projects' tab in *VE13.25th_CrowdfundingSpreadsheet.xlsx)*

E.5.2.1.1.3.2 # of Projects

The number of projects the crowdfunding website has hosted.

E.5.2.1.1.3.3 # Successful Projects

The number of successful projects a crowdfunding website has hosted.

E.5.2.1.1.3.4 Success Rate

How successful a crowdfunding website's projects are. We found with Kickstarter's strict application process, it would promote projects to be more successful. Other crowdfunding websites like Indiegogo had more relaxed applications or no application at all, thus making the possibility for a crowdfund to be successful less likely.

E.5.2.1.1.4 Content, Features

The content and features section is easily the more subjective of the sections. Instead of dealing with raw numbers, the section deals with categories, subjects, and "Yes and No" questions.

E.5.2.1.1.4.1 Topics

The topics category deals with which possible category uScript, PreserVenice, and Venipedia fit under. In each respective tab, "uScript", "PreserVenice" and "Venipedia", the categories are fit to the project.

E.5.2.1.1.4.2 Geography

Where the crowdfund can be hosted. Most were either worldwide or limited to North America.

E.5.2.1.1.4.3 Rewards

If the crowdfund project can provide incentives to those donating. Examples of these rewards can be found in "Crowdfunding Projects", under GoogleDocs in the Crowdfunding folder of the B13-25th team's folder, as well as in Fabio's document entitled, "PreserVenice Crowdsourcing Script".

E.5.2.1.1.4.4 Updates

Whether the crowdfunding project can provide updates to those donating or thinking about donating.

E.5.2.1.1.4.5 Video

If video is necessary for the crowdfunding website or optional. We found in our research that most successful crowdfunds had a video, which is a better explanation and more appealing to those donating.

E.5.2.1.1.4.6 Charity

Whether the crowdfund supports charities. Due to Kickstarter's strict application process that focuses on a finished product, they do not support charities.

E.5.2.1.1.4.7 Causes

The column stating whether a crowdfunding website supports causes.

E.5.2.1.1.4.8 Salaries

If the crowdfunding website supports paying a salary of someone or not. "1-time" is meant to indicate that it will pay someone's salary for one time period.

E.5.2.1.1.4.9 Big Picture

If a crowdfunding website supports something that is part of a bigger picture. Due to the vagueness of these particular projects, most did not support it.

E.5.2.1.1.4.10 Application

As mentioned earlier, applications for the most part were relaxed. This leads to less success by a project because they do not fit the higher standards of most successful projects.

E.5.2.1.1.4.11 Facebook, Twitter, Google+

If the project can be spread on Facebook, Twitter, or Google. Due to the advantageous aspects of social media, all can be shared in one way or another. As seen in Section 0 "Social Media Proposal", our plan is to use an RSS Feed to post to each respective social media platform.

E.5.2.1.2 Projects

The projects tab is to establish how much money is needed to be raised for each respective project. uScript, PreserVenice, and Venipedia have their own unique traits and demands.

E.5.2.1.2.1 uScript

As laid out in Section 0 of the uScript Proposal, uScript needs a substantial amount of money to be completed. This amount is going at a cheap rate for an independent computer programmer.

E.5.2.1.2.2 PreserVenice

As laid out in Section 00 in PreserVenice's Proposal, a salary of €20,000 is needed each year for Gabriele, as well as a 20% sur-charge associated with each donation to cover the costs of filing paperwork and carrying out the task.

E.5.2.1.2.3 Venipedia

Our programmer, Ben Lichtner has offered to make Venipedia automated. As mentioned in the Venipedia Proposal in Section 0, it will take approximately $15,000 to undertake. This is at a discounted rate.

E.5.2.1.3 Related Projects

Per request of our advisor, we compared different projects to the ones we are trying to fundraise money for in the "Related Projects" tab. Other examples of crowdsourcing projects can be found in Fabio Carrera's Google Doc entitled "uScript Crowdsourcing Script". We found that with all

Figure 27: Related Projects Tab in VE13.25th_CrowdfundingSpreadsheet.xlsx

successful crowdfunds, the page and content appears professional, comes with a video, and clearly defines goals with a potential for direct or indirect rewards.

E.5.2.1.4 uScript

This tab has all of the relevant information for crowdfunds that will potentially support uScript. Their characteristics can be described in Section 0 "Crowdfunds" tab.

E.5.2.1.5 uBreakdown

Due to the advisor's request the person in charge of crowdfunding, William Richtmyer, filled out the uBreakdown tab with his own opinion of how each crowdfunding website performed according to the advisor's "scientific method". After being presented, it was suggested that the values could be edited to each person's opinion, or "weight" of a category.

To operate the uBreakdown tab, one simply needs to fill out a scale from 1-10 in the green horizontal boxes under "Weight of Category". 10 is the highest, or most important a category can be. There may be multiple categories with the same weight. For the green vertical tabs, depending on a person's previous weight results in the boxes in the row, one can judge how much the "Unreached Fit" or "Topic Fit" weigh. Due to the unique nature of the category, there are examples of how to fill it out under "will_crowdfunding", "kristen_crowdfunding", and

Figure 28: uBreakdown Tab in VE13.25th_CrowdfundingSpreadsheet.xlsx

"dylan_crowdfunding". The results are to be explained in Section 0, Crowdfunding Results.

E.5.2.2 Crowdfunding Results

To avoid confusion with *CrowdfundingSpreadsheet.xlsx*, a separate spreadsheet entitled

CrowdfundingResults.xlsx was made to show the results of the groups' choices in the "uBreakdown" tab. The "uScript" and "uBreakdown" tabs are the same in both *CrowdfundingSpreadsheet.xlsx* and *CrowdfundingResults*.xlsx, but the difference lies in the "uResults" tab. 3 of our 4 team members filled it out to show how each crowdfund faired. Indiegogo and Razoo had the most positive results, getting most of the vote. As you can see, though the form was filled out differently from all 3 team members, the trend continued.
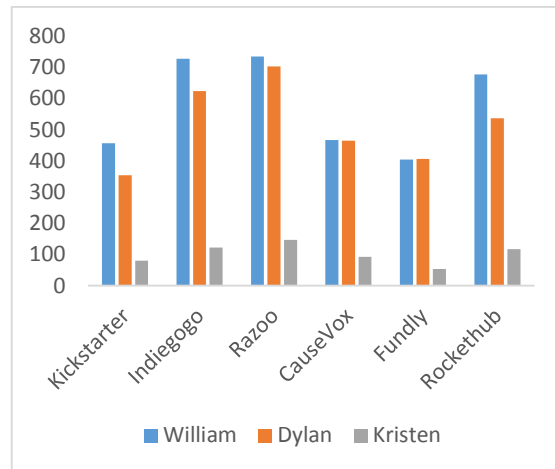
Figure 29: uScript Crowdfund Selection

E.5.2.3 Video

Our team did not produce a video for uScript. We created a storyboard on GoogleDocs entitled "uScript Script". Through further research, our team found a well-made video would potentially cost anywhere from $2,500[15] to $30,000[16]. The length of production for an art animation lasts 5-8 weeks, something that is not plausible even if we did have the resources. The more professional a video looks, the more money potentially raised. Due to our team's background, none of us have experience with animation or art. Our team worked diligently for over a week producing a "stop animation" video to showcase uScript's potential, but ran out of time with the amount of focus shifting to PreserVenice.

E.5.3 Content

In order to build the content for uScript, a lot of time and effort was put in for each category. A combination of trimmed past content and newly created content, it provides most of what is needed for the crowdfunding project.

E.5.3.1 Help Us

E5.3.1.1 uScript is a project aimed at facilitating the mining of information from archives of ancient manuscripts, by making digital transcriptions searchable and sharable. It was the focus of several

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[15] http://www.mairperkins.co.uk/how-much-does-an-animation-cost/
[16] http://www.cartoonbrew.com/ideas-commentary/72508-72508.html

WPI-related projects in the past decade. It requires a re-write using Javascript to bring it back to at least some of its original functionality. Thanks to uScript, historical research will be greatly expedited. Printed books are by now more numerous than manuscripts, but the latter hide some of the more arcane and revealing secrets of the past. Individual documents may seem relatively unimportant, documenting day-to-day affairs such as birth and death records, police reports, and other local events. However, when collections of these manuscripts are taken as a whole, they can provide a clear and insightful perspective on the histories of entire civilizations.

Our system promises to digitize all of the handwritten records held in public and private archives without major investments and with ever-improving accuracy. To date, only a small percentage of the world's historical written records have been tapped into to contribute to mankind's knowledge of our past. Since written records of our past are by definition finite, we propose to implement a mechanism that promises to capture – once and for all – the entirety of the written records that our ancestors left behind. We propose to develop an emergent system architecture that will systematically create, without duplications and overlaps, a cumulative electronic repository of digital transcriptions of the written records from our past, to be shared, searched and analyzed to shed light on the history of humanity.

E.5.3.2 About Us

E.5.3.2.1 Venice Project Center

Since 1988, the Venice Project Center of the Worcester Polytechnic Institute has been at the forefront of the exploration of the causal relations that cumulatively produce the physical damage that is visible everywhere in Venice. The Project Center works with influential conservation organizations, such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), Archeoclub d'Italia, and the National Council of Research (CNR). Aligning with the goals of the different organizations, the center has a direct benefit to the city and its lagoon.

E.5.3.2.2 Fabio Carrera

Fabio Carrera is a full time member of the faculty at Worcester Polytechnic Institute (WPI), where he is also the director of the Venice and Santa Fe Project Centers, and former director of the Boston Project Center. In addition to a number of scientific papers, his work has been repeatedly featured in National Geographic magazine (most recently in the August 2009 issue), MIT's Technology Review magazine, the Smithsonian magazine, Wired, New Scientist and Science. He was also featured on BBC Radio and in a National Geographic video completely dedicated to his work in his hometown of Venice, Italy. Ever since earning his Ph.D. degree in Urban Information Systems and Planning from the Massachusetts Institute of Technology (MIT). He is currently working on the release of twenty five years

of detailed geospatial data collected by 640 WPI students who produced 179 research projects in Venice since 1988.

E.6 VENIPEDIA

E.6.1 Proposal

E.6.1.1 Needs

E.6.1.1.1 Skill of Team

To appear legitimate and professional, a short write-up of our Kyle Miller and Ben Lichtner should be posted in the crowdfunding website. This will be completed by them, with the assistance of our adviser and the team. We will also explain the history of Venipedia and WPI's role in contributing to it.

E.6.1.1.2 Familiarity with Applications

Venipedia has been a work in progress for a couple of years now. Ben Lichtner's technical experience combined with Kyle Miller's enthusiasm will help propel Venipedia into a self-sufficient product.

E.6.1.2 Cost

The cost will be approximately $15,000 to have Ben Lichtner program Venipedia. This number was provided to us by our project adviser.

E.6.1.3 Timeline

The total time for our project is fourteen weeks. The first seven were spent coming up with identifying the needs of Venipedia. The next week was spent creating a matrix to identify, compare, and pick different crowdfunding platforms. Three more weeks will be spent developing a plan to crowdfund, along with making the content needed to fill the platform. This will include pictures and written content. The remaining three weeks will be spent launching the crowdfunding campaign. Since the allotted time for our project is so small, we are unable to see the results of how much is raised for Venipedia.

Identify	Develop	Launch
8 weeks	4 weeks	3 weeks

Figure 30: Venipedia Timeline

E.6.1.4 Process

The launch will consist of getting the Venipedia crowdfunding platform up and fully running. We may need to make minor alterations to our project, but it will have to be in the 14 week time span allotted.

E.6.1.5 Define product and goals

The deadline to launch the project will be by the end of the 13th week of our project. This will allow time for the team to make any last-minute changes. The length of the crowdsourcing campaign is currently undetermined, and our team will determine an appropriate length when necessary.

To make the vision of Venipedia clear, our team will develop a video to showcase Venipedia's usefulness.

E.6.1.6 Why Donate?

An important factor in the success of the Venipedia crowdfunding campaign is to convince people to donate. The video, infographics, and any other information is crucial in showing people the need and practicality of Venipedia.

A reward will be placed in which those that donate over a specified amount will receive a thanks letter and a spot on the contributors list. At a certain amount the users should be rewarded with a logo or picture putting them as "Platinum Donators". A possibility of giving user privileges to particular users can be arranged.

E.6.1.7 Updates

Our team will do updates once a week for Venipedia. It will recap the past week's success in crowdfunding, and talk in detail about either a unique trait of Venipedia, how the money will be spent, or an advantage to donating a particular amount.

E.6.2 Data

Venipedia is a mid-sized crowdfunding project, requiring approximately $15,000 to automate some processes.

E.6.2.1 Crowdfunding Spreadsheet

Given the amount of crowdfunds, differences among them, and having to pick a crowdfund, we developed a Microsoft Excel spreadsheet to compare the different websites. The is file named *VE13.25th_CrowdfundingSpreadsheet.xlsx*

E.6.2.1.1 Crowdfunds

Figure 31: Crowdfunds Tab in VE13.25th_CrowdfundingSpreadsheet.xlsx

At first, our team made a tab called 'Crowdfunds', in which 11 different crowdfunds are compared. Different attributes of the crowdfund, ranging from a fee charged to a payment style, are all accounted for. 31 different attributes of each crowdfund were recorded. This data was acquired last on October 30, 2013. An explanation can also be found in the 'CategoriesExplained' tab.

E.6.2.1.1.1 Fees, Limits, and Payments

Unfortunately, a lot of the data was not easily accessible on the crowdfund's website or a 3rd party website. Our team emailed all 11 websites asking for the missing information. Very few obliged, stating that the information was not public. (See Appendix for more information)

E.6.2.1.1.1.1 Fees

For all of the fees involved, we found that percentages involved were around 4-5%, but ranged from 2.9% (Gittip) to 7.9% (Fundly). Some crowdfunds did not have any fee to process a donation, (process and constant fee) which would indicate they did not use Amazon Payments or Paypal. Only one crowfund had a limit, and that was CauseVox. If one wanted to pay more money for a premium plan, there is no limit on CauseVox. Given the advisor's desire to not pay any unnecessary money for such a plan, our team decided to not use CauseVox altogether.

E.6.2.1.1.1.2 If Goal Unreached

An interesting column is the "If Goal Unreached". Depending on the crowdfund, one could find 1 of 3 results:

1) All or nothing. This simply means if you reach your goal, you are able to keep the money raised. Otherwise, the money is returned to the donator with no fee associated.

2) Keep what you get. Regardless of if a crowdfund is successful or fails, the host keeps the money. This can be beneficial for ambitious projects.

3) Option to keep money. Depending on the progress of the crowdfund or the amount raise, one might want to have the option to give the money back, or to keep the money. If one raises very little

money from a crowfund, then it may be desirable to give the money back for a future crowdfund. However, if one comes close to raising the desired money, they may keep the money.

E.6.2.1.1.1.3 Payment Style

Payment style is straightforward: if a payment is charged to a person's account, the money is handled by the company listed. Most crowdfunds prefer to use Paypal due to their straightforward plan and because of their established reputation. Others use Amazon Payments, or give you an option of a type of payment style. Lastly, some crowdfunding platforms have their own payment system, which can sometimes lead to lower or higher process and constant fees.

E.6.2.1.1.2 Statistics of Dollars and Users

As mentioned before, a lot of statistics were surprisingly unavailable to the public. The two most popular crowdfunds, Kickstarter and Indiegogo were the ones to deliver the most amount of data.

E.6.2.1.1.2.1 Total Dollars

Total dollars is the total amount raised by the crowdfunding website, regardless of if the project was successful or unsuccessful.

E.6.2.1.1.2.2 Avg Raised

The average amount raised by a crowdfund. This includes both successful and failed crowdfunds.

E.6.2.1.1.2.3 Success Dollars

The total amount of dollars raised by successful crowdfunds.

E.6.2.1.1.2.4 Unsuccess Dollars

The total amount of dollars raised by unsuccessful crowdfunds.

E.6.2.1.1.2.5 Total Backers

The total amount of backers for all crowdfunds that were successful.

E.6.2.1.1.2.6 Repeat Backers

The amount of backers for all crowdfunds that have donated more than once.

E.6.2.1.1.2.7 Total pledges

The total amount of people who pledged to a crowdfund.

E.6.2.1.1.3 Statistics of Projects

The statistics of projects covers a variety of statistics for each project. Like The Statistics of Dollars and Users, this category did not have a lot of public information available.

E.6.2.1.1.3.1 Avg Length

The average length of a crowdfunding project. Through independent research, we found most projects lasted from 30-45 days. (See 'Related Projects' tab in *VE13.25th_CrowdfundingSpreadsheet.xlsx*)

E.6.2.1.1.3.2 # of Projects

The number of projects the crowdfunding website has hosted.

E.6.2.1.1.3.3 # Successful Projects

The number of successful projects a crowdfunding website has hosted.

E.6.2.1.1.3.4 Success Rate

How successful a crowdfunding website's projects are. We found with Kickstarter's strict application process, it would promote projects to be more successful. Other crowdfunding websites like Indiegogo had more relaxed applications or no application at all, thus making the possibility for a crowdfund to be successful less likely.

E.6.2.1.1.4 Content, Features

The content and features section is easily the more subjective of the sections. Instead of dealing with raw numbers, the section deals with categories, subjects, and "Yes and No" questions.

Topics

The topics category deals with which possible category uScript, PreserVenice, and Venipedia fit under. In each respective tab, "uScript", "PreserVenice" and "Venipedia", the categories are fit to the project.

Geography

Where the crowdfund can be hosted. Most were either worldwide or limited to North America.

Rewards

If the crowdfund project can provide incentives to those donating. Examples of these rewards can be found in "Crowdfunding Projects", under GoogleDocs in the Crowdfunding folder of the B13-25th team's folder, as well as in Fabio's document entitled, "PreserVenice Crowdsourcing Script".

Updates

Whether the crowdfunding project can provide updates to those donating or thinking about donating.

Video

        If video is necessary for the crowdfunding website or optional. We found in our research that most successful crowdfunds had a video, which is a better explanation and more appealing to those donating.

Charity

        Whether the crowdfund supports charities. Due to Kickstarter's strict application process that focuses on a finished product, they do not support charities.

Causes

        The column stating whether a crowdfunding website supports causes.

Salaries

        If the crowdfunding website supports paying a salary of someone or not. "1-time" is meant to indicate that it will pay someone's salary for one time period.

Big Picture

        If a crowdfunding website supports something that is part of a bigger picture. Due to the vagueness of these particular projects, most did not support it.

Application

        As mentioned earlier, applications for the most part were relaxed. This leads to less success by a project because they do not fit the higher standards of most successful projects.

Facebook, Twitter, Google+

        If the project can be spread on Facebook, Twitter, or Google. Due to the advantageous aspects of social media, all can be shared in one way or another. As seen in Section 0 "Social Media Proposal", our plan is to use an RSS Feed to post to each respective social media platform.

E.6.2.1.2 Projects

        The projects tab is to establish how much money is needed to be raised for each respective project. uScript, PreserVenice, and Venipedia have their own unique traits and demands.

uScript

        As laid out in Section 0 of the uScript Proposal, uScript needs a substantial amount of money to be completed. This amount is going at a cheap rate for an independent computer programmer.

PreserVenice

As laid out in Section 10.5.1 in PreserVenice's Proposal, a salary of €20,000 is needed each year for Gabriele, as well as a 20% sur-charge associated with each donation to cover the costs of filing paperwork and carrying out the task.

Venipedia

Our programmer, Ben Lichtner has offered to make Venipedia automated. As mentioned in the Venipedia Proposal in Section 10.7.1, it will take approximately $15,000 to undertake. This is at a discounted rate.

E.6.2.1.3 Related Projects

Per request of our advisor, we compared different projects to the ones we are trying to fundraise money for in the "Related Projects" tab. Other examples of crowdsourcing projects can be found in Fabio Carrera's Google Doc entitled "uScript Crowdsourcing Script". We found that with all successful crowdfunds, the page and content appears professional, comes with a video, and clearly defines goals with a potential for direct or indirect rewards.

Figure 32: Related Projects Tab in VE13.25th_CrowdfundingSpreadsheet.xlsx

E.6.2.1.4 Venipedia

This tab has all of the relevant information for crowdfunds that will potentially support Venipedia. Their characteristics can be described in Section 0 "Crowdfunds" tab.

E.6.2.1.5 vBreakdown

Due to the advisor's request the person in charge of crowdfunding, William Richtmyer, filled out the vBreakdown tab with his own opinion of how each crowdfunding website performed according to the advisor's "scientific method". After being presented, it was suggested that the values could be edited to each person's opinion, or "weight" of a category.
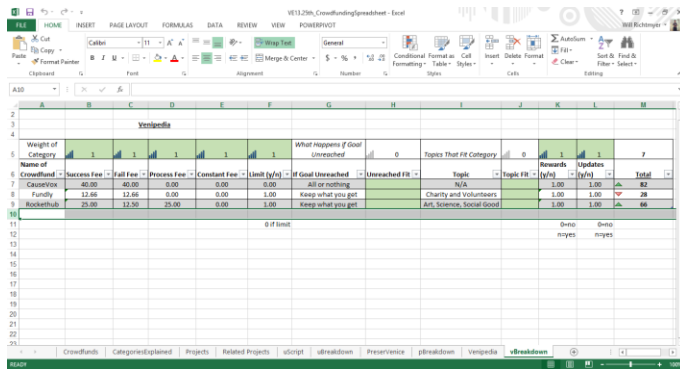
Figure 33: vBreakdown Tab in VE13.25th_CrowdfundingSpreadsheet.xlsx

To operate the vBreakdown tab, one simply needs to fill out a scale from 1-10 in the green horizontal boxes under "Weight of Category". 10 is the highest, or most important a category can be. There may be multiple categories with the same weight. For the green vertical tabs, depending on a person's previous weight results in the boxes in the row, one can judge how much the "Unreached Fit" or "Topic Fit" weigh. Due to the unique nature of the category, there are examples of how to fill it out under "will_crowdfunding", "kristen_crowdfunding", and "dylan_crowdfunding". The results are to be explained in Section 0, Crowdfunding Results.

E.6.3 Crowdfunding Results

To avoid confusion with *CrowdfundingSpreadsheet.xlsx*, a separate spreadsheet entitled *CrowdfundingResults*.xlsx was made to show the results of the groups' choices in the "vBreakdown" tab. The "Venipedia" and "vBreakdown" tabs are the same in both *CrowdfundingSpreadsheet.xlsx* and *CrowdfundingResults*.xlsx, but the difference lies in the "vResults" tab. 3 of our 4 team members filled it out to show how each crowdfund faired. Rockethub had the most positive results, getting most of the vote. As you can see, though the form was filled out differently from all 3 team members, the trend continued.

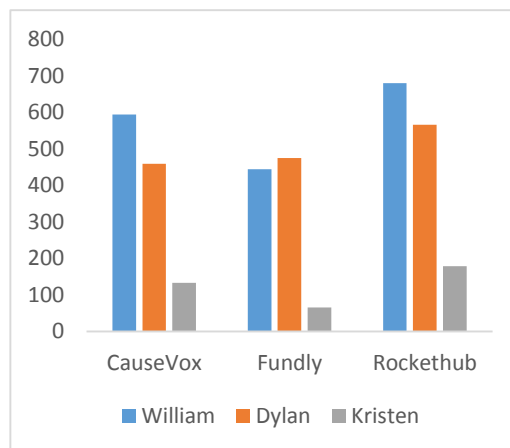*Figure 34: Venipedia Crowdfund Selection*

E.6.4 Video

Our team was not required to produce a storyboard or video for Venipedia, as it would be too much work.

E.6.3 Content

In order to build the content for Venipedia, a lot of time and effort was put in for each category. A combination of trimmed past content and newly created content, it provides most of what is needed for the crowdfunding project.

Help Us

Venipedia was started in 2008 on the 20th anniversary of the Venice Project Center, and it has greatly improved and grown over the years, as we experimented with different formats, styles, and ways to manage content. The purpose of the site is to provide a primary resource about Venice to the English-speaking community. Both the English and Italian Wikipedia sites have pages about Venice, but the English version contains broad information and the valuable information from the Italian version is not feasibly accessible by English-speakers. Venipedia attempts to fill the gap between these two resources by distributing pertinent Venetian data in English.

The CK Console will create and maintain the bulk of the "individual" data-driven pages, but we will also need to <u>manually</u> add at least two other types of pages: "**aggregate**" (a.k.a. "**plural**") pages, which give a broad overview of an entire class of objects (e.g., bridges, canals, coats of arms) and "**typical**" (a.k.a. "**singular**") pages, which describe in detail the *anatomy* of a typical representative of a class of objects (e.g., bridge, canal). Both types of pages will need to be constructed and populated manually. To read more about Venipedia's content, userbase, and organization visit the About page.

About Us

Ben Lichtner

Benny Lichtner makes art, books, and software. Most recently, he has been doing research and development for Redfish Group and City Knowledge in the realms of applied complexity science, urban data visualization, and interweb technology. He also aids the students of the WPI Venice Project Center in their efforts to record and publicize data about the city of Venice, Italy, and sporadically runs Corrugated Press, a publisher of hand-bound books of literary art.

Kyle Miller

Kyle Miller is a Toronto-based urban planner, engineer, data analyst, web designer, photographer, and musician. Currently enrolled in the Master of Science in Planning program at the University of Toronto, Kyle's areas of interest include transportation analysis, waterfront planning, and good urban design. Kyle has lived and worked in the United States, Canada, and the UK, and has contributed to projects as diverse as a public art smartphone app for Venice, the development of an experimental buoyantly assisted aircraft, and environmental compliance audits for some of the UK's largest retailers. Kyle's extra-curricular pursuits have included walking 1,600 kilometers of the Camino de Santiago de Compostela and, whilst living in Venice, learning to row standing up in the Venetian style. Kyle completed his own project at the VPC in 2007 and has been helping future teams of students ever since.

E.6.4 Results

As suggested by our advisor, Fabio Carrera, our team should focus on PreserVenice and uScript first.

Script

Though content has been given for future groups to utilize, there is no script or storyboard to work off of. Future groups will have to collaborate with Professor Carrera to develop a storyboard and short video.

E.7 EMAILS ABOUT CROWDFUNDING INFORMATION
Crowdrise (11/14/2013)

Hey William,

Thanks so much for the email.

We don't give away any numbers. I know...we're the worst. I can say that CrowdRise is designed to be super viral and give charities and fundraisers all the tools and features they'll need to help get the word out and raise more money for their causes. In short, if Facebook is the place that defines you and Twitter is the platform where you say what you're doing, then CrowdRise is the site to show how you give back.

The goal at CrowdRise is to make you slightly self-interested about your fundraising, proud of your charitable work and addicted to giving back. We don't sell advertising and we're not concerned with the number of users on the site....we care about being the catalyst to activate and engage fundraisers that will change the world.

Also, here are some really successful campaigns you can check out if you want to see some numbers:

ING Marathon: http://www.crowdrise.com/ing-nyc-marathon-2012

Personal Fundraiser: http://www.crowdrise.com/thedamthing/fundraiser/TheDamClimb

Charity Event: http://www.crowdrise.com/UTABigBowl2013

We want to have relentlessly good customer service so please let me know if you have any other questions at all and I'll be ready to help.

Thanks again and have the best Thursday ever,

Quintas

Kickstarter (11/14/2013)

Kickstarter Support, Nov 14 11:44 (EST):

Hi William,

Thanks for getting in touch. We don't currently have these resources available, but we have a general stats page about all the projects on our site here:

http://www.kickstarter.com/help/stats

We've also published some informative statistics about Kickstarter over the years, which you can find here:

http://blog.kickstarter.com/post/5014573685/happy-birthday-kickstarter

http://www.kickstarter.com/blog/shortening-the-maximum-project-length

Please let me know if you have any other questions and I'll be happy to help.

Best,

Natalie

GoFundMe (11/14/2013)

Morgan (GoFundMe Customer Happiness)

Nov 14 05:48 am (PST)

Hello William,

Thanks so much for your interest in GoFundMe.

While some of this information is not published on purpose, you will find some critical numbers on our press page here:

http://www.gofundme.com/media/

Thanks!

Morgan

We're here to help! I'll try my best to respond within 5 minutes during normal business hours.

Customer Happiness, GoFundMe