

An NEH White Paper

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Project Summary

As they participated in the productive coexistence that is characteristic of Mediterranean societies, Sicily's Norman rulers (ca. 1061-1194) practiced a strategic multiculturalism that resulted in extraordinary cultural output. Many monuments that survive today bear witness to the exchange despite that so many of them are at serious risk. Southern Italy's endemic poverty leaves few resources for the maintenance and staffing of its sizable patrimony. In addition, these sites have existed for almost a millennium in an area beset by geological challenges that include regular seismic activity, intense heat, rampant wildfires and occasional volcanic eruption. Much has already been lost and many sites we know of through textual evidence alone.

The Norman Sicily Project (NSP) which, thanks largely to NEH support is now available as a fully-functioning prototype at <http://normansicily.org/> (Italian-language version at <http://sicilianormanna.it>), was initiated by [Dawn Marie Hayes](#), Professor of Medieval European History, [Montclair State University](#) (MSU), and [Joseph Hayes](#), Senior Software Engineer at [Stardog Union](#), in 2015 out of concern for the surviving monuments. It uses state-of-the-art technology to shed new light on the period, helping users to better understand this remarkable society while recording it for future generations. [Image 1] The site reconstructs what we know by bringing together

Image 1. Screenshot of the Monastic Sites Map with Type Ahead Text Box Search, Clickable Clusters and Explanatory Legend

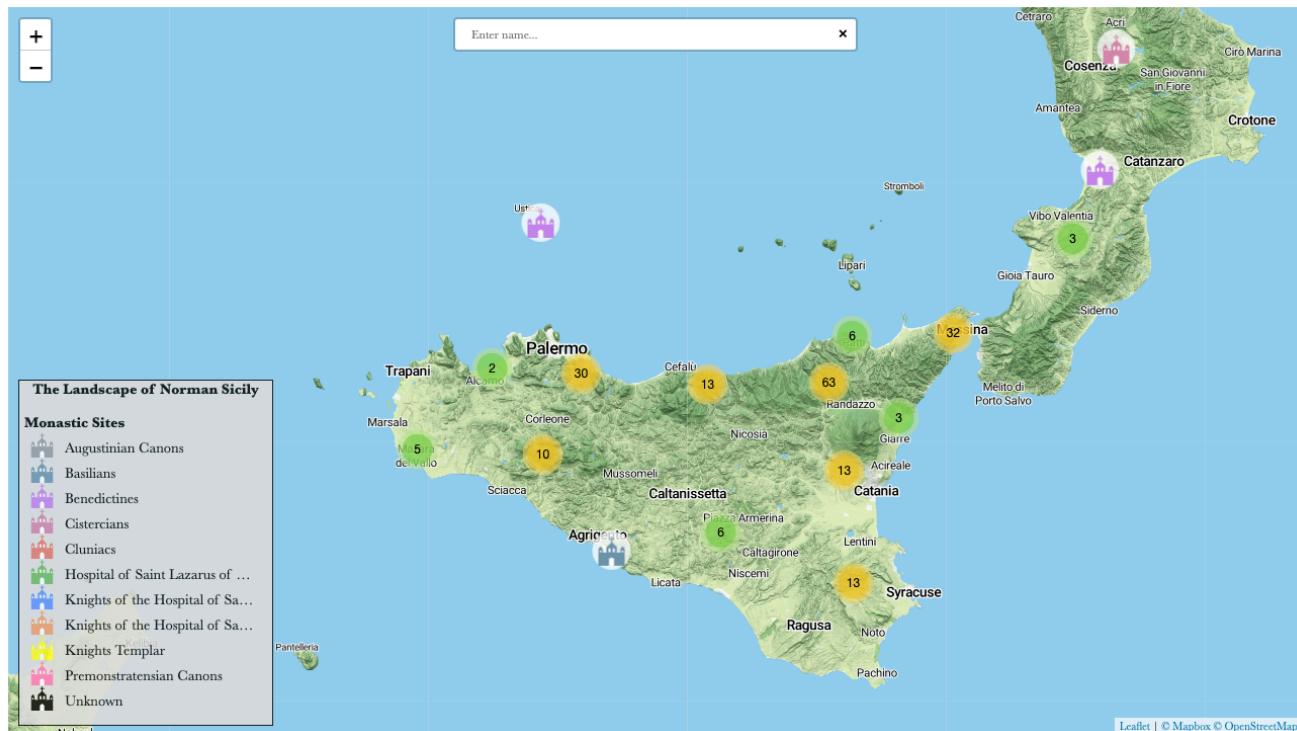
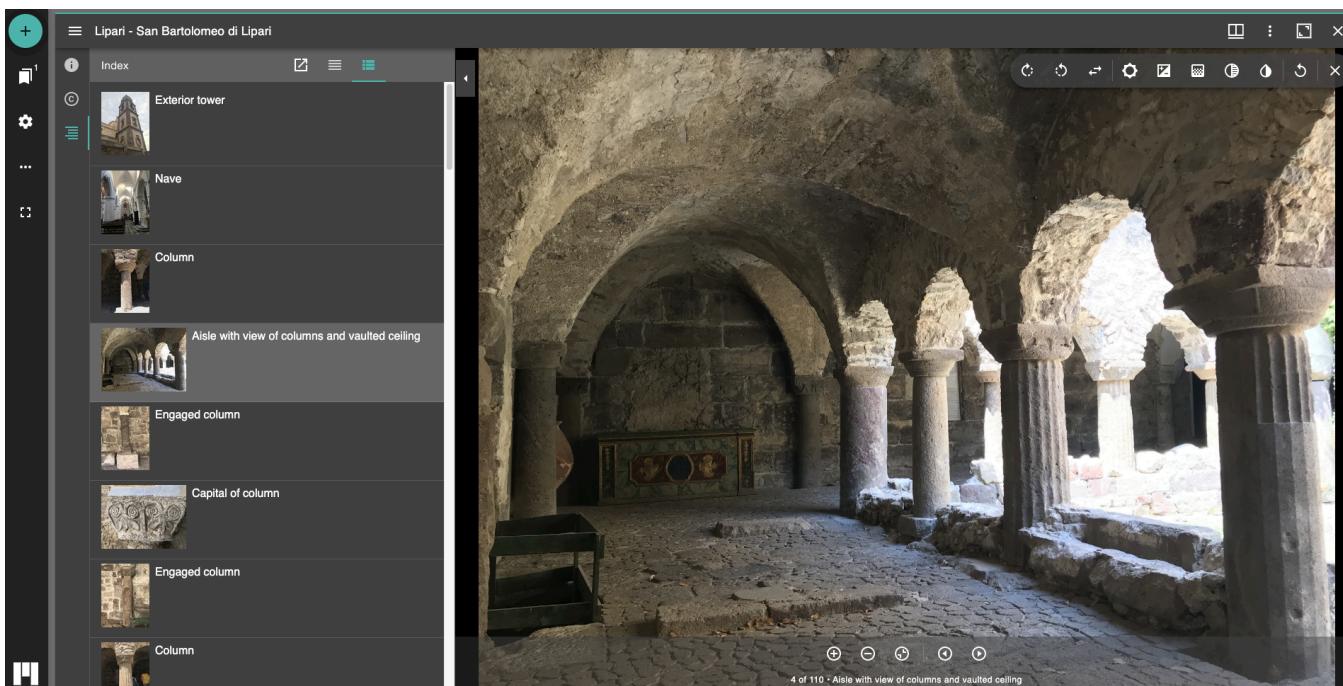


Image 2. The Project's Image Collection Presented through a Mirador Viewer



images and videos (embedded in the individual monastic records but also catalogued alphabetically by the name of the *comune* in which they are located at <http://media.normansicily.org>), basic identifying information and geolocation data using modern web development techniques.

Image 3. An Example of a Monastic Site Record with Data Tabs

The Landscape of Norman Sicily

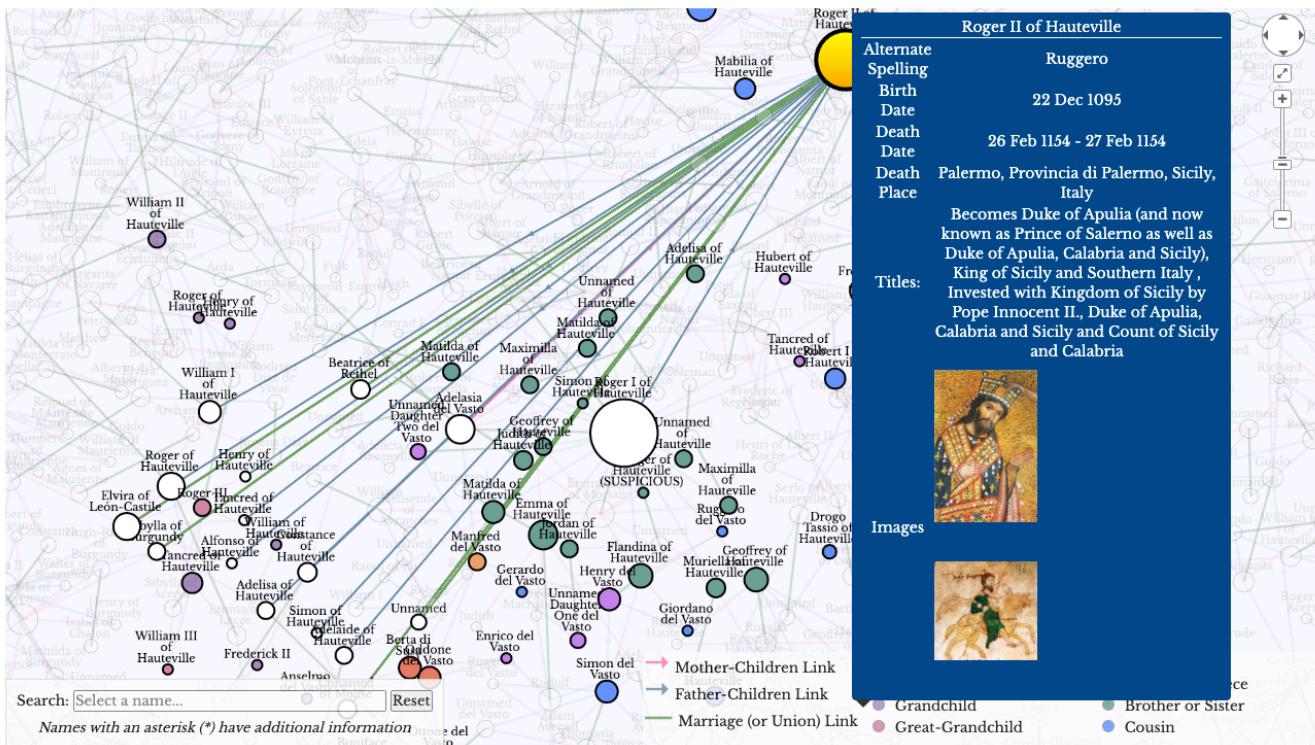
Monastic Sites

- Augustinian Canons
- Basilians
- Benedictines
- Cistercians
- Cluniacs
- Hospital of Saint Lazarus of ...
- Knights of the Hospital of Sa...
- Knights of the Hospital of Sa...
- Knights Templar
- Premonstratensian Canons
- Unknown

Map showing locations of monastic sites across Sicily, with numbered markers (19, 5, 8, 26, 5, 11, 3, 28) corresponding to numbered circles on the map. Labeled locations include Capaci, Partinico, Termini Imerese, Cefalù, Stretta, Capo d'Orlando, Sant'Agata di Militello, Barcellona Pozzo di Gotto, Randazzo, and Reggio Calabria.

[Images 2 and 3] It also offers [genealogical information](#) and [visualization tools](#) that can help visitors understand the data in new ways. **[Image 4]** The intention is for the project to offer scholars, students and the general public who are interested in Norman Sicily the opportunity to learn from and collaborate with each other while opening up the possibility for comparative research with other regions and during other historical periods (see, for example, [Dawn and Joe's](#)

Image 4. An Example of a Genealogical Record Discoverable by Clickable Node or by Type Ahead Name Search



[article in Digital Medievalist](#) where they compare Sicily's information with English data from the same period).

In addition, the *NSP* contributes to linked open data, enhancing its discoverability while establishing connections to other humanities-based websites. The stable URIs (Uniform Resource Identifiers) assigned to each record permit linking to matching places in well-established open data sets. The primary product from this grant, therefore, is a fully functional pilot of the *NSP*'s monastic data whose inventory includes information for over 200 foundations culled from a variety of scholars sources which are listed in [the project's bibliography](#). Through this web app, we have published a well-developed subset of the data the team has collected since 2015, including suggestive information from cultural heritage sustainability fieldwork it performed with Co-PI, [Greg Pope](#), Professor of [Earth and Environmental Studies](#), MSU, in July 2017 and in July 2019 on representative monastic sites across the island.¹ Interoperability is a high priority for this project. For this reason, data are provided freely in a variety of machine-readable formats so that interested parties can conduct their own analyses. **[Image 5]**

Image 5. The Machine-Readable Formats of the Project's Vocabulary and Datasets

Download

Vocabulary

For its linked open datasets, The Norman Sicily Project uses a custom vocabulary. It is available in various formats, including [JSON-LD](#), [N3](#), [N-Quads](#), [RDF/XML](#), [TRIG](#), and [TTL](#).

Dataset

Currently, the dataset includes Norman monasteries in Sicily from the period beginning 1060 until 1194. It is available in various formats, including [JSON-LD](#), [N3](#), [N-Quads](#), [RDF/XML](#), [TRIG](#), and [TTL](#).

In addition, the dataset includes the Hautevilles who ruled Sicily and southern Italy as well as a wide variety of individuals who were part of their extended family network. Developed from numerous published scholarly sources, the tree is both chronologically and geographically broad in an effort to situate the Hautevilles within numerous aristocratic families from across the European continent. With that said, the genealogy is meant to be suggestive, not comprehensive. While it is included in the complete dataset above, it is also available for download in various formats, including [GEDCOM](#), [JSON-LD](#), [N3](#), [N-Quads](#), [RDF/XML](#), [TRIG](#), and [TTL](#).

Dataset Notes

All of the datasets are LOD three star compliant.



All of the datasets are released under:



[Link to the Page](#)

The Project's Origins & Goals

Motivation

At first begun as a simple project to make available to the public images we had taken of hidden-away sites that had been constructed in Norman Sicily, the *NSP* has evolved considerably. Now better described as an interactive website that collects, presents and interprets information about the people and places of late eleventh- and twelfth-century Sicily, the project attempts to mitigate some of the challenges that confront the island's cultural heritage by offering students and specialists opportunities to engage it. It is an extraordinary patrimony, one that the [United Nations Educational, Scientific and Cultural Organization](#) (UNESCO) formally recognized in July 2015 for its blending of Byzantine, Islamic and western European elements by inscribing nine sites – collectively identified as [Arab-Norman Palermo and the Cathedral Churches of Cefalù and Monreale](#) – in its [World Heritage List](#). Yet, at the same time, so much Sicily's extraordinary heritage can be elusive and fragile. The monuments inscribed in the Arab-Norman itinerary are now identified as cultural treasures, guided by a management plan. Unfortunately, however, the vast majority of structures born of this cultural tradition lack the exposure and protection provided by UNESCO recognition. The *NSP* calls attention to these others.

One of the various challenges that confronts Sicily's Norman heritage is that many of its monuments are not staffed regularly. Others are poorly signed. Still others are relatively inaccessible due to challenging terrain. And even others are threatened by the vagaries of modern life or have been designated off-limits due to the functions they serve in the modern world. A major goal of the *NSP*, therefore, is to address the issue of accessibility to Sicily's elusive Norman heritage, documenting it in various ways with the aid of digital technologies. This effort is of particular importance as the history of medieval Sicily and the southern Italian mainland has been relatively overlooked, particularly in the Anglophone world (although, thankfully, this has been changing over the past decade or two), and its rulers have been largely studied in a vacuum, often divorced from the wide kinship network in which they were embedded. For this reason, an accompanying genealogy, rendered through a force-directed graph, provides the viewer with a sense of the Norman rulers' connectedness, demonstrating visually that the history of this Mediterranean state, though located on the margins of Europe, needs to be considered as part of a much wider community that includes north Africa as well as eastern and western Europe.

Yet another goal of the project is scientific in nature: to assess the long-term sustainability of some of these structures. To accomplish this, we conducted field visits during which Greg applied the field-based [Cultural Stone Stability Index](#) (CSSI) to a number of monuments in order to gauge their physical integrity and determine the impact humans, animals and the natural environment – including the earthquakes and volcanic activity for which the region is known – have had over the past millennium. This approach was especially exciting and enabled us - in a collaboration between scientific and humanities disciplines - to bring to bear on the sites we visited the expertise of a geologist with cultural stone experience.

A final, equally important goal of the *NSP* is to record relevant historical information shared by locals during our field visits (e.g., see, for example, the record for the monastery of St. Mary of Jehosaphat). In traditional societies such as Sicily's, a great deal of knowledge is stored locally and passed down orally. Record notes that contain such information caution the user when it is uncorroborated by a scholarly source. This approach allows the society's stakeholders to participate in the recording of their past.

Past Work

The *NSP* grew out of a site, [*The Envisioning Norman Sicily Production*](#), Dawn and Joe developed with Itewari Ekpebu-Bryan, formerly an instructional designer at MSU, and a team of students in 2013. Made possible by the generous support of MSU's [College of Humanities and Social Sciences](#) and the assistance of the university's [Office of Information Technology](#), the students annotated a selection of Dawn's images of Norman Sicily's monuments. The focus of this effort was geographical, calling attention to sites in the towns of Caccamo, Caltanissetta, Campofelice di Roccella, Castelmola, Cefalù, Erice, Monreale, Palermo and Sperlinga. Like the hundreds of images used in the *NSP*, the images used in this site were taken during numerous trips Dawn made to Sicily between 2004 - 2019.

Intended Audience

The *NSP* offers scholars, students and the general public who are interested in Norman Sicily the opportunity to learn from and collaborate with each other. In addition to providing visual representations and downloadable data, the project also invites outside participation and includes a portal through which any of these constituencies can share relevant information. This includes the Italian public whose engagement has been made more possible by [an Italian-language version of the website](#).

The Team and its Work

Dawn Hayes (**DH**), Greg Pope (**GP**) and Joe Hayes (**JH**, Chief Technical Architect) comprised the principal project participants. Given that the grant was intended to help lay a project's best technological foundations, Joe's work was especially important and he helped identify the technical needs and ensured that they were met by either himself or another team member. Greg helped the project achieve a marriage between the humanities and the sciences by performing cultural stone assessments on a variety of monuments.

In addition, during the tenure of the grant, we were fortunate to have working on the project as media and metadata assistants Christina Giordano (**CG**, [CHSS](#) and [CART](#), 2022), Grace Last (**GL**, [CHSS](#), 2021), Alessandra Lentini (**AL**, [CART](#), 2021) and Charlee Reiff (**CR**, [CART](#), 2020). Interviewed in September 2019 and trained during a two-day period the following month by Dot Porter (**DP**), Curator of Digital Research Services at the [University of Pennsylvania](#), we are very grateful to each of them for cataloging the images and applying metadata to the files. Grace is also acknowledged for assisting with the project's dissemination in the U.S. and Alessandra played a critical role in designing the site's interface with an eye towards both aesthetics and usability. James Leyva (**JL**) ([CHSS](#), 2021), Dawn's former student who already had a strong technical background, helped implement the redesign.

David Urban (**DU**), a Cloud Service Operations Specialist at [Adaptly](#) and Joe's former co-worker, did the work of programming, configuring, testing and troubleshooting the image server.

Alessandra Faranda (**AF**) is a contact Dawn made during one of her numerous trips to Sicily. Currently studying law at the [University of Palermo](#), she has translated the English version of the site and, in doing so, has made it accessible to a wide Italian public. She also assisted with disseminating the site in Italy by creating a database of stakeholders in Italy under Dawn's direction. Once Dawn approved the list, Alessandra emailed the stakeholders with a prepared announcement.

A similar strategy was used in the United States, with Grace helping to develop the database of English-language contacts, which included educational and cultural institutions, as well as making posts to social media sites. Other strategies that the team employed to disseminate the website include three academic publications:

- Dawn Marie Hayes and Joseph Hayes, "The Norman Sicily Project: A Digital Portal to Sicily's Norman Past." *Digital Medievalist* 12 (2019): 1-31. <https://journal.digitalmedievalist.org/articles/10.16995/dm.68/>
- Dawn Marie Hayes and Joseph Hayes, "The Norman Sicily Project: An Ongoing, Web-Based Effort to Promote the Island's Eleventh- and Twelfth-Century Past." Forthcoming in *Mapping Pre-Modern Sicily: Maritime Violence, Cultural Exchange and Imagination in the Mediterranean*, ed. Emily Sohmer Tai and Kathryn Reyerson (forthcoming with Palgrave Macmillan).
- Dawn Hayes, "The Norman Sicily Project: Deriving Meaning from the Prototype's Data." Forthcoming in *Kalkas: Rivista sulla preistoria, storia, archeologia, numismatica, storia dell'arte, scienze del paesaggio e storia agraria e forestale del Gargano e del mezzogiorno d'Italia*.

and a presentation at a major international conference of medievalists:

- Dawn Marie Hayes and Joseph Hayes, "The Norman Sicily Project: A Completed Prototype and Next Steps." Delivered at the (virtual) [International Medieval Congress](#), [University of Leeds](#), England, July 5-9, 2021.

The *NSP* also has its own social media accounts now established at Instagram ([@thenormansicilyproject](#)), Twitter ([@Norman_Sicily](#)) and Facebook ([@TheNormanSicilyProject](#)) that the team has been using to share the project's progress. A [Github account](#) is also available. In addition, with the help of MSU library staff, the team has created a MARC record for OCLC (<http://www.worldcat.org/oclc/1003325014>) so that the *NSP* can be discovered in WorldCat. An article has also been submitted recently to [Wikipedia](#) for inclusion and it is currently awaiting review. We intend to create a [Google Knowledge Panel](#) for the site in the coming months.

At the time the award was announced, MSU included information on its [website](#). In addition, the [Medieval Academy of America](#) posted about the project on its [blog](#).

The principal project participants discussed the composition of the Advisory Board and decided that, given the scope of the project, it should be comprised of two historians, two art historians, two scientists with cultural stone experience, two digital humanists, a technical reviewer and an individual to review for accessibility. Drawing on their combined professional contacts and, in the case of Dawn and Greg, networks of former students, the core team invited the following individuals to the Advisory Board, whose members drew on their expertise to review the prototype for accuracy as well as for general appearance, conceptualization, design and structure:

- **Sarah Davis-Secord (SD)**, Associate Professor of [History](#), [University of New Mexico](#)
- **Matthew Gold (MG)**, Associate Professor of [English](#) and [Digital Humanities](#), [CUNY Graduate Center](#)
- **Sebastian Heath (SH)**, Clinical Associate Professor of Computational Humanities and Roman Archaeology, [ISAW](#), [New York University](#)
- **Alex Metcalfe (AM)**, Senior Lecturer in [History](#), [Lancaster University](#)
- **Thomas Paradise (TP)**, University Professor, [Department of Geosciences](#), [University of Arkansas](#)
- **Lisa Reilly (LR)**, Associate Professor of [Art History](#), [University of Virginia](#)
- **Kelly Schrum (KS)**, Former Director of Educational Projects, [Roy Rosenzweig Center for History and New Media](#)
- **William Tronzo (WT)**, Senior Teaching Professor, [Visual Arts](#), [University of California, San Diego](#)
- **Alice Turkington (AT)**, Associate Professor of [Geography](#), [University of Kentucky](#)
- **Steven Way (SW)**, [Alumnus](#), [Montclair State University](#)

Their feedback, discussed in the following section of this paper, will help shape the site going forward.

It should be noted that as we prepared to start the work supported by the grant, other assistance was generously offered by Max Wilson ([Yale University](#), 2019), who served as a research assistant during the project's 2019 fieldwork. That same summer, Anastasia Hayes ([Macaulay Honors College](#), 2017) provided invaluable translation support and participated in data collection as Madeleine Hayes ([Macaulay Honors College](#), 2018) navigated and managed logistics of travel. Alessandra Hayes (**AH**, [Macaulay Honors College](#), 2023) provided regular social media and video support.

A Table of the Main Tasks and the Team Members who Completed Them

GRANT ADMINISTRATION	DATASETS EVALUATION
Writing of NEH White Paper (DH, JH)	Review of Datasets (Advisory Board: SD, MG, SH, AM, TP, LR, WT and AT)
Accounting (Setup, Administration and Disbursements) (DH)	Review for Accessibility by Individuals with Disabilities (Advisory Board: SW)
TECHNICAL WORK ADMINISTRATION	DISSEMINATION
Interviewing, Hiring and Training Student Workers (DH, JH, DP)	Technical Review (Advisory Board: KS)
USER EXPERIENCE WORK	
Creation of Pages to Serve Datasets and Posted Image Collections (JH)	Notification of Grant Award: University Press Release and Notification of Advisory Board (DH)
DATASET PRODUCTION	
<i>Monastic Dataset:</i> Verification (DH, JH and Student Workers)	Social Media Presence: Academia.edu, Facebook, Twitter and Instagram (AH, AF, DH, GL and JH)
<i>Monastic Dataset:</i> Author Metadata (JH)	Blogging (CG, GL, AL, CR)
<i>Monastic Dataset:</i> Application of Metadata (JH and Student Workers)	Targeted Dissemination via Email (AH, AF, DH and GL)
<i>Media Dataset:</i> Storage Area (JH and DU)	<p>Article: "The Norman Sicily Project: A Digital Portal to Sicily's Norman Past." <i>Digital Medievalist</i> 12 (2019): 1-31. (DH and JH)</p> <p>Chapter: "An Ongoing, Web-Based Effort to Promote the Island's Eleventh- and Twelfth-Century Past" Forthcoming in <i>Mapping Medieval Sicily: Maritime Violence, Cultural Exchange and Imagination in the Mediterranean</i>, ed. Emily Sohmer Tai and Kathryn Reyerson (Palgrave Macmillan). (DH and JH)</p>
	<p>Article: "The Norman Sicily Project: Deriving Meaning from the Prototype's Data." Forthcoming in <i>Kalkas: Rivista sulla preistoria, storia, archeologia, numismatica, storia dell'arte, scienze del paesaggio e storia agraria e forestale del Gargano e del mezzogiorno d'Italia.</i> (DH)</p>

Media Dataset: Author Metadata (JH and DP)

Conference Paper: “The Norman Sicily Project: A Completed Prototype and Next Steps.” To be delivered at the (virtual) International Medieval Congress, University of Leeds, England, July 5-8, 2021. (DH and JH)

Media Dataset: Geodata Association (JH, DH and Student Workers)

SITE REDESIGN

Genealogy Dataset: Author Metadata (JH)

Organization of Data and Aesthetic Design (AL, DH and JH)

Genealogy Dataset: Reformatting of Database (JH, DH and Student Workers)

Video Production (GP, AH and DH)

Genealogy Dataset: Data Verification (DH and Student Workers)

Implementation (JL and JH)

Translation of Monastic, Media and Genealogy Datasets into Italian (AF, JH and DH)

Cultural Stone Stability Data (GP and JH)

NB: The global COVID crisis that began in late 2019, just three months after work on the project began in earnest, extended the length of our timeline considerably as it presented a wide variety of challenges to every person on our team as members endured lockdowns and other major disruptions to their daily lives. The extended timeline also meant that some student workers graduated and another accepted an employment opportunity that prevented her from continuing on the project. For these reasons, our original twelve-month timeline extended into a second year.

The Project's Outcomes and Products

What follows is a list of the NSP's outcomes:

- All [Source Code](#) is published under a permissive MIT license on GitHub
- [Vocabularies](#) in JSON-LD, N3, N-Quads, RDF/XML, TRIG and TTL formats are published on GitHub.
- [Monastic Dataset](#) of the 206 houses documented in Sicily is freely available for download and individual use in JSON-LD, N3, N-Quads, RDF/XML, TRIG and TTL formats. They are LOD three star compliant and released under a Creative Commons Attribution-ShareAlike 4.0 (CC BY-SA 4.0) International License.
- [Kinship Network Dataset](#) of the 1,356 people currently recorded is freely available for download and personal use in GEDCOM, JSON-LD, N3, N-Quads, RDF/XML, TRIG and TTL formats. It, too, is LOD three star compliant and released under a Creative Commons Attribution-ShareAlike 4.0 (CC BY-SA 4.0) International License.
- [Approximately 4,000 Images and Videos](#) are available in high resolution, embedded in the individual monastic records and also available through the project's media repository
- [Greg Pope's Video Explaining Use of the CSSI](#) in MP4 format
- [A Choropleth Map](#) demonstrating the density of Sicily's monastic orders by province whose [code](#) is available in the project's Github repository
- A [Bibliography](#) of the sources consulted to construct the monastic inventory
- A [Journal Article](#): Dawn Marie Hayes and Joseph Hayes, "The Norman Sicily Project: A Digital Portal to Sicily's Norman Past." *Digital Medievalist* 12 (2019): 1-31. <https://journal.digitalmedievalist.org/articles/10.16995/dm.68/>
- A [Forthcoming Chapter](#): Dawn Marie Hayes and Joseph Hayes, "The Norman Sicily Project: An Ongoing, Web-Based Effort to Promote the Island's Eleventh- and Twelfth-Century Past." To be published in *Mapping Pre-Modern Sicily: Maritime Violence, Cultural Exchange and Imagination in the Mediterranean*, ed. Emily Sohmer Tai and Kathryn Reyerson (Palgrave Macmillan).
- A [Journal Article](#): "The Norman Sicily Project: Deriving Meaning from the Prototype's Data." Forthcoming in *Kalkas: Rivista sulla preistoria, storia, archeologia, numismatica, storia dell'arte, scienze del paesaggio e storia agraria e forestale del Gargano e del mezzogiorno d'Italia*.
- A [Newspaper Article](#): "Dagli Stati Uniti arriva l'app che racconta la Sicilia arabo normanna dei secoli passati." *Palermo Today*. April 22, 2021. <https://www.palermotoday.it/social/norman-sicily-project-app.html>
- [Conference paper](#) from the presentation made at the [International Medieval Congress, University of Leeds](#), July 5 - 9, 2021
- [The NSP's Instagram Account](#)
- [The NSP's Twitter Account](#)
- [The NSP's Facebook Account](#)
- [The NSP's Github Account](#)
- [Six Blog Posts and One Vlog Post](#) with student perspectives on Sicily and the project
- [Six Blog Posts](#) written by Dawn that offer initial interpretations of the data
- This [White Paper](#)

We selected [Stardog Free](#) as a database as it provides a high level of functionality and offers robust storage implementation with its free license option. For implementing various functionality, we leveraged open source languages and software. For hosting, we selected [Amazon Web Services](#) (AWS) because of its functional offerings, resilience and robustness. As for our decision to use Google Drive as a source media storage platform, we chose it for the same reasons (resilience and robustness) as well as ease of use.

The code libraries we built on include but are not limited to Stardog, Loris, python-gedcom, NodeJS, Docker, Leaflet, Mirador, Hugo and Mapbox. For more information, please see the project's Github repository.

When possible, we drew on existing metadata standards and defined custom metadata on an as-needed basis.

The team did make a change to its initial plans regarding the project's repository system. It ultimately decided to use [Google Drive](#) and Amazon S3 on account of their robustness, resilience and ease of use. These services were also preferred because they do not make claims to own content, which sets them apart from some institutional repositories. The question of maintaining control over intellectual property was one of the few challenges the team encountered during the project.

The Project's Evaluation & Impact

Evaluation

The team evaluated the project's methodology and results by asking the members of its Advisory Board (see p. 10) to review the web app while also performing its own internal assessment. Each Advisory Board member was sent a link to a Google form that asked a number of short- and long-answer questions while providing space to add additional comments. The responses were collected and then downloaded for review.

The results were, overall, positive and encouraging. The most critical comments by far concerned user experience as well as public engagement and educational value. In short, there was a great deal of agreement among the Advisory Board members that the site needs to offer guidance (perhaps with short videos) on how to access and use its data and resources. One member also emphasized the need for interpretation of the data. Though outside the mission of Level I funding, the team is in agreement with these assessments and plans to address them in the next phase. Future applications will incorporate the Advisory Board's suggestions and later phases of the project will respond to them.

The UX/UI work is extensive and needs to be undertaken by an experienced professional. We are trying to secure funding to support a designer who will act on the suggestions. The need for initial interpretations of the data, on the other hand, could be addressed more easily. In response to the feedback, Dawn did some analysis of the information that has been collected and has posted [short essays](#) on the following:

- [patronage patterns](#) of the rulers and their subjects according to monastic order, geographical location and spiritual patron supported by tables and followed by questions to consider
- the [geographical distribution](#) (historical region as well as the more granular modern province) of Norman Sicily's monasteries by monastic order supported by tables and followed by questions to consider
- a [comparison of geographical distance and monastic life](#) in Sicily and in better-known western Europe supported by distance measurements on maps and followed by questions to consider
- a [comparison of monasticism in England and Sicily](#) arranged according to monastic order, gender and spiritual patrons supported by graphs
- a [meditation on the significance of one of Sicily's outlier monasteries](#), St. George of Gratteri, the only Premonstratensian house in the kingdom, supported by a screenshot captured from the project's kinship network
- a [discussion of the striking gender imbalance in the society's regular clergy](#), accompanied by a table and charts and a preliminary conclusion as to why there may have been so few nuns

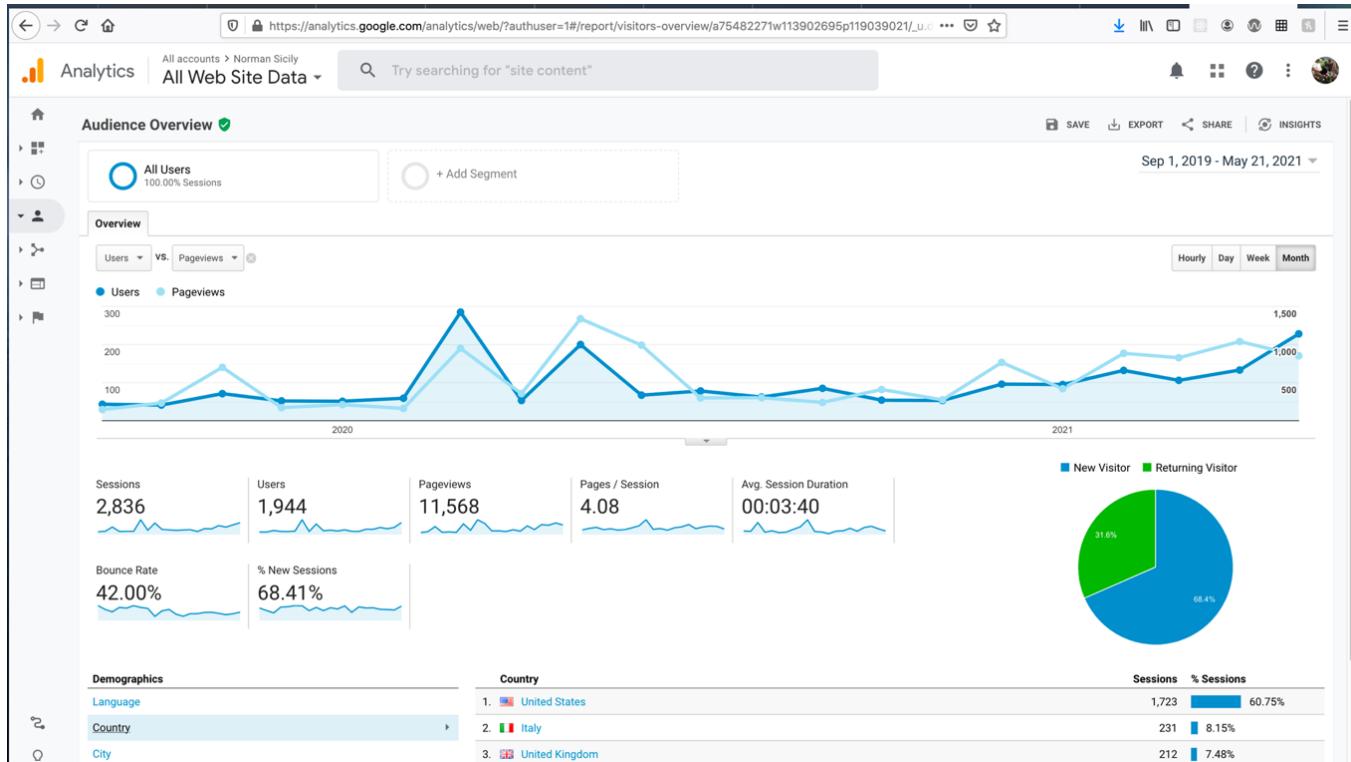
One of the most important take-aways from this project is the value that comes with working with people from different academic backgrounds. The historical, technical and scientific conversations the project generated were enormously productive and have increased the project's utility. In addition, giving voice to those who live in the communities the team visited - enabling it to tap into locally-stored knowledge - was also important. The team is solidly committed to involving specialists from other disciplines (including non-humanities disciplines) as well as knowledgeable locals in future phases of the project.

Impact

As noted above, the team employed a number of strategies to connect with the *NSP*'s stakeholders. Leveraging social media was a fairly effective, with accounts established at [Instagram](#) (@thenormansicilyproject, 88 followers), [Twitter](#) (@Norman_Sicily, 28 followers) and [Facebook](#)

(@TheNormanSicilyProject, 109 followers). During the life of the grant, Google Analytics reports the site had 1,944 users with 11,568 page views (September 1, 2019 to May 22, 2021) [Image 6].

Image 6. A Google Analytics Take on the Project's Reach



We realize that these numbers are imperfect instruments and cannot be considered precise in any way, but they are suggestive of the project's expanding reach. Comments from Advisory Board members were also encouraging, with a number of scholars noting the potential the *NSP* has to inspire future research and to enable high school teachers and college professors to more easily incorporate medieval southern Italy - often excluded from mainstream narrative histories - into their classes.

The Project's Continuation & Long-Term Impact

The team believes that there is a great deal of potential in this project and it has every intention of continuing its work. Their plan is to pursue new directions that emerged during the NEH-funded work while also following up on the suggestions made by the members of the Advisory Board in their reviews of the prototype. Now that the monastic data have been reshaped and vetted as part of this project, the team is seeking additional funding to move to the castles and churches, looking at clusters of defensive fortifications and the families that built and held them, churches and their dedications, the spread of Latin and Greek centers of worship across the island, etc. This will contribute to social, cultural and religious understandings of a society that historians have often approached primarily from political and economic perspectives.

From a heritage conservation perspective, the *NSP* is valuable in that it will triage and offer a prognosis for as many of the surviving monuments as we are able to visit. This includes valuable sustainability data such as their seismic zones, most pressing stone stability concerns and the greatest external threats. By doing so, the *NSP* will suggest a web-based model that can be duplicated by other communities that host endangered monuments but have few resources to preserve them. In short, the project demonstrates how open-access software and basic, low-cost citizen science can be used to document and assess neglected cultural heritage sites. It also demonstrates how scholars can expand the web of data and its network of linked datasets. By making the project's data intelligible to humans and machines alike, it is possible for it to participate in the semantic web and share its data with other applications. The team hopes that other researchers will follow up on these outcomes by taking similar approaches to other societies.

Probable future sources of support comprise a number of internal grants, including ones offered by MSU's Dean's Office and University Foundation, as well as other external grants made available through the NEH and the [ACLS's Digital Extension Grant](#) program. Given the interdisciplinary nature of the project, the team is also exploring potential support from a range of sponsors including [USAID](#), the [US Department of State](#), [National Geographic](#), the [European Union](#) as well as funding made available through private sources. The team is also applying for a HCRR Level II/ Implementation Grant.

At the end of the Google form each member of the Advisory Board completed, the team asked if s/he would be willing to serve on the Board again should additional funding come through. The Board remains almost entirely intact (one member was overcommitted and directed us to a colleague who accepted our invitation to serve during a future phase). The project's social media accounts will enable the team to keep in touch with stakeholders as it awaits the fate of future funding applications and the project's "Contact Us" page remains a convenient way for any stakeholder to reach the team. In addition, the team will continue to maintain and grow the American and Italian contact lists that it has developed so that it can send out updates on the project when warranted.

¹ The monastic sites we have assessed are St. Nicholas of Fico, St. Venera of Vanella (suspected site), St. Lucy of Adernò, Christ the Savior of Placa, St. Bartholomew of Lipari, St. Philip of Agirà, Sts. Peter and Paul d'Agrò and St. George of Gratteri. A video of Dr. Pope demonstrating the use of the Cultural Stability Index (CSSI), the field-based scoring assessment instrument that the team has used to evaluate the long-term sustainability of these cultural monuments, is available through the project's website, <http://normansicily.org/en/resources/learn/>. A PDF copy of the Index itself is available at http://normansicily.org/pdfs/cultural_stone_stability_index.pdf.