



WPI

Exhibiting 30 Years of Achievements at the Venice Project Center

Venice, B19

30th Anniversary Team

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This report represents the work of WPI undergraduate students submitted to the faculty as evidence of completion of a degree requirement. WPI routinely publishes these reports on its website without editorial or peer review. For more information about the projects program at WPI, please see <http://www.wpi.edu/academics/ugradstudies/project-learning.html>

Authorship

The members of this project are Nathaniel Bajakian, Jordan DeDonato, Nathan Stallings, and Jeremy Wong.

Nathaniel created the Population Graph and recorded videos for the stone presentation. He helped edit and make changes to The Population Graph section of the paper.

Jordan created and constructed the bell tower exhibit and all of the photomosaics. He helped update and organize the VPC Master List along with editing the final presentation slides.

Nathan created and constructed the timeline exhibit. He helped update and organize the VPC Master List. He wrote the final project report and executive summary. He helped edit the final presentation slides and paper.

Jeremy created the stone presentation and the slides for the final presentation. He also edited the paper and executive summary and helped write The Stone Presentation section.

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Abstract

Over the last three decades, the Venice Project Center (VPC) has hosted 222 projects, all of which attempted to improve Venice. These teams worked with sponsors to collect data on the city and proposed plans to improve the city's most pressing problems. Unfortunately, the impact these projects have had remains widely unknown by the Venetian populace. The goal of our project is to showcase the impact the Venice project center has had on Venice. To achieve this, we created an exhibit showcasing the impressive achievements of the VPC. Our exhibit was broken down into four main aspects: a timeline, bell tower exhibit, stone presentation, and population graph. When constructing the exhibit we also helped locate and organize lost databases among the VPC's archives.

Executive Summary

The VPC has worked on 222 projects over the last 30 years of operation, allowing them to amass a collection of data on the canals, artwork, tourists, local businesses, bell towers, and many other aspects of Venice. Until recently, much of this data had not been visualized or made accessible to the public. The VPC attempted to solve this problem by developing various methods of visualization and publication such as Venipedia and Venice 3.0, along with open-source tools, such as the Sandbox, that allow users to make various graphs and charts from any given dataset.

We helped the VPC by showcasing the long-lasting impact the Venice Project Center has had on Venice. Our team focused on creating an exhibit to creatively display the work the VPC has done throughout the years, along with organizing information collected by the VPC over the last 30 years. The Venice Project Center had cleared space in their headquarters, H3, which we used to set up four exhibits (Figure 1) to inform the public about the problems facing Venice, and the steps the VPC has taken over the past three decades to understand and hopefully alleviate them.

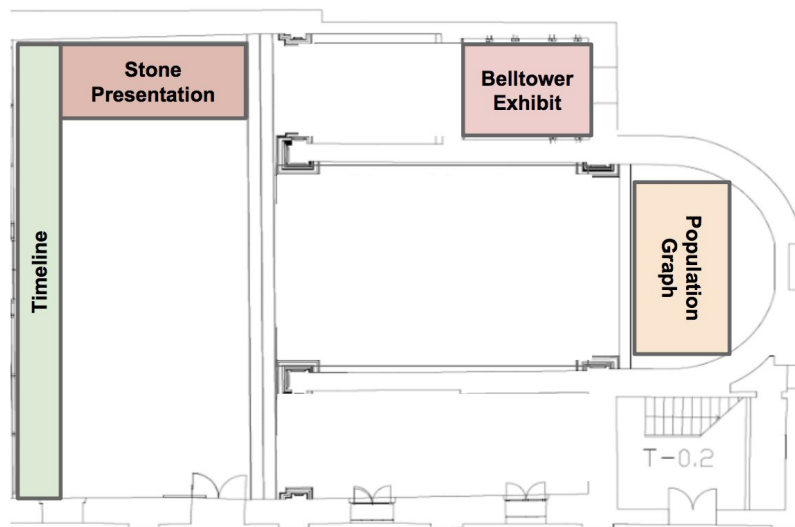


Figure 1: The Exhibit Blueprint

To highlight the wide range of topics the VPC has researched, we created the Bell Tower exhibit. This exhibit fills the unused bell tower at H3 and portrays the various levels of the city as the stairs are ascended (Figure 2). This theme-based exhibit was designed to display various maps and infographics intended to emphasize the wide range of projects the VPC has hosted while portraying important trends and information. This exhibit provides the VPC with a creative way of visualizing their data while utilizing the previously neglected space.

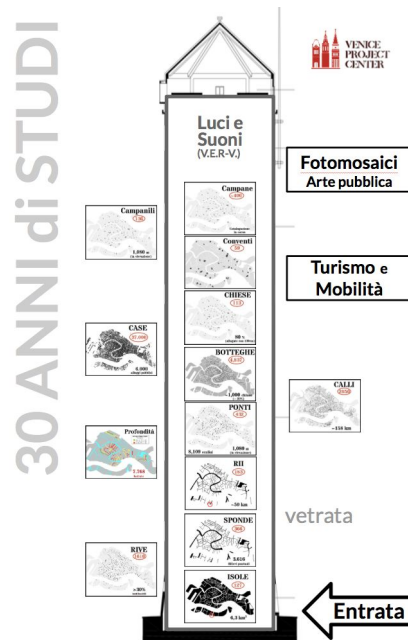


Figure 2: The Bell Tower Layout

Towards the top of the bell tower, there are two unused rooms. We decided that one of these rooms would be ideal for displaying the VPC's photographic database. The VPC has a database containing over 7000 pictures on the street art and infrastructure of Venice. To display these pictures, we designed eleven photomosaics, which are a collection of similar pictures put together to create a larger image, as seen in Figure 3. This allowed us to creatively display the thousands of pictures the VPC has collected on various landmarks.

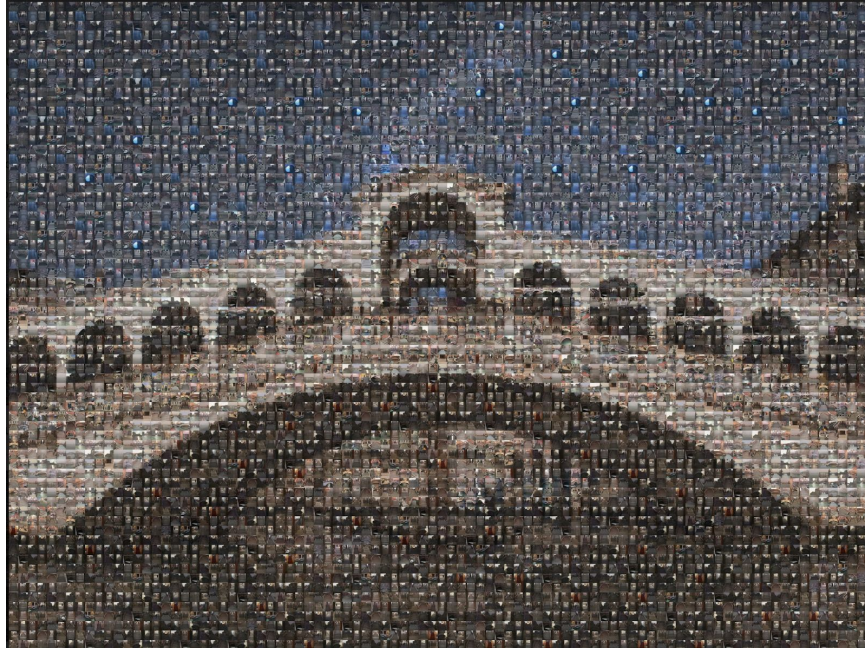


Figure 3: A Bridge Themed Photomosaic

Along with a large collection of pictures, the VPC has a large collection of images and data on the street art of Venice. To help the VPC display this information, we created the stone presentation exhibit, which is a slide show presented on large stone tablets hanging on one of the walls in the church (Figure 4). The presentation is broken down into various types of street art and contains two main forms of data communication. The first is a short video with words displaying information about the topic, and the second method consists of static images, graphs, and charts intended to communicate quantitative information the VPC has collected on various forms of street art around Venice. This presentation helps the VPC bring awareness to damaged and neglected street art.



Figure 4: The Stone Presentation

We decided it was important to highlight the accomplishments and major milestones of the VPC and the WPI students who have previously worked with them, so we created the timeline exhibit (Figure 5). The Timeline Exhibit displays IQP or MQP award-winning projects, publications that used VPC data, applications and tools the VPC created, VPC milestones, and projects that were the first in a series of themed projects. The timeline spans 40 years, allowing for additional projects to be added in the future. The timeline excels at bringing attention to the VPC's many years of operation and the hard work of WPI students.



Figure 5: A Segment of the Timeline

The final aspect of our exhibit focuses on Venice's main problem of a declining population. The VPC has conducted various projects examining the effects of tourism and their relation with local Venetians. These projects resulted in the VPC collecting data on Venice's population, which we used to develop a graph that depicts the rapid downfall of the population and the rise of tourism in recent years (Figure 6). This graph is hung on the high altar in H3 and shows visitors the alarming rate at which locals are leaving the city and we hope it will help bring awareness to this pressing issue.



Figure 6: The Population Graph

Through the process of designing our exhibit, we helped the VPC organize data by updating its master list. The master list is a Google Sheets Document which contains information on the IQP and MQP projects the VPC has hosted over its 30 years of operation. We updated this list and helped fill in missing data fields, along with creating a new sheet containing links to large data sets. This will make it easier for future WPI teams and VPC employees to find data sets and certain projects in their databases.

We were pleased when given the opportunity to help the Venice Project Center construct and exhibit emphasizing the impressive work they have done over the past three decades. The exhibits we designed will help give visitors a better understanding of the in-depth research the VPC has conducted while bringing awareness to the problems facing Venice. Our team recommends that future teams continue to add new information to the various aspects of the museum, along with constructing a new exhibit. This new exhibit will be an interactive 3D model of Venice, which will allow visitors to visually see and interact with various aspects of Venice. We hope that the exhibit is successful in helping the VPC communicate the important steps they have done to assist Venice.

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1.0 Introduction

Over the last 30 years, the implementation of computers has made it significantly easier to gather and generate data. Forbes states that 90 percent of all the data in the world was generated in just the last two years alone (Marr, 2019). This increase in data collection has left a void in the area of visualization, as much of the data is not communicated to the public or used for analysis. A study done by the International Data Corporation found that “Just 3% of all data is currently tagged and ready for manipulation, and only one-sixth of this - 0.5% - is used for analysis” (Burn-Murdoch 2012). The absence of proper communication techniques results in complex data that is difficult to interpret.

Data visualization is essential in the interpretation and publication of large amounts of data. SAS, a leading company in data analysis, defines data visualization as “the presentation of data in a pictorial or graphical format” (SAS, 2019). As large amounts of data are gathered by popular cities, such as Venice, there becomes a larger demand for data visualization. The Venice Project Center (VPC) is an organization that has been collecting data on the city of Venice for a multitude of years, resulting in a growing need for visualization and publication.

The VPC has worked on 222 projects over the last 30 years, allowing for the collection of data on the canals, artwork, tourists, local businesses, bell towers, and other aspects of Venetian heritage. The VPC has created a master list to organize these projects, and attempted to visualize the data gathered by these projects by developing websites, such as Venipedia and Venice 3.0. The VPC has also developed open-source tools, such as the Sandbox, allowing users to make various graphs and charts from any given dataset. These online tools are a step towards data visualization for public consumption.

Visualizing data online is a start, but the establishment of an exhibit in the VPC headquarters will encourage a more hands-on learning approach. Hands-on-learning has proven to be a better form of learning than learning through demonstration. A study performed by Kathleen Hearn found that Hands-on Learning was “... more efficacious than learning through demonstration, particularly when recall was measured 24 to 48 hours after the learning” (Hearn, 2010). A hands-on learning approach will help the VPC communicate its visualized data in a way that teaches and educates the guests about the problems facing Venice. To achieve this, the Venice Project Center has cleared space in their headquarters, H3, to set up exhibits that will inform the public about the problems facing Venice, and the steps the VPC has taken over the past 30 years to understand and hopefully reduce them.

The goal of our project is to showcase the impact the Venice Project Center has had on Venice. This will provide researchers with important data and bring awareness to the problems facing Venice. We plan on achieving this by organizing information collected by the VPC over the last 30 years and creating an exhibit in the VPC headquarters, allowing visitors and sponsors to see the projects and achievements the VPC has had. We wish to give guests a physical representation of the impact the VPC has had on their city.

2.0 Background

Over the past 30 years, the Venice Project Center (VPC) has amassed more than one million points of data on bridges, bells, canals, businesses, tourism, street art, and other aspects of Venice. The VPC has also proposed plans to improve traffic in the canals and better ways to preserve the health of the lagoon. This chapter will discuss the VPC's most impactful projects and data over the last 30 years, the process of visualizing and publicizing data, and creating engaging exhibits for public consumption.

2.1 History of the Venice Project Center

The Venice Project Center (VPC) began in 1988 when a recently graduated Fabio Carrera and six WPI students completed "The Feasibility of a Venice Project Center." The project focused on the logistics of setting up an official IQP project center in Venice, along with monitoring the community's reaction to having American students working on the city's problems (Behmke et al., 1998). The project searched for potential urban, environmental, and scientific problems facing Venice that future WPI students could work to improve. The success of this project highlighted a need for a project center in Venice and resulted in WPI establishing it as an official project center in 1993. This opened the door for over 800 students to come to Venice and work on projects intended to preserve the city's heritage through data collection and publication (Bishop et al., 2017).

2.1.1 Impactful VPC Projects

It is necessary to understand the term *impact* to fully grasp the impact that VPC projects have had. *Impact* is defined as "something that is measurable and the result of carefully planned actions within established timeframes (usually short-term), that seek to bring about definable improvement in a given set of activities" (Jones et al., 2016). The goal of all VPC projects is centered around leaving a positive impact on the city of Venice, which will improve the lives of residents. The VPC has benefited the sponsors they have worked with by providing collegiate level research teams to collect and analyze data, along with benefitting WPI by giving students a chance at real-world project experience. The sponsors can then use the data collected by WPI teams to implement change in the city of Venice. As a result, these projects leave beneficial impacts on the city, improving daily life for Venetians. For example, in 2001 a team of students worked with their sponsor, Consorzio Trasportatori Veneziani Riuniti, to redesign the cargo system of Venice, rerouting delivery paths and changing the way boats are loaded, thus decreasing boat traffic by 90% and increasing the efficiency of the Venice Cargo System (Tucker et al., 2001). With the data collected by the WPI team, their sponsor was able to propose implementing this new cargo system to the city of Venice, which was approved, leaving a positive impact on Venice. The VPC has hosted projects that have had environmental impacts on Venice. In 2002, the Dunes of Venice team created a Lagoon Environmental Atlas for the Environment Department of the City of Venice, which contained information about vegetation and geomorphology of the dunes. The WPI team also proposed site specific preservation plans to keep the inner islands safe from extreme tides and storms (Frelat et al., 2002). This information was then used by the Environment Department of the City of Venice to create a methodology to monitor the health of the dunes and assess the impacts of

future development which is important for the city, as the dunes on the outskirts of the lagoon help keep the inner islands safe from extreme tides and storms. The VPC has also hosted projects that focused on improving the structural integrity of the city. In 1998, a WPI team worked with UNESCO, the United Nations Educational, Scientific, and Cultural Organization, to assess the sewer holes and canal wall damage. The team found that around 80% of canal wall damage was due to structural damage, which commonly occurs when sewer holes build up with sediment and leak into the canal wall. They also studied the pollution of the canals and found that certain places in the city build up with more sewage, causing pungent smells and increasing the risk of spreading diseases. The team proposed a plan that prioritizes the repair of highly damaged canal walls, and suggested plans to control the pollution of the canals by rerouting sewer holes to the lagoon, rather than to the city (Babic et al., 1998). Venice used the VPC's data and recommendations to implement a system of dredging the canals that prioritized high risk areas and paid closer attention to the integrity of the canal walls. Projects like these and many others played crucial roles in the Venetian community, providing the government and locals with important information in regards to the city's trends, health, and heritage. The examples mentioned previously are just three of eight Venice Projects that WPI acknowledged with the prestigious President's IQP Award. This award is given only to students whose IQP work is deemed to be outstanding in its focus on science, technology, and society (Racicot, 2019). These projects provided Venice with data and helped bring awareness to pressing social, cultural, or environmental challenges facing the city. To aid researchers, the VPC has attempted to make this data easily accessible through appealing data visualization techniques.

2.2 Organizing and Visualizing VPC Data

Over the years, the VPC has organized and published various databases and applications. As time passes, certain tools change and become outdated, resulting in the VPC having broken apps and disorganized databases. One document that has been consistently updated is the VPC master list. This is a google sheets document called "VPC:Master Project List" which contains information on all projects hosted by the VPC. This list provides links to available projects, but is incomplete and does not help the VPC organize their various databases. Recently, the VPC has sponsored two projects that worked on the process of organizing and publishing the VPC's data. In 2017, the Venice Project Center sponsored a project titled "Organizing and Visualizing 30 years of Data collection at the Venice Project Center". This team focused on organizing the data the VPC had stored on its repository and communicating it to the public through the sandbox application and a series of booklets (Bishop et al., 2017). The following year, the VPC sponsored a project called "Celebrating 30 Years of the Venice Project Center". This project continued the work of the 2017 project and improved the VPC's online presence through a revamped VPC 3.0 website. The "Celebrating 30 Years of the Venice Project Center" team also created an interactive timeline to publish data in an organized manner on the VPC 3.0 website (Ellis et al., 2018). These projects focused on visualizing data and communicating the important work the VPC has done to the public.

2.2.1 The VPC's Sandbox Application

In 2017, a team of WPI students hosted by the VPC developed a tool called the Sandbox, which is useful for producing static visualizations for researchers. The Sandbox tool is a web-based application capable of developing customizable graphs from data collected by the VPC (Ellis et al.,

2018). Once teams working with the VPC collect data, that information is then put on a database called the CK. The Sandbox can access this data, and the user interface allows for the manipulation of this data into various forms of graphs or maps. The Sandbox then automatically generates a graph from the selected dataset, allowing the user to modify titles, descriptions, labels, or color palettes (Ellis et al., 2018). The sandbox is the VPC’s most recent and updated form of data visualization.

2.3 Publishing Data for Public Use

Data visualization is useless if the information collected is not communicated to the public. This is commonly done through data publication, which is the act of “making something known to the community at large, exhibiting, displaying, disclosing, or revealing [information]” (Phelps et al., 2005). The VPC has previously published their data through their websites such as veniceprojectcenter.org and Venipedia.org through an exhibit held in 1998.

2.3.1 Previous Forms of VPC Publication

The VPC maintains two main sources for data publication, Venipedia and the VPC 3.0 website. Venipedia is a wiki created to provide English speakers with information on Venice. It also acts as a reliable resource for the VPC, as it contains information collected by past WPI groups (Tsiros et al. 2012). To publicize the data on Venipedia, WPI students structured pages of information with pictures, descriptions, history, and numerical data, as shown in Figure 2.3.1.1.

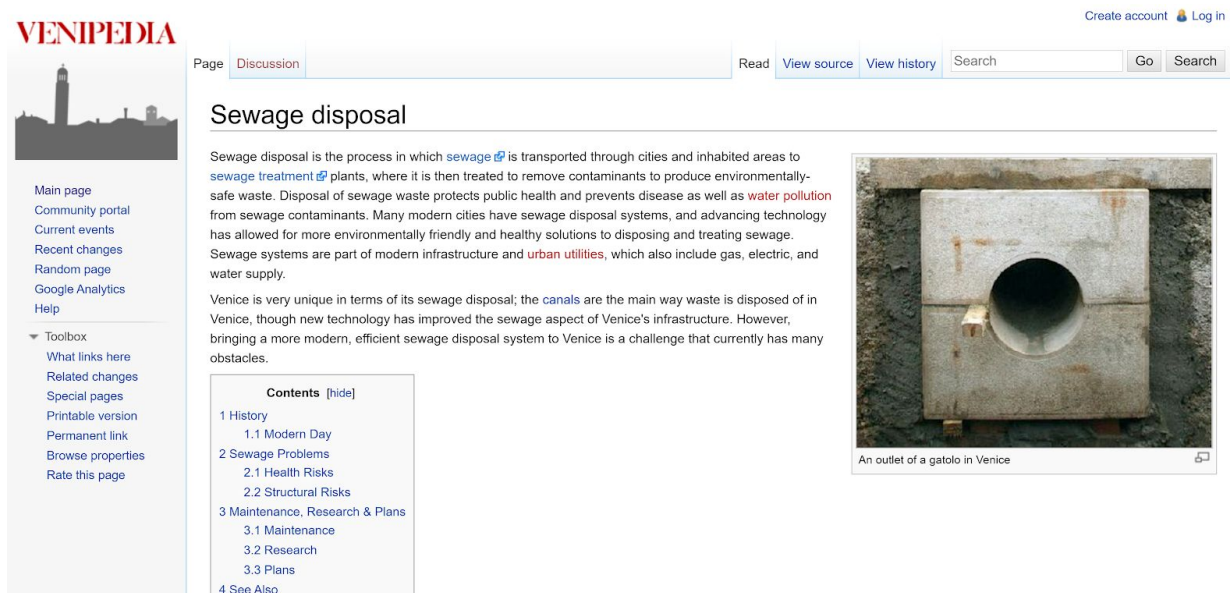


Figure 2.3.1.1: Venipedia Page

This allows users to access information collected by the VPC through a simple search on the website. As of October 2019, Venipedia had over 27,000 pages and 19,000 articles with hundreds of thousands of views on these pages. These organized pages make it straightforward for researchers to utilize information collected by the VPC. This data can then be used in studies and projects, highlighting the problems facing Venice. Along with the VPC, any registered user can modify the information on the Venipedia page, allowing locals and other researchers to build upon

the data about their city. Administrators monitor the changes made to the pages to ensure the new information is accurate.

The VPC 3.0 website focuses on the past WPI projects and highlights the information they gathered about Venice. The VPC website provides users with information on past projects, allowing them to search through applications, tools, impacts, and open databases. One such application users have access to is the previously mentioned Sandbox application. There is also the previously mentioned timeline application created by the “Celebrating 30 Years of the Venice Project Center” team. The VPC 3.0 and Venipedia websites provide a solid foundation for communicating information. Having these resources are useful for publicizing data, however, the VPC wished to incorporate an exhibit that contained information tailored to a more specific audience.

2.3.2 Previous Forms of VPC Exhibits

During the 10th anniversary of the VPC, a team designed an exhibit to present the history of the VPC to the Venetians in an interesting and informative way, such that every visitor leaves with an understanding of how and why the Venice Project Center was started” (Behmke et al., 1998). The intended audience of the exhibit were Venetians and potential future project sponsors. The exhibit featured sections on the history of the VPC and its relationship with WPI, previous VPC projects, future projects, and a dedication to Fabio Carrera, the founder of the VPC (Behmke et al., 1998). This was intended to entice and encourage new sponsors to work with the VPC and was their only form of publication at the time. The 10th anniversary team followed certain design techniques, all of which played an important role in creating a comprehensive exhibit.

2.3.3 Design Techniques

When hosting an exhibit, it is essential to practice good design techniques to maximize the effectiveness of the exhibit. The first step towards an engaging design is the consideration of an audience. Once a visitor steps inside, the design of the exhibit must be captivating and engaging, or you will lose the visitor’s attention. This can be done with attractive displays, interactive exhibits, and an organized floor layout (Allen, 2009). Once the audience is known, it is important to communicate the purpose of the exhibit. This is done through event objectives, which can be both tangible and intangible, and can be reached pre-event, during the event, and post-event. These objectives must value the organization holding the event and the audience attending the event (Allen, 2009). Once a target audience and objectives have been determined, the design process for the exhibit can begin.

There are five design principles that need to be taken into consideration when visualizing an event. These principles are (Allen, 2009):

- “1. The Elements - All the Parts That Make Up the Event
2. The Essentials - Must-Haves
3. The Environment - Venue and Style
4. The Energy - Creating a Mood
5. The Emotion - Feelings”

To successfully plan an exhibit, a design team must first look at the big picture and key elements. When considering the elements of the exhibit, teams should make an overview grid to layout the focus of the exhibit. This will give more insight into the elements of budgeting, event timing, logistics, and orchestration. Once the goals of an event are created from the elements, the planning team can start working on the essentials. These consist of the hard costs that would make the event memorable, such as supplies, space requirements, staffing, and transportation fees. The event must-haves will become the core of the event design and the event elements will naturally unfold around them (Allen, 2009). Once the big picture and must-haves have been decided, certain aspects of the exhibit can be designed.

When designing the elements of an exhibit, incorporating interactive displays is an important factor to be considered. A well designed interactive exhibit creates a learning climate, engaging audiences. As discussed by Sue Allen, “Research on visitor learning in museums suggest that interactivity can promote engagement, understanding, and recall of exhibits. For example, Maxwell and Evans (2002) cite evidence that both children and adults recall actions they themselves perform better than those they observe” (Allen, 2007). By incorporating interactive aspects into an exhibit, the audience becomes more interested and engaged with the experience, as they control what information they are viewing in a creative and entertaining way. A healthy balance between informative and interactive displays would better allow the audience to learn and retain information presented, and reduce confusion often found in exhibits that focus too heavily on interactive aspects (Allen, 2007). It is important to have both types of displays, as it makes information engaging and easy to follow, providing the audience with a better understanding and learning experience.

Three other design principles that must be considered are the environment, energy, and emotion, which are all related to the venue. A proper exhibit venue is crucial for effectively displaying information and setting the tone for the audience. When selecting a venue multiple aspects need to be taken into consideration such as room requirements, lighting (both natural and artificial), and presentation capabilities that are needed (Allen, 2009). It is important to know the floor and wall dimensions to properly modify the displays, ensuring enough room for the audience to move around. Various venue styles and designs can set various moods. Many traumatic historical exhibits are held at the place where the event occurred, which tends to set up a more somber and serious mood. The desired mood for an exhibit must be considered before hastily picking a venue, as it can drastically modify the audiences’ experiences and feelings. In the case of a provided venue, the steps must be modified slightly. The exhibit must be designed around the venue, ensuring there is enough space for the audience. Furthermore, the exhibit will be designed around the mood and tone of the venue, rather than picking a venue to set a certain tone.

2.4 Summary

The VPC has been operating in Venice for the last thirty years, working to improve the quality of life in Venice and amassing a large collection of information along the way. This information can provide researchers and locals with important data regarding the well being of the city. However, to successfully do this, the data needs to be visualized, which the VPC has attempted to do this in the past with various tools and programs, such as the Sandbox. This data is then uploaded onto their website allowing people to access this information. The VPC has previously created an anniversary exhibit, displaying information about the steps they have taken to improve

Venice. The team that designed the exhibit focused on following certain principles to ensure the effectiveness and quality of the exhibit.

3.0 Organizing Information

The VPC has collected a wide range of data on various aspects of Venice, however, each project stored data differently, resulting in an unorganized collection of physical and online data. Previous groups attempted to organize this data, resulting in the majority of physical data being uploaded online and then merged with the online data in a google drive called VPC WPI. However, this google drive lacks organization, and much of the information is hard to find or incomplete. Furthermore, a master list called “VPC:Master Project List” has been created in an attempt to organize and categorize projects hosted by the VPC, but this master list was also incomplete and did not connect to the databases.

3.1 Updating the Master List

We helped the VPC organize data by updating the VPC: Master Project List. This Google Sheet document contains a list of IQP and MQP projects hosted by the VPC over its 30 years of operation. It can be found in the VPC WPI google drive, and contains 8 sheets: WPI VPC Project List, Data Sets, Categories, Topics, MQP, Latest, IQP Labels, MQP Labels. Our team focused on improving the WPI VPC Project List sheet (Figure 3.1.1) and creating the Data Sets sheet. We improved the WPI VPC Project List sheet by adding bibliographies for all projects documented on the sheet. We created these bibliographies in APA format which allows them to be easily copied and cited for research papers. We also searched through the list of previous projects and filled in missing data fields. We marked any projects in red that were missing digital reports so future teams could scan the physical copies.

Project title	Term	Year	Project report link	Website	Sponsor(s)	Authors
Venice 3.0 Open: Venice 30th Anniversary Open Data Project	B	2017		https://sites.g	VPC	Schueler, Matthew J.; Spencer, Myles E.; Willoughby, Colin J.; Ying, Jessie X.
Venice Without Obstacles: Analyzing Accessibility in Venice For Various Disabilities	B	2018	x		SerenDPT, Federico Poletti	Eliana Abenante; Andrew DeRusha; Michael DiStefano; Stephanie Jones
Venice From Above: An Effort to Preserve Venice's Bell Towers	B	2018		https://sites.g	SerenDPT	Nick Colucci; Candan Iuliano; Fivos Kavassalis; Philippe Lessard
Celebrating 30 Years of the Venice Project Center	B	2018		https://sites.g	VPC	Ken Morton; Nicholas Delli Carpini; Elijah Ellis; Sam Hale
Open For Business: Analyzing Venetian Storefronts	B	2018		https://sites.g	VPC	Joe Bartone; Yibin Chen; Stephanie Racca; Keith Scales
Tech Mecca in Giudecca: Establishing a Startup Factory	B	2018		https://sites.g	SerenDPT	Colin Hiscox; Ryan Lee; Peter Maida; Alexander McMahon
PreserVenice Launch: A Crowdfunding Solution for Preserving Venetian Heritage	B	2018		https://sites.g	SerenDPT; Arti City	Dimitri Berardi; Benjamin Hetherington; Samuel Joy; Katherine Thompson
Exploring Urban Permaculture: Initializing a Path to a Greener Venice	B	2018		https://sites.g	SerenDPT; F.U.D. (Fattoria Urbana Diffusa)	Alex Jordan; Rachel Manca; Kevin O'Driscoll

Figure 3.1.1: The WPI VPC Project List Sheet

To help the VPC organize their multiple online datasets, we created the Data Sets Sheet. This sheet contains a list of various topics associated with large data sets, and links to where the information can be accessed, as seen in figure 3.1.2. We created this by digging through the WPI VPC google drive to find documents and folders containing information on specific topics. We then copied the links over into the master list. This will make it easier to find databases and certain projects throughout the VPC database.

A	B	C	D	E
Data Set	Links to data	Links to Pictures	Related infographics	
1				
2	Alters	https://drive.google.com/file/d/1JN1-czYwP41BQE1FoE9P-4uRH45CL4I/view		
3	Bell Towers		http://bellis.veniceprojectcenter.org/#map	
4	bridges	https://drive.google.com/drive/folders/0B7ELN_M21x_kem9ETWpd3RCz0k		
5	C			
6	Crosses	https://drive.google.com/drive/u/0/folders/0B4r87xN0ctkpG9iYWRLLRy1OU0k		
7	canals	https://drive.google.com/file/d/15xbSek2zbTzzbNSpD9ROqZxJLU5APu/view		
8	churches	https://drive.google.com/file/d/1Q3hwSNGMoElvmDee6F9w7WOHb1ZGQH2T/view	https://drive.google.com/drive/u/0/folders/0B4r87xN0ctkpRDh2LWJwRnQ2NEE	
9	coats of arms		https://drive.google.com/drive/u/0/folders/0B4r87xN0ctkpRU9hbFzYWFbVaDA	
10	conventi			
11	decorazioni (20) (Decorations)		https://drive.google.com/drive/u/0/folders/0B4r87xN0ctkpRzJjeGVVTFRSJA	
12	edicole			
13	forcole			
14	fontains	https://drive.google.com/drive/u/0/folders/0B4r87xN0ctkcdJrTUZmM3FHV1U		
15	frammenti (Fragments)	https://drive.google.com/drive/u/0/folders/0B4r87xN0ctkpaUdIRmRrRmNmC28		
16	iscrizioni (Inscriptions)	https://drive.google.com/drive/u/0/folders/0B4r87xN0ctkpQzYeDfaWxgXXzQ		
17	keystones	https://drive.google.com/drive/u/0/folders/0B4r87xN0ctkpZVvKWU4bnIU1E		
18	lapidi chiese			
19	lunette	https://drive.google.com/drive/u/0/folders/0B4r87xN0ctkpbXjxWVWjWRS05Rk0		
20	mascaroni (masks)			
21	monuments	https://drive.google.com/drive/u/0/folders/0B4r87xN0ctkpUOdUYUprNGVRUmM		
22	palaces			
23	patere	https://drive.google.com/file/d/1JrFxDXFqrW8q5wila1YY_nwDoxptxKf/view	https://drive.google.com/drive/u/0/folders/0B4r87xN0ctkpcXdTm1aX2twakk	
24	pili portabandiera			
25	portali (Portals)	https://drive.google.com/drive/u/0/folders/0B4r87xN0ctkpTU9qbDNMbnptbDQ		
26	rilievi (Reliefs)	https://drive.google.com/drive/u/0/folders/0B4r87xN0ctkpUDRBN1h0VVA0GJA		
27	rive (docks)	https://drive.google.com/drive/u/0/folders/1YVhy-D0DiuLwCwp3N0uuoqhoMnrvnL		
28	sculptures (10)	https://drive.google.com/drive/u/0/folders/0B4r87xN0ctkpUDRBN1h0VVA0GJA		
29	scuole (schools)			
30	ehone		http://ehone.veniceprojectcenter.org/#index	

Figure 3.1.2: Data Sets Sheet in Master List

3.2 Recommendations

We recommend that future teams continue to improve and add to the multiple sheets in the master list. It would be beneficial for the VPC if they hosted a project dedicated solely to organizing all the information and designing a future methodology for collecting and adding data to the massive database. A unified approach to collecting and storing data would prevent future disorganization and make it much easier to access valuable data about Venice collected by the VPC.

4.0 The Timeline Exhibit

In 2018, the VPC 30th Anniversary team created an online timeline application accessible from VeniceProjectCenter.org. This timeline focuses on four major subjects: IQP Awards, Applications, Publications, and Milestones. Once the major projects had been identified in each of these categories, the team gave each event a title, date, and description. They also provided any links to the original content and impactful pictures (Ellis et al., 2018). This timeline is a great online tool for highlighting the most important VPC achievements, and we decided that a similar exhibit would be very beneficial in our museum. We designed and created the timeline exhibit in two major phases: Planning and Constructing.

4.1 Planning the Timeline Exhibit

Inspired by the previous years work, we decided that a physical representation of the timeline would help viewers visualize the multitude of projects the VPC has hosted. We wanted the timeline to emphasize WPI students and the work they have done for Venice. To communicate this effectively, we broke the timeline down into five major categories. We displayed any IQP or MQP award-winning projects, publications that used data collected by students, applications and tools created by students, VPC milestones, and projects which we classified as firsts. A “first” is the original project in a series of related projects, such as the first bell tower project in 1994 (Figure 4.1.1).

Campane e Campanili

Nel 1994, due giovani studentesse di WPI completarono il primo di una lunga serie di progetti sui campanili e sulle campane di Venezia e delle isole lagunari.



Il VPC continua a raccogliere informazioni dettagliate per la conservazione dei 136 campanili esistenti, registrando i suoni delle oltre 500 campane in essi contenute.

bellsveniceprojectcenter.org

Martino, R. G., Foscar, S. (1994). Method for the evaluation of historical bells and bell towers. Worcester Polytechnic Institute (WPI).

Figure 4.1.1: The First Bell Tower Project

The 1994 Bell Tower project was one of the “firsts” highlighted in the timeline, and there have been nine other Bell Tower projects since. Once we decided on the content of the timeline, we typed the material for the Timeline Exhibit on a google slide presentation, which was shared with our advisor, Fabio Carrera. Each slide acted as an element that would be displayed on the timeline. As new

elements were added to the slide presentation, he would translate the information into Italian. Once we started planning and finalizing slides, we needed to construct the physical exhibit.

4.2 Constructing the Timeline Exhibit

We came to the realization that we would need to do large amounts of printing to construct the physical timeline. The VPC purchased a professional printer capable of printing on A3 paper, which we used to set up a printing station inside of H3. We ran test prints on normal paper and did final prints on high quality glossy or matte paper. Our test prints consisted of various text and paper sizes, which we used to find the best design for our timeline. We decided that the timeline should consist of multiple small elements, most of which contained a project picture with a small description of what the project was about, along with an acknowledgement to the WPI team responsible for that specific project. We picked this design because it gave the timeline a clean and professional look. Once we were happy with the look of test prints, we switched to finalized prints on glossy or matte paper. Any images or photos were printed in glossy to give them a nice shine. Any prints that were larger than A3, we performed at Al Canal, a printing company located in Venice. Once the information was printed out, we pasted them on foam board. We used foam board because it added a professional look to the timeline and would improve the integrity of the elements. To get the foam board to stick to the wall, we used Blu Tack as it allowed us to reposition elements as necessary and would not damage the glass wall. We decided that we wanted to emphasize the magazines that used data collected by WPI students, as this was a very impressive accomplishment. We did this by using a company called White Wall to print out magazine covers on forex, which is a high-quality foam board material. We designed the timeline to span 40 years, allowing for additional projects to be added in the future, as we believe WPI students and the VPC will continue to do impressive things.

4.3 Reflections and Recommendations

During the creation of the timeline, it went through multiple iterations before coming to a final design. The original design consisted of 13 elements on A2 paper, which would then be printed onto a window sticker and applied to the window. After meeting with Al Canal, a printing company located in Venice, we realized that window stickers were not in our budget. We brainstormed the layout of the timeline by printing a rough draft of the timeline and placing it on the glass wall. From that prototype, we realized a better design was to populate the timeline with more information and shrink the elements to either A3, A4, or A5 sized paper printed on glossy or matte. We then cut the paper and glued it onto foam boards, allowing the information to stand out while creating a professional aesthetic. It also allowed us to attach the elements to the glass wall with Blu Tack, which wouldn't damage the wall and allow us to easily move and adjust the elements. As the VPC continues to host impressive projects, we encourage future teams to continue to add onto the timeline, as there are 10 years of additional space. We also recommend slowly converting the elements on the timeline to White Wall prints due to the fact that the prints are high quality and professional.

5.0 The Bell Tower Exhibit

Over its 30 years of operation, the Venice Project Center has collected data on many aspects of Venice. With large amounts of data on canals, bell towers, tourism, street art, docks, bridges, and many more topics, the VPC has amassed an impressive and informative database. The VPC lacks a creative way of displaying this information and the extent of research it has done on Venice to visitors, so we decided to create an exhibit, which we called the Bell Tower Exhibit.

5.1 Planning the Bell Tower Exhibit

As part of the old church, the VPC owns an unused bell tower. We designed a vertical exhibit which utilizes the staircase inside the bell tower to demonstrate the various “levels” of the city. We wanted the bell tower exhibit to make the visitor feel like they were ascending the city of Venice as they climbed the staircase. To do this, we displayed certain maps and infographics regarding various aspects of the city. Since the Timeline Exhibit focuses on the WPI students and their projects, we designed the Bell Tower Exhibit to emphasize the data and information created and collected by the VPC. This exhibit is theme-based, and it starts with islands, then docks, canals, bridges, streets, stores, houses, churches, convents, bell towers, bells, and two separate rooms for canals and public art (Figure 5.1.1).

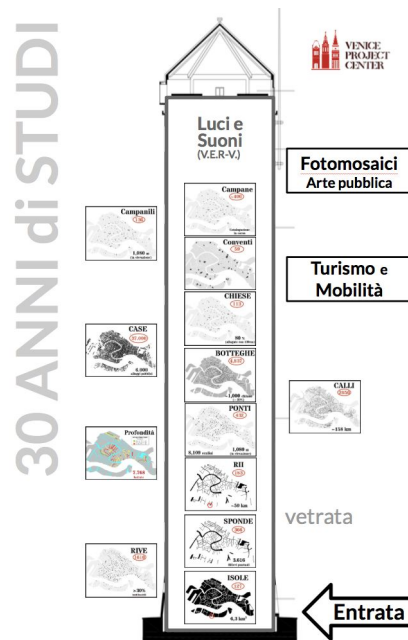


Figure 5.1.1: The Bell Tower Layout

We planned the bell tower exhibit in a similar way to how we planned the Timeline exhibit. We created a google slides document which we used to design various elements of the exhibit. Due to the fact that the Bell Tower exhibit focuses heavily on data, we used visualization technique such as maps, graphs, and charts to communicate the information. We also displayed the applications the

VPC created, which are accessible via QR codes in the exhibit. We wrote text explaining the images and charts which allows the Bell Tower Exhibit to be self-explanatory. Similarly to the Timeline Exhibit, Fabio helped us translate any text into Italian, and once the final design was achieved, we began the process of physically constructing the exhibit.

5.2 Creating the Bell Tower Exhibit

We used the same printing station we set up in H3 discussed in the Timeline Exhibit section to print out the various elements we designed. Similarly to the Timeline Exhibit, we also created drafts to test what design would look best. Our final design consisted of A2, A3, A4, A5, and A6 sized elements spread out along the wall. We decided to use smaller elements because it looked cleaner and we could fit in more information. Once we printed out our final design, we pasted the paper on to foam board to give it a polished, professional look. As part of each “level” we had an intro map that informed the guest that they have reached a new section and gave a brief introduction on what the floor is about. These posters were all A2 sized, which meant we had to print them at Al Canal, but we were still able to mount them onto foam board. Due to the bell tower containing old bricks, it was hard to hang the posters with just Blu Tack. Our solution was to wipe down the bricks with a broom to remove any dust or chipped pieces, and then we sprayed the wall with glue. This allowed the Blu Tack to stick successfully to the wall, but we are unsure of how permanent of a solution this is.

5.3 Reflection and Recommendations

The Bell Tower Exhibit is a creative way of displaying the various levels of Venice, and makes use of the vertical space. . It also does an excellent job of showing the diversity of projects the VPC has hosted on multiple elements of Venice. Due to a lack of time, we were not able to complete all the levels of the city. We recommend that future teams continue to add layers, especially a bells layer, along with more information in each layer. One problem we foresee with the Bell Tower Exhibit is the posters falling off the walls over time. Due to the fragile state of the bricks, the Blu Tack doesn't always stick. We recommend that future teams look into solving this problem, potentially by hanging the posters from the steel staircase structure.

6.0 Photomosaics

A photomosaic is a form of static visualization. It is a “multi-scale image, conveying different information when viewed up close as when seen from a distance” (Silvers, 1996). This type of visualization is perfect for displaying a large number of photos found in graphical databases. While they provide a creative way of displaying images, they lack in their ability to display information about the individual photos in the collection. Regardless, photomosaics are very easy to create, as the process is automated. There are many tools, such as websites or photo modification tools like Photoshop, that can take a database of photos and turn them into an elegant photomosaic.

6.1 Designing Photomosaics

The VPC has a database containing over 7000 pictures on the street art and infrastructure of Venice. These pictures have been collected over many years by various WPI students. In an attempt to display the large numbers of photos the VPC has collected, we decided that photomosaics would be a perfect template. We designed photomosaics on monuments, coat of arms, portals, reliefs, street alters, wells, bridges, patere, sculptures, docks, fountains. We picked these topics because the VPC’s databases contained a plethora of pictures. Since photomosaics lack in their ability to provide information about the pictures, we created descriptions for each one. These descriptions provide the reader with information on what the mosaics are, along with how much information the VPC has collected on the subject. Once we had decided on the topics, we picked a large more iconic pictures to be the main photo in the mosaic. We decided to use well known and easily recognizable landmarks for each topic such as the Rialto Bridge and Bartolomeo Colleoni. We worked with Fabio to pick the best known images in each database and then prepared to make photomosaics around that image. Once we had finalized a design, the next step was to create and display the photomosaics.

6.2 Creating Photomosaics

After researching tools online and running trials on various websites, we decided the best tool to use was a website called TurboMosaic, as it produces good quality mosaics at a cheap and affordable price. This allowed us to display the thousands of pictures the VPC has collected on various landmarks as seen in Figure 6.2.1.



Figure 6.2.1: A Photomosaic Crafted from Monuments

Once TurboMosaic had created the photomosaic, we downloaded the file so we could print it out. Due to the unique nature of these images, we knew we wanted to have a large final print out. We used Al Canal to print out all photomosaics, and we tested A1 and A2 sizes. We decided that A1 was too big for our available space, resulting in the final size for the photomosaics being A2. Since Al Canal did not allow us to print on glossy paper at such a large scale, we used a thicker 180 gram paper. Although this did not give the photomosaics a nice shine, the thicker paper improved the quality and appearance of the photomosaics. We then mounted the paper to foam board and hung them in one of the empty rooms at the top of the Bell Tower exhibit. We used the glue and Blu Tack method discussed in the Bell Tower Exhibit section to successfully attach the photomosaics and descriptions to the brick wall.

6.3 Reflections and Recommendations

The photomosaics provide a very unique way of portraying the images collected by the VPC. The software, TurboMosaic, worked very well and it allowed us to customize the photomosaics as we pleased. The printing process through Al Canal was efficient in terms of time and price. We created 11 photomosaics, which are currently being displayed in one of the rooms in the Bell Tower Exhibit. Our original goal was to create a photomosaic for every type of street art, but some of the databases did not contain enough pictures. We recommend that future teams improve these databases by collecting more pictures, which would allow them to construct more photomosaics. We also recommend printing the photomosaics out with a company like White Wall, which will improve the quality of them. Future teams should also find a final spot to hang the photomosaics on the wall. Their current location could be improved so they achieve more visibility.

7.0 The Stone Presentation

Venice is famous for its unique geographic location and beautiful architecture. Part of its beauty can be found hidden among the streets, as a stroll down the winding alleys of Venice will reveal a world of old public art. This public art consists of unique artifacts dating back to 300 AD (PreserVenice, 2013). There are two main types of public art, decorative and functional. Decorative art is a public art that lacks functionality and it consists of crosses, street alters, fragments, coats of arms, patere, reliefs, symbols, sculptures, and other decorations. Functional art is public art that has a function and consists of monuments, portals, flag poles, bells, fountains, lunettes, church floors, wellheads, and keystones. Much of the public art played important roles in Venice’s history, but recent neglect has left the art in desperate need of restoration.

7.1 Designing The Stone Presentation

We decided to create the Stone Presentation to bring awareness to the struggles of Venice’s public art. The VPC has collected a large amount of data on the various types of public art, and we hoped that by highlighting their importance and rich history, people would be inspired to help maintain and restore the art. We designed the stone presentation in two major groups, decorative and functional public art, as seen in figure 7.1.1.

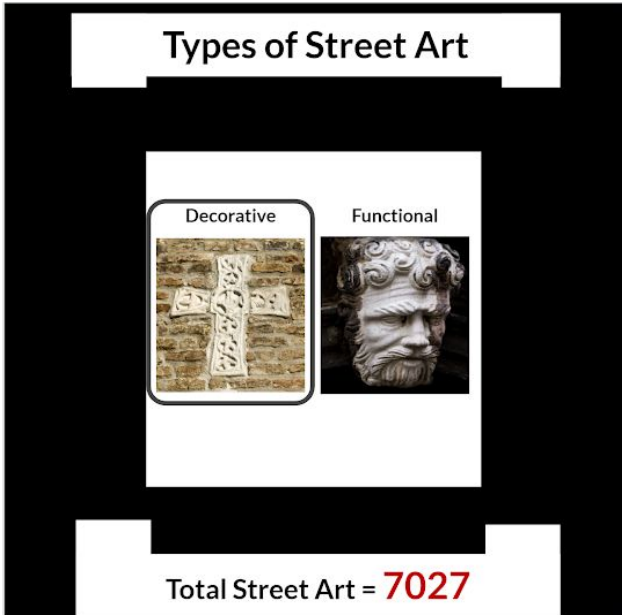


Figure 7.1.1: Decorative and Functional Street Art

We wanted to include various infographics and videos about each of the different types of public art. We created the stone presentation to be displayed on large stones that were pulled up from the previous church floor held on the walls of H3. As a different way to communicate information we decided to create short videos detailing information on the public art called Assertion videos. Assertion videos are short, usually under two minute videos created to make an assertion. Usually, several seconds of stock footage or photos are displayed, with a short sentence or phrase being

overlaid on it. These sentences or phrases follow a common theme for the video, often making an assertion on some topic, providing background on it, and possibly even suggesting future action items. We decided to make assertion videos on two major topics, Fountains and Street alters. We picked these topics because they're easy to find around the city of Venice and have a rich and interesting backstory.

7.2 Creating The Stone Presentation

We created the slideshow on google slides and focused on the large amount of data collected by the VPC. When creating the presentation slides the aspect ratios of the slides had to match something that would fit all of the church floor stones. After testing various ratios, we went with a 11.5 x11.5 ratio as it enabled us to project on all of the stones in a higher quality. We constructed a template for the stone presentation by lining up boxes with the outline of each stone so we would be able to determine the maximum area we would be able to use on each stone. After creating the template we developed a "key" slide that would display all of the types of public art and it would be a reference to how far along into the presentation it is. After that, for each of the pieces of public art, we added a map depicting all the currently known locations of that particular type and also listed the total number of each type of public art there was in the database. The next slide in the series shows pictures of the public art on the main stone and on the right stone is a timeline depicting the oldest and newest pieces of that type of public art.

Another type of slide is the assertion video slides. After determining the topics for our video, we commenced filming. After identifying several locations of the public art, we travelled to each of those locations and took various videos and pictures, which allowed for flexibility in editing. Besides some cutting and minor color correction, all that we need to do to create the videos was overlay text. We used Adobe Premiere Pro to do this, as it easily allowed us to edit and export the videos.

Once we put all the slides together, we set them up on a 5-second timer, allowing the stone presentation to operate autonomously. The VPC provided us with a projector and a stand, which after testing various locations, was placed in a spot that allowed us to project on the stone tablets with good resolution and proper scale.

7.3 Reflections and Recommendations

The stone presentation is a great method for communicating the large amount of information and data the VPC has collected on public art. Breaking down the presentation into various sections allows us to add a key, allowing viewers to see where they are in the slideshow. The videos allow us to communicate information to the viewer without using static graphs or charts. This tends to be more engaging and can tell a story that a normal graph can not. We recommend future teams continue to make videos and add new slides and information to the stone presentation.

8.0 The Population Graph

One of Venice's most pressing issues is the rapidly decreasing population in contrast to the exponential growth in tourism. The city's population peaked at 174,808 people in 1951 and has been decreasing ever since. As the population of Venice decreases, the amount of tourism increases (Blanco et al., 2014). This creates a difficult situation for residents, as the influx of tourism makes them feel like a stranger in their own city as their culture is eroded away.

8.1 Designing the Population Graph

Our goal in creating the population exhibit was to emphasize this problem and visualize the alarming rate at which residents are leaving the city, along with a corresponding rise of daily tourists visiting the island. To accomplish this, we decided to use a bar graph as they excel at comparing two variables over time. We wanted to represent the local Venetian population with an item that is significant to their culture. We choose to use Venice's iconic *bricole*, which are large wooden mooring posts seen all around the city, to display the population of the Venetians in contrast to elaborate red and white striped posts that represent the daily tourists. We obtained the data needed to populate the graph from the VPC. On the WPI VPC google drive, there are two files called "CPV: Venice Tourism (Historical Trends)" and "CPV: Venice Population (Historical Trends)". These files contain consistent population and tourism data dating back until the 1950's, and then spotty population data dating back to the 1300's. Once we had a design in mind and the necessary data, we moved onto creating the graph.

8.2 Creating the Population Graph

We created a simple scatter plot of the data in Google Sheets and imported it into Photoshop, where *bricole* and the red and white mooring pylons were overlaid on the data. Once that was complete, several pictures of the wall this graph was to be displayed on were taken. These were used to create a background for the graph, as seen in figure 8.2.1. The graph is located on the back wall of the high altar in H3 and covers over 100 years of data. The brick wall background was seen as necessary, as the alternative would be leaving the space white, covering up the distinctive brick walls of H3.

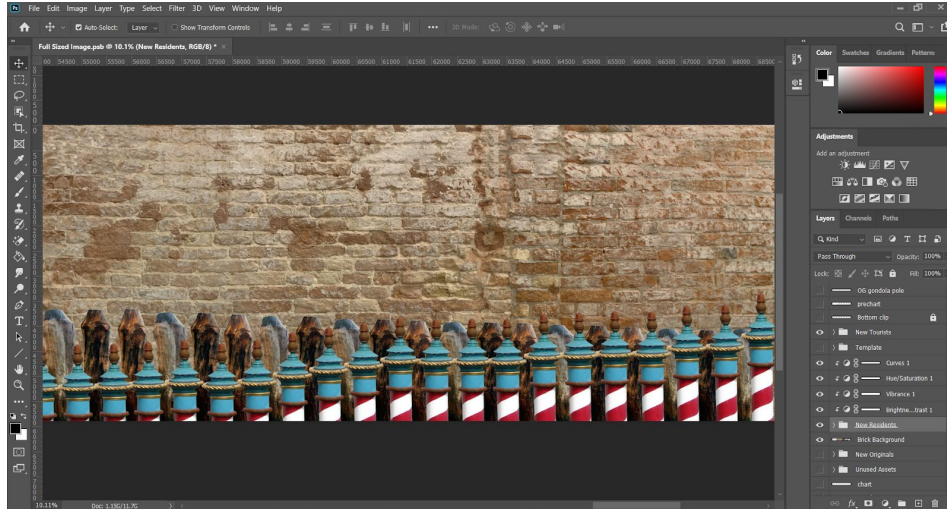


Figure 8.2.1: The Creation of the Population Graph

We realized that to maintain an appropriate scale, we had to compare the Venice Population to the average number of daily tourists, rather than the total number of annual tourists. We also added individuals points portraying the estimated population levels back to the mid 1300's. The printing store, Al Canal, allowed us to print on a 1 x 40 meter paper, which we used to print out the entire population graph at once. The final dimensions of the printed area was approximately 1x8 meters, with another 4 meters being used for data between 1320 and 1951. We then hung this up on the wall using Blu Tack along the top edge of the sheet.

Before 1951, there isn't any consistent source of data with which to create a yearly population graph. Therefore, the wooden posts cannot go back further than this point. However, we do have data going back to the mid 1300s. To visualize this, we used 4 cm diameter red dots stuck to the wall in a scatter plot, with years ranging from 1320 to 1951. Significant events in history, such as the Black, Salute and Redentore plagues, the fall of the republic, and the inclusion into the Kingdom of Italy are included on call-out boards situated throughout this section. This can be seen in Figure 8.2.2.

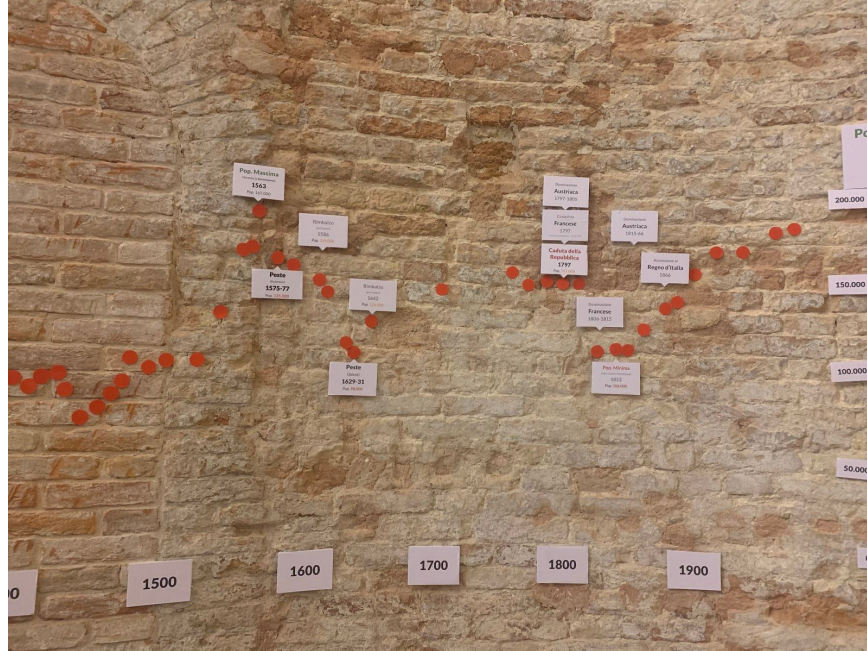


Figure 8.2.2: The Creation of the Population Graph

8.3 Reflections and Recommendations

Our original plan was to make the population graph out of wood. During our preparation term, we created a small scale model of this graph with a base and posts. Our plan was to create arched base to fit in the high altar, with a wooden post representing the tourist and resident population through height, with space left over to continue marking this trend into the future. Unfortunately, due to a lack of funds, we decided to print out the population graph instead. The final version of the graph came out well and allowed us to communicate the alarming, steady rate at which the population is decreasing. We recommend future teams take our graph and transform it into a 3D model. The Leroy Merlin Venezia Marghera lumber yard on the Venice mainland will be able to provide the team with the necessary wood. This will provide a nice interactive 3D element to the exhibit and allow for future years to be added on.

9.0 Conclusion

Working with the Venice Project Center has given us a great insight into the many things it has done over the years to improve the city of Venice. Our goal of creating an exhibit for November 30th was achieved by organizing data collected by the VPC and creatively visualize that data through four main exhibits. This exhibit was intended to help the VPC communicate its impact and data to visitors at H3. We believe that it will be successful in doing just that, as each element displays different information showing the wide range of impacts the VPC has had. To improve the exhibit, we recommend future teams to continue adding onto the timeline and bell tower exhibit. We also recommend creating a 3D version of the population graph. This was our original plan, but a lack of funding preventing us from doing this properly. We also recommend creating a 3D model of Venice. This would be a great addition to the exhibit, and if implemented properly could add a nice interactive element to the VPC's exhibit.

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ANNO	IL MOVIMENTO TURISTICO NEL COMUNE DI VENEZIA (esercizi alberghieri ed extralberghieri)										Pernottanti	Escursionisti	Anno	Turisti		
	VE CENTRO STORICO		LIDO DI VENEZIA		MESTRE-MARGHERA		LIT. DEL CAVALLINO		COMUNE DI VENEZIA							
	ARRIVI	PRESENZE	ARRIVI	PRESENZE	ARRIVI	PRESENZE	ARRIVI	PRESENZE	ARRIVI	PRESENZE						
54	1995	1.449.052	3.234.870	172.291	452.570	903.708	1.657.736	545.680	5.409.381	3.070.731	10.754.557	3.234.870	5.140.025	1995	8.374.895	22945
55	1996	1.471.708	3.288.115	198.173	492.758	956.470	1.749.246	544.099	5.359.461	3.170.450	10.889.580	3.288.115	5.224.628	1996	8.512.743	23323
56	1997	1.443.384	3.325.556	200.577	484.735	907.814	1.636.189	560.593	5.421.827	3.112.378	10.888.307	3.325.556	5.284.120	1997	8.609.676	23588
57	1998	1.482.502	3.444.938	215.785	519.757	952.080	1.745.531	575.082	5.437.420	3.225.449	11.147.846	3.444.938	5.473.811	1998	8.918.749	24435
58	1999	1.451.447	3.455.323	203.553	530.869	951.907	1.735.811	585.945	5.536.664	3.163.852	11.282.458	3.459.323	5.498.668	1999	8.955.591	24537
59	2000	1.503.913	3.562.728	220.848	574.622	1.023.753	1.771.886			2.748.814	5.909.236	3.562.728	5.660.973	2000	9.223.701	25270
60	2001	1.554.874	3.728.713	224.071	596.896	1.034.933	1.861.171			2.813.878	6.286.780	3.728.713	5.924.714	2001	9.653.427	26448
61	2002	1.481.866	3.587.434	192.053	515.374	1.047.697	1.930.517			2.721.656	6.033.325	3.587.434	5.700.229	2002	9.287.663	25446
62	2003	1.546.867	3.829.285	182.327	527.598	1.019.539	1.855.529			2.748.733	6.212.412	3.829.285	6.084.517	2003	9.913.802	27161
63	2004	1.746.591	4.435.241	179.473	538.537	1.092.545	1.958.295			3.018.609	6.930.073	4.435.241	7.047.347	2004	11.482.588	31459
64	2005	1.902.478	4.925.182	180.041	519.813	1.155.104	2.225.638			3.237.623	7.670.433	4.925.182	7.825.835	2005	12.751.017	34934
65	2006	2.028.575	5.387.695	192.970	572.469	1.273.615	2.284.990			3.496.160	8.245.154	5.387.695	8.560.742	2006	13.948.437	38215
66	2007	2.165.656	5.875.370	188.378	565.862	1.272.819	2.401.642			3.626.853	8.842.874	5.875.370	9.335.630	2007	15.211.000	41674
67	2008	2.075.085	5.876.553	181.061	517.078	1.176.729	2.293.908			3.433.775	8.487.539	5.676.553	9.019.721	2008	14.696.274	40264
68	2009	2.096.593	5.727.324	165.899	493.859	1.142.623	2.224.728			3.405.115	8.445.911	5.727.324	9.100.393	2009	14.827.717	40624
69	2010	2.251.160	5.760.811	162.631	482.759	1.294.616	2.277.677			3.708.407	8.521.247	5.760.811	9.153.602	2010	14.914.413	40861
70	2011	2.501.000	6.227.000									6.227.000	9.894.350	2011	16.121.350	44168
71	2012	2.485.000	6.222.000									6.222.000	9.896.405	2012	16.108.405	44133
72	2013	2.533.000	6.402.000									6.402.000	10.172.415	2013	16.574.415	45409
73	2014	2.599.000	6.425.000									6.425.000	10.208.961	2014	16.633.961	45572
74	2015	2.777.000	6.815.000				258,89%					6.814.000	10.827.060	2015	17.641.060	48332
75	2016	2.896.054	7.045.613	185.995	539.188	1.563.518	2.926.987			4.645.567	10.511.788	7.045.613	11.195.080	2016	18.240.693	49975
76	2017	3.155.548	7.862.292	184.753	558.982	1.694.581	3.264.545			5.034.882	11.695.919	7.862.292	12.492.736	2017	20.355.028	55767
77														2018	0	
78														2019	0	

+ Turisti Anno Proiezione Sottostima Grafo Turisti Crociere Escursionisti Sintesi Copy of ElaborazioneC

Appendix B: Population Data

CPV: Venice Population (Historical trends) Share

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fx	Anno	Pop.	Fonte	link
1	Anno	Pop.		
2	1338	115,000	<i>D. Beltrami, Storia della popolazione di Venezia dalla fine del secolo XVI alla caduta della Repubblica, Cedam, Padova 1954</i>	http://venus.unive.it/macellosangiobbe/popolazioneve.htm#beltra http://www.https://pl
3	1348	55,000		
4	1361	70,000		
5	1371	72,000		
6	1373	71,000		
7	1382	72,000		
8	1388	75,000		
9	1397	80,000		
10	1400	85,000		
11	1405	82,000		
12	1411	86,000		
13	1414	89,000		
14	1420	90,000		
15	1422	85,000		
16	1427	76,000		
17	1435	78,000		
18	1439	80,000		
19	1449	83,000		
20	1457	86,000		
21	1462	90,000		
22	1464	88,000		
23	1468	91,000		
24	1478	102,000		
25	1486	98,000		
26	1490	96,000		
27	1495	99,000		

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fx	Anno	Pop.	Fonte	link
26	1490	96,000		
27	1495	99,000		
28	1498	101,000		
29	1509	102,000	<i>Correr, Codice Cicogna n.3638</i>	
30	1540	129,971	<i>Galliccioli, Delle memorie venete antiche</i>	
31	1548	150,000		
32	1552	158,768		
33	1555	159,467	<i>Correr, Codice Manoscritto Donà delle Rose</i>	
34	1563	168,627	<i>Correr, Codice Donà</i>	
35	1581	134,835	<i>Marciana, Cod. Ital. VII</i>	
36	1586	148,638	<i>Bibl. Vaticana, Cod. Ottob., Lat. 2580, foglio 170</i>	
37	1593	139,457		
38	1624	141,625	<i>M.C. Correr, Codice Donà</i>	
39	1631	98,000		
40	1633	102,362	<i>ASV, Provveditori alla Sanità, B. 568</i>	
41	1642	120,373	<i>ASV, Provveditori alla Sanità, B. 568</i>	
42	1696	135,352	<i>ASV, Provveditori alla Sanità, B. Cap. II, B. 189</i>	
43	1714	140,000	<i>Gino Benzoni, Venezia agli inizi del 1700.</i>	
44	1760	149,476	<i>ASV, Provveditori alla Sanità, B. 570</i>	
45	1766	140,256	<i>ASV, Deputati ed Aggiunti alla Provv. Del Denaro Pubblico, B. 8</i>	
46	1770	139,878	<i>ASV, Deputati ed Aggiunti alla Provv. Del Denaro Pubblico, B. 8</i>	
47	1780	140,286	<i>ASV, I Vol. dell'esemplare, II dell'Anagrafe Venete</i>	
48	1784	140,090		
49	1790	137,203	<i>ASV, Deputati ed Aggiunti alla Provv. del Denaro Pubblico, B. 212</i>	
50	1797	137,240		
51	1811	115,246		
52	1823	110,556		

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	A	B	C	D	E	F
51	1811	115,246				
52	1823	110,556				
53	1825	110,031				
54	1842	106,353				
55	1852	105,915				
56	1857	119,293				
57	1871	128,787				
58	1881	131,834				
59	1901	146,076				
60	1911	157,805				
61	1921	159,262				
62	1931	163,559	Istituto centrale di statistica			
63	1936	163,849	Istituto centrale di statistica			
64	1951	174,808	Istituto centrale di statistica			
65	1952	174,448	Istituto centrale di statistica			
66	1953	172,195	Istituto centrale di statistica			
67	1954	170,446	Istituto centrale di statistica			
68	1955	167,069	Istituto centrale di statistica			
69	1956	162,834	Istituto centrale di statistica			
70	1957	158,466	Istituto centrale di statistica			
71	1958	154,268	Istituto centrale di statistica			
72	1959	150,242	Istituto centrale di statistica			
73	1960	145,402	Istituto centrale di statistica			
74	1961	137,150	Istituto centrale di statistica			
75	1962	132,148	Istituto centrale di statistica			
76	1963	129,468	Istituto centrale di statistica			
77	1964	126,808	Istituto centrale di statistica			
78	1965	123,733	Istituto centrale di statistica			

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	A	B	C	D	E	F
76	1963	129,468	Istituto centrale di statistica			
77	1964	126,808	Istituto centrale di statistica			
78	1965	123,733	Istituto centrale di statistica			
79	1966	121,309	Istituto centrale di statistica			
80	1967	118,889	Istituto centrale di statistica			
81	1968	116,270	Istituto centrale di statistica			
82	1969	113,587	Istituto centrale di statistica			
83	1970	111,550	Istituto centrale di statistica			
84	1971	108,426	Istituto centrale di statistica			
85	1972	106,516	Istituto centrale di statistica			
86	1973	106,806	Istituto centrale di statistica			
87	1974	105,656	Istituto centrale di statistica			
88	1975	104,206	Istituto centrale di statistica			
89	1976	102,269	Istituto centrale di statistica			
90	1977	100,608	Istituto centrale di statistica			
91	1978	99,189	Istituto centrale di statistica			
92	1979	97,280	Istituto centrale di statistica			
93	1980	95,222	Istituto centrale di statistica			
94	1981	93,598	Istituto centrale di statistica			
95	1982	92,118	Istituto centrale di statistica			
96	1983	90,414	Istituto centrale di statistica			
97	1984	87,936	Istituto centrale di statistica			
98	1985	86,072	Istituto centrale di statistica			
99	1986	84,355	Istituto centrale di statistica			
100	1987	82,703	Istituto centrale di statistica			
101	1988	80,988	Istituto centrale di statistica			
102	1989	79,487	Istituto Nazionale di Statistica, Ufficio statistico Comune di Venezia			
103	1990	78,485	Istituto Nazionale di Statistica, Ufficio statistico Comune di Venezia			

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	A	B	C	D	E	F
102	1989	79,487	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
103	1990	78,165	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
104	1991	76,644	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
105	1992	75,159	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
106	1993	73,149	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
107	1994	72,037	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
108	1995	71,053	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
109	1996	69,906	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
110	1997	68,600	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
111	1998	67,838	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
112	1999	66,945	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
113	2000	66,386	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
114	2001	65,695	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
115	2002	64,076	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
116	2003	63,947	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
117	2004	63,353	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
118	2012.499	58,606	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
119	2013.805	57,539	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
120	2014.099	56,783	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
121	2014.104	56,783	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
122	2014.107	56,784	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
123	2014.11	56,784	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
124	2014.112	56,784	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
125	2014.115	56,778	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
126	2014.118	56,772	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
127	2014.121	56,778	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
128	2014.123	56,782	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
129	2014.126	56,778	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			

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	A	B	C	D	E	F
128	2014.123	56,782	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
129	2014.126	56,778	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
130	2014.129	56,778	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
131	2014.132	56,778	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
132	2014.134	56,785	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
133	2014.137	56,779	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
134	2014.14	56,771	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
135	2014.142	56,765	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
136	2014.145	56,762	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
137	2014.148	56,762	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
138	2014.151	56,762	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
139	2014.153	56,774	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
140	2014.156	56,772	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
141	2014.159	56,767	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
142	2014.162	56,773	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
143	2014.164	56,778	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
144	2014.167	56,778	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
145	2014.17	56,778	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
146	2014.173	56,773	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
147	2014.175	56,770	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
148	2014.178	56,759	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
149	2014.181	56,767	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
150	2014.184	56,760	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
151	2014.186	56,760	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
152	2014.189	56,760	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
153	2014.192	56,759	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
154	2014.195	56,750	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
155	2014.197	56,755	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			

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	A	B	C	D	E	F
154	2014.195	56,750	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
155	2014.197	56,755	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
156	2014.2	56,749	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
157	2014.203	56,739	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
158	2014.205	56,739	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
159	2014.208	56,739	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
160	2014.211	56,738	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
161	2014.214	56,737	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
162	2014.216	56,741	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
163	2014.219	56,741	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
164	2014.222	56,741	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
165	2014.225	56,741	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
166	2014.227	56,741	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
167	2014.23	56,733	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
168	2014.233	56,730	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
169	2014.236	56,729	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
170	2014.238	56,737	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
171	2014.241	56,740	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
172	2014.244	56,740	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
173	2014.247	56,740	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
174	2014.249	56,736	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
175	2014.252	56,732	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
176	2014.255	56,735	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
177	2014.258	56,731	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
178	2014.26	56,727	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
179	2014.263	56,727	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
180	2014.266	56,727	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
181	2014.269	56,726	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			

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CPV: Venice Population (Historical trends)

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	A	B	C	D	E	F
181	2014.268	56,736	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
182	2014.271	56,730	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
183	2014.274	56,725	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
184	2014.277	56,717	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
185	2014.279	56,718	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
186	2014.282	56,718	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
187	2014.285	56,718	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
188	2014.288	56,714	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
189	2014.29	56,708	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
190	2014.293	56,708	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
191	2014.296	56,709	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
192	2014.299	56,705	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
193	2014.301	56,705	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
194	2014.304	56,705	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
195	2014.307	56,705	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
196	2014.31	56,705	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
197	2014.312	56,705	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
198	2014.315	56,701	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
199	2014.351	56,699	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
200	2014.353	56,702	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
201	2014.356	56,701	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
202	2014.359	56,701	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
203	2014.362	56,701	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
204	2014.364	56,700	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
205	2014.367	56,703	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
206	2014.37	56,700	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
207	2014.373	56,690	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
208	2014.375	56,691	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			

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fx	A	B	C	D	E	F
208	2014.375	56,684	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
209	2014.378	56,684	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
210	2014.381	56,684	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
211	2014.384	56,676	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
212	2014.386	56,675	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
213	2014.389	56,669	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
214	2014.392	56,667	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
215	2014.395	56,672	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
216	2014.397	56,673	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
217	2014.4	56,675	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
218	2014.403	56,674	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
219	2014.405	56,673	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
220	2014.408	56,684	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
221	2014.411	56,689	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
222	2014.414	56,687	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
223	2014.416	56,687	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
224	2014.419	56,687	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
225	2014.422	56,687	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
226	2014.425	56,689	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
227	2014.427	56,696	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
228	2014.43	56,687	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
229	2014.433	56,687	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
230	2014.436	56,687	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
231	2014.438	56,687	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
232	2014.441	56,690	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
233	2014.444	56,681	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
234	2014.447	56,678	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
235	2014.450	56,680	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			

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fx	A	B	C	D	E	F
236	2014.452	56,680	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
237	2014.455	56,680	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
238	2014.458	56,680	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
239	2014.46	56,678	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
240	2014.463	56,680	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
241	2014.466	56,667	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
242	2014.468	56,677	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
243	2014.471	56,678	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
244	2014.474	56,678	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
245	2014.477	56,678	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
246	2014.479	56,689	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
247	2014.482	56,676	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
248	2014.485	56,669	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
249	2014.488	56,677	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
250	2014.49	56,684	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
251	2014.493	56,684	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
252	2014.496	56,684	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
253	2014.499	56,682	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
254	2014.501	56,687	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
255	2014.504	56,685	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
256	2014.507	56,691	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
257	2014.51	56,689	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
258	2014.512	56,689	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
259	2014.515	56,689	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
260	2014.518	56,690	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
261	2014.521	56,687	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
262	2014.523	56,681	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
263	2014.526	56,685	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			

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fx	A	B	C	D	E	F
262	2014.523	56,681	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
263	2014.526	56,685	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
264	2014.529	56,682	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
265	2014.532	56,682	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
266	2014.534	56,682	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
267	2014.537	56,682	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
268	2014.54	56,650	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
269	2014.542	56,651	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
270	2014.545	56,653	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
271	2014.548	56,651	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
272	2014.551	56,651	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
273	2014.553	56,651	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
274	2014.556	56,650	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
275	2014.559	56,651	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
276	2014.562	56,655	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
277	2014.564	56,653	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
278	2014.567	56,655	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
279	2014.57	56,655	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
280	2014.573	56,655	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
281	2014.575	56,642	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
282	2014.578	56,640	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
283	2014.581	56,634	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
284	2014.584	56,630	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
285	2014.586	56,624	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
286	2014.589	56,624	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
287	2014.592	56,624	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
288	2014.595	56,623	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
289	2014.597	56,620	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			

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fx	A	B	C	D	E	F
288	2014.595	56,623	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
289	2014.597	56,620	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
290	2014.6	56,615	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
291	2014.603	56,617	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
292	2014.605	56,619	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
293	2014.608	56,619	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
294	2014.611	56,619	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
295	2014.614	56,620	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
296	2014.616	56,616	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
297	2014.619	56,617	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
298	2014.622	56,617	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
299	2014.625	56,617	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
300	2014.627	56,617	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
301	2014.63	56,617	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
302	2014.633	56,599	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
303	2014.636	56,598	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
304	2014.638	56,595	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
305	2014.641	56,595	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
306	2014.644	56,588	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
307	2014.647	56,588	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
308	2014.649	56,588	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
309	2014.652	56,581	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
310	2014.655	56,577	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
311	2014.658	56,577	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
312	2014.66	56,580	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
313	2014.663	56,575	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
314	2014.666	56,575	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
315	2014.669	56,576	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			

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fx	A	B	C	D	E	F
315	2014.668	56,575	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
316	2014.671	56,569	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
317	2014.674	56,564	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
318	2014.677	56,566	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
319	2014.679	56,568	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
320	2014.682	56,569	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
321	2014.685	56,569	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
322	2014.688	56,569	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
323	2014.69	56,565	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
324	2014.693	56,565	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
325	2014.696	56,572	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
326	2014.699	56,575	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
327	2014.701	56,572	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
328	2014.704	56,572	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
329	2014.707	56,572	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
330	2014.71	56,575	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
331	2014.712	56,574	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
332	2014.715	56,569	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
333	2014.718	56,562	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
334	2014.721	56,551	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
335	2014.723	56,551	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
336	2014.726	56,551	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
337	2014.729	56,545	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
338	2014.732	56,548	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
339	2014.734	56,537	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
340	2014.737	56,534	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
341	2014.74	56,512	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
342	2014.743	56,512	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			

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fx	A	B	C	D	E	F
342	2014.742	56,512	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
343	2014.745	56,512	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
344	2014.748	56,506	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
345	2014.751	56,506	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
346	2014.753	56,506	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
347	2014.756	56,508	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
348	2014.759	56,504	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
349	2014.762	56,504	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
350	2014.764	56,504	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
351	2014.767	56,514	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
352	2014.77	56,506	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
353	2014.773	56,507	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
354	2014.775	56,510	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
355	2014.778	56,512	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
356	2014.781	56,512	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
357	2014.784	56,512	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
358	2014.786	56,513	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
359	2014.789	56,502	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
360	2014.792	56,502	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
361	2014.795	56,499	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
362	2014.797	56,499	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
363	2014.8	56,499	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
364	2014.803	56,499	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
365	2014.805	56,499	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
366	2014.808	56,500	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
367	2014.811	56,495	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
368	2014.814	56,492	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
369	2014.816	56,492	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			

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	A	B	C	D	E	F
369	2014.816	56,484	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
370	2014.819	56,484	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
371	2014.822	56,484	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
372	2014.825	56,483	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
373	2014.827	56,474	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
374	2014.83	56,472	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
375	2014.833	56,472	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
376	2014.836	56,471	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
377	2014.838	56,471	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
378	2014.841	56,471	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
379	2014.844	56,473	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
380	2014.847	56,463	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
381	2014.849	56,458	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
382	2014.852	56,460	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
383	2014.855	56,464	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
384	2014.858	56,464	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
385	2014.86	56,464	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
386	2014.863	56,464	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
387	2014.866	56,463	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
388	2014.868	56,455	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
389	2014.871	56,455	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
390	2014.874	56,449	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
391	2014.877	56,449	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
392	2014.879	56,449	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
393	2014.882	56,440	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
394	2014.885	56,435	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
395	2014.888	56,438	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
396	2014.89	56,438	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			

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	A	B	C	D	E	F
395	2014.888	56,438	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
396	2014.89	56,433	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
397	2014.893	56,433	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
398	2014.896	56,433	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
399	2014.899	56,433	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
400	2014.901	56,432	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
401	2014.904	56,409	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
402	2014.907	56,412	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
403	2014.91	56,406	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
404	2014.912	56,406	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
405	2014.915	56,406	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
406	2014.918	56,406	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
407	2014.921	56,413	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
408	2014.923	56,416	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
409	2014.926	56,410	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
410	2014.929	56,407	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
411	2014.932	56,410	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
412	2014.934	56,410	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
413	2014.937	56,410	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
414	2014.94	56,410	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
415	2014.942	56,409	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
416	2014.945	56,407	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
417	2014.948	56,407	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
418	2014.951	56,404	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
419	2014.953	56,404	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
420	2014.956	56,404	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
421	2014.959	56,406	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
422	2014.962	56,409	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			

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fx	A	B	C	D	E	F
421	2014.959	56,406	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
422	2014.962	56,403	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
423	2014.964	56,393	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
424	2014.967	56,397	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
425	2014.97	56,394	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
426	2014.973	56,394	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
427	2014.975	56,394	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
428	2014.978	56,393	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
429	2014.981	56,380	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
430	2014.984	56,369	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
431	2014.986	56,369	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
432	2014.989	56,369	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
433	2014.992	56,369	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
434	2014.995	56,369	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
435	2014.997	56,364	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
436	2015	56,355	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
437	2015.003	56,356	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
438	2015.005	56,356	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
439	2015.008	56,356	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
440	2015.011	56,356	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
441	2015.014	56,356	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
442	2015.016	56,359	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
443	2015.019	56,359	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
444	2015.022	56,349	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
445	2015.025	56,342	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
446	2015.027	56,344	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
447	2015.03	56,344	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
448	2015.033	56,344	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			

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fx	A	B	C	D	E	F
446	2015.027	56,344	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
447	2015.03	56,344	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
448	2015.033	56,344	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
449	2015.036	56,339	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
450	2015.038	56,335	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
451	2015.041	56,334	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
452	2015.044	56,334	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
453	2015.047	56,328	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
454	2015.049	56,328	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
455	2015.052	56,328	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
456	2015.055	56,326	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
457	2015.058	56,321	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
458	2015.06	56,324	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
459	2015.063	56,317	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
460	2015.066	56,310	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
461	2015.068	56,310	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
462	2015.071	56,310	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
463	2015.074	56,305	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
464	2015.077	56,299	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
465	2015.079	56,292	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
466	2015.082	56,298	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
467	2015.085	56,292	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
468	2015.088	56,292	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
469	2015.09	56,292	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			
470	2015.093	56,290	Istituto Nazionale di Statistica, Ufficio statistica Comune di Venezia			

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