White Paper Report

Report ID: 103906
Application Number: HG-50027-11
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Institution: Center for Jewish History
Reporting Period: 9/1/2011-8/31/2014
Report Due: 11/30/2014
Date Submitted: 12/1/2014
Center for Jewish History

National Endowment for the Humanities

NEH/DFG Enriching Digital Collections

Grant #: HG-50027-11

White Paper

Wissenschaft des Judentums: An International Digital Collection

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Submitted November 30, 2014
a. Background

The Wissenschaft des Judentums (WDJ) project was a fruitful collaboration among three international institutions, the Center for Jewish History (the Center), the Leo Baeck Institute (LBI), and the Frankfurt University Library (JSF). Originally slated to run from September 2011 to August 2013, with an extension granted through August 2014, the National Endowment for the Humanities (NEH) and Deutsche Forschungsgemeinschaft (DFG)-funded project exceeded its goals by producing well over 160,000 digital surrogates for books from a vital collection whose originals were destroyed during World War II. The virtual re-creation of this collection continues to enhance scholarship by providing access to digital images and accompanying metadata to users worldwide.

This project completed a digital book collection of the historic resources of the Wissenschaft des Judentums. The unique Wissenschaft collection of the JSF was populated with digital surrogates from missing titles housed at the Center, and the Center’s own digital collections were augmented in the process. The Wissenschaft des Judentums was a scholarly movement among European Jews in the 19th and the beginning of the 20th century that comprised the first engagement with pre-modern Jewish religious texts using the modern research methods of academia. It combined the ideals of emancipation and freedom brought about in the French revolution with critical engagement with the classical sources of Judaism. Founded in Germany in the early 1820s, Wissenschaft soon became the legacy of important Jewish communities worldwide, and one of Judaism’s outstanding manifestations of modern times. These materials have a high research value. While at the time of their writing, these books were often read only by the scholars themselves, they comprise today an important primary resource for historical research in a diversity of disciplines of the humanities and social sciences. As specialized a collection as Wissenschaft is, the documents provide insight into a broad range of religious and political movements worldwide.

Until the 1930s, it was believed that the JSF’s entire collection, which arose through generous donations of German Jews in the late 19th century to become the largest in Europe, resided within Germany, mostly at the Frankfurt University Library. However, with the rise of National Socialism, much of the collection was lost or displaced beyond German borders. In addition to many Hebrew and Yiddish materials relating to Judaism being destroyed during the War, many of the Wissenschaft’s German-language materials were also lost. It was recognized that creating digital surrogates of these materials was not only prudent from a digital preservation standpoint, but a crucial step in making them discoverable and accessible. It was also vital to re-create this historically significant collection, much of which no longer exists in physical form. The collaboration among these institutions has produced the most comprehensive digital library of
Wissenschaft des Judentums in existence, and has recreated the academic and cultural resources from the pre-Holocaust era using 21st century technology and practice.

With the continued support of the DFG, JSF has been making Wissenschaft materials available online since 2007. Prior to this collaborative project, JSF estimated that it was missing 25% of the 11,000 titles that once constituted its world renowned collection of Wissenschaft des Judentums. Ultimately, the Center identified approximately 1,000 (40%) of these missing books within the holdings of its partner organizations.

b. Activities

While JSF oversaw the maintenance and enhancement of the Freimann Portal, the site at which the WDJ materials are full-text searchable, the LBI and the Center prepared for the large-scale digitization of the WDJ materials at the Center.

The respective roles of the WDJ project collaborators were defined as follows:

- LBI Library staff handled the selection, preparation, cataloging and physical transfer of materials.
- Center Digital Lab staff handled the digitization (defined as image capture, quality assurance, post-production processing, metadata creation and ingest) and transfer of digital surrogates to JSF.
- JSF staff handled and continues to handle the ingest of digital surrogates and metadata into the Freimann Portal.

Selection, Preparation and Cataloging of Materials at LBI Library

The project required preparation and selection of materials which continued throughout the process and grant term. LBI catalogers, working from the original Freimann Library bibliography, worked through the titles and compared them with the holdings at JSF. This process ensured not only the selection of materials but also their full descriptive cataloging, which was required before digitization took place.

The cataloging process consisted of several steps to identify and prepare the materials for digitization. LBI catalogers created a project management spreadsheet to manage the project, and included all pertinent information, such as author, title, call number, unique identifier, date sent to the Center’s Digital Lab, Freimann catalog chapter, and page number. The spreadsheet was shared with the Center and JSF as needed.
LBI received 3,424 titles in several batches from JSF to be checked against the Center’s online catalog (search.cjh.org) and the print “Katalog der Judaica und Hebraic,” compiled by Prof. Dr. A. Freimann and published in Frankfurt am Main in 1931. LBI spent over 525 hours checking these titles in batches to identify the projected 1,000 books to be digitized.

The majority (80%) of the materials came from the LBI collections. However, Wissenschaft des Judentums works were also found in the collections of the Center’s other partners: American Sephardi Federation, American Jewish Historical Society, and YIVO Institute for Jewish Research. These materials also were pulled for digitization and transferred to the Center’s Digital Lab. Credit lines were added to descriptive information at JSF to specify the name of the contributing partner.

Each book (or each volume in the case of multi-volumes) was assigned a unique digital identifier from a list of URNs sent by JSF. In addition, fields were added to the Center’s library catalog to specify the name of the collaborative WDJ project, as well as links to the digitized book displayed at the Freimann Portal and to the digitized item in DigiTool (the Center’s digital asset management system).

When this initial preparation was completed, books were made ready for transfer to the Center’s Digital Lab and subsequent digitization. Prior to the project’s start, a batch of 100 books was prepared to test the workflow. Throughout the duration of the project, batches ranged from 50-100 books each. Accompanying each batch was a list which included author, title, call number, date published, number of pages, and digital identifier. The Center’s Digital Lab emailed LBI when ready for a new batch and the next batch was promptly delivered. Over the course of the WDJ project, LBI distributed updated lists via email which included the number of books and dates sent to and from the Center’s Digital Lab.

A portion of this preparation work had been done before the project’s grant term began. Due to the arduous nature of the analysis with the Freimann Catalog, LBI Catalogers who were preparing these items for digitization needed more time for the selection process. The preparation time ultimately needed had not been built into the project’s work plan, and as a result, the Center did end up covering these additional costs that might have been included in the original project budget. For future projects, the Center and partners will build time into the work plan and budget that will allow for a significant amount of preparation and testing time.

**Digitization in the Center’s Digital Lab**

When the WDJ project was first conceived, the Center’s Digital Lab did not have the staff or equipment allocations that it does presently. The project goals were very ambitious, and the
Center learned early on that it needed to staff up in order to fulfill its commitment to its funders. The Center’s Gruss Lipper Digital Lab was founded in 2006 to serve the Center community of the partner organizations and its own staff. The WDJ project was the first large-scale digitization project the Center took on. Prior to that, the Digital Lab had been working on smaller projects and ad hoc requests. While the Digital Lab had established regular workflows and determined standards, there was still not a productive way to derive meaningful numbers that would produce projections for digitization projects with a wider scope. The salient issue of generating metrics by which to project output and measure general productivity levels has been a challenge, both for writing project proposals as well as for works in progress. In the last eight years, the Center has more efficiently produced metrics that measure resources on a more granular level - for staff time, equipment output, tiers of quality assurance, OCR, ingest - and has been able to derive more accurate measurements of the work the Digital Lab is able to do in any given period.

During the project’s first twelve months (September 2011-August 2012), the Center coordinated efforts with JSF to generate workflows for the transfer of materials between the two institutions. The first steps for the Center’s role in the project included the hiring and assigning of staff and purchasing of equipment in the early months of the project. The Center’s Digital Lab put its team in place. The project’s full-time digital photographer and primary camera operator for the Atiz BookPro was hired. The Atiz BookPro was purchased with funding from the project budget, and the primary photographer also became the Lab’s WDJ project manager, establishing communication and transfer workflows with staff at JSF. A dedicated quality assurance technician and metadata librarian on staff were enlisted to work on the project as well. Center staff worked closely with their colleagues at the LBI, whose materials made up the majority of the works to be digitized.

For the Lab to accommodate the digitization of the WDJ materials, new workflows had to be incorporated into the regular lab procedures. The WDJ project had a significant, positive impact on the way the Lab is run, and streamlining of processes occurred as a result. The first year of the WDJ project was spent creating and coordinating workflows as well as communication protocols among the Center, LBI and JSF. Once the Atiz BookPro camera was purchased, it took six weeks to train staff, do testing, and establish digitization and quality assurance protocols. Center and LBI staff worked closely with the project team in Frankfurt to establish these protocols—in order for the materials to be integrated into the JSF’s digital collections, certain specifications had to be adhered to in the digitization process. The Center and the JSF also created uniform workflow protocols that remained in effect throughout the project.

Adjustments were made on the Atiz BookPro to broaden the scope of what the camera could shoot. For instance, the Canon cameras on the machine were adjusted in place to get the entire object in frame, and Adobe Lightroom software was used for editing instead of Atiz BookPro.
editing software in order to have additional control for post-production functions. Image and color specifications, output as uncompressed tiffs, derivative and quality assurance protocols, and reconciling Center and JSF workflows all had to be defined for the project in the initial stages.

Special attention was given to incorporating the WDJ project workflows into the regular functions of the Digital Lab in general. It was important not to isolate the project, but rather integrate it into the Lab’s purview so that more efficient procedures could be learned from the process. This vital training and testing period was a process that took longer than originally anticipated. While the LBI prepped and delivered materials to the Digital Lab, the digitization of WDJ materials did not begin in earnest until early 2012. At the end of the first reporting period, approximately ten percent of all materials had gone through the digitization process and had been transferred to JSF, with an additional 3.3 percent very near completion.

As the end of the first year approached, the productivity level necessary to fulfill the commitment to the goals of the project was not adequate. In the first interim report, submitted September 28, 2012, these issues were noted, along with the suggestion that a re-evaluation of progress would be made in six month’s time, and that an extension would be considered.

While productivity levels did increase in the second half of the first year, in December 2012, a request was made to the NEH for a one-year extension. The Center, LBI and JSF felt that the delays in the beginning of the project were significant enough to affect the projections for the second, and at the time final, year of the initiative. NEH graciously granted the extension on December 7, 2012, and plans were made to ensure the sustainability of the project through to its end in August 2014, including the expansion of staff and additional equipment allocations.

Several organizational changes took place over the grant term, and in addition to other noted factors, this did affect the functions of the Lab. Over the course of the first year, the Director of the Digital Lab - and co-writer of the original WDJ project proposal - left the Center. A new manager was hired into a newly-created position that had oversight of both the Digital Lab and Preservation services. However, in a year’s time, in the summer of 2013, this new position was proved ineffective; the manager left, and after deliberation by the Center, the position was eliminated. The Center realized that a middle person was unnecessary, and more oversight was needed at the functions level. The aforementioned digital photographer hired for the project became the Digital Services Manager, with direct oversight over the administration of the WDJ project as well as all other Lab functions, including intake of materials, image capture, quality assurance and metadata creation and ingest into the Center’s OPAC. While the Digital Services Manager remained the primary photographer on the WDJ project, she was able to directly manage all digitization activity on the project, including assigning staff to particular functions,
and managing additional communication with both LBI and JSF. To increase the productivity levels and output, staff adjustments were made so that materials could be digitized on the BookPro from 8am-10pm, 4 days/week, and 8am-5pm on Fridays and Sundays for image processing and additional shooting.

Additional staff were assigned to the project (not all at 100% of their time) for both image capture and quality assurance functions. Additional photographers were assigned to support image capture production, and a third quality assurance person was brought on to support the quality assurance process. Regarding equipment, the BookPro remained the primary camera for the entire project, and completed 95% of the work. The Lab’s large format Better Light camera was used to digitize selected oversize materials.

Photographers discovered elements of the physical books that, while not particularly vulnerable overall as objects, made them more vulnerable for photography in particular. For example, condition issues such as brittleness and tight margins necessitated the removal of a selection of books from the original list. These books were then replaced with alternate titles. While LBI catalogers noted condition issues in their original assessments, in some instances, Digital Lab staff found additional components of the objects that would require particular stabilization before digitization (and at times, the Center’s Conservator would review and help stabilize an object prior to shooting) or, as noted, staff would recommend that the title be replaced with another title in the WDJ collection. These factors increased the time it took for each object to go through the digitization process.

In addition, in the fall of 2012, after deliberation and testing, a new quality assurance process was put in place. Once this new analysis was implemented, quality assurance time was cut by 40%. The parameters of the old process had staff assuring that there was no dust, no hair, and no particles on each image. The new process allowed for some minor particles and fibers to be present in the final image as long as no text or relevant content was affected. Due to the inherent nature of the WDJ materials, there was dust present constantly and it became a prohibitive process to do quality assurance at the highest level. The lab staff found that quality assurance could be done at a different level without compromising the image quality or process.

Between the extended hours, revised staff, equipment allocations, and workflow adjustments, the Digital Lab’s productivity levels increased exponentially, allowing the Center to exceed the projected image count as well as finish the digitization work by March 2014 (in advance of the post-extension revised deadline). The reallocation of resources in a more efficient manner and the troubleshooting of logistical issues was a joint effort between the project director and Digital Lab management and staff. The resulting changes put the WDJ project back on track and on its revised schedule.
Access

In the project’s final year, the Center’s Digital Lab and LBI worked with JSF to deliver all digital assets to be ingested into the Freimann Portal. At JSF, the ingest and OCR-processing of the digitized items is still in progress as materials are being made full-text accessible via the portal. All assets will be available by December 2014.

Following image capture and quality assurance, the 50-100 book batches of digital surrogates were sent to JSF via external hard drive shipments. Simultaneously, MARCXML bibliographic records of the digitized books were sent to JSF by LBI, thus generating a report based on the fields that had digital identifiers in their bibliographic records. After checking each batch of records, JSF sent an error list that LBI added to a cumulative list. The books on the list were then pulled and checked for missing pages and other digitization errors. This workflow was built in to ensure the quality and comprehensiveness of the process. It should be noted, however, that the CJH Digital Lab had an extremely low margin of error - .02%. (Just 7 out of the first 40,000 images had to be reshot due to missing pages or an image out of focus, for example.) Books were reshot as needed and images resent to JSF via FTP.

The plan to make WDJ assets available via the Center’s catalog is in progress, as the digital surrogates and accompanying metadata are being ingested into the digital assets management system and made available via search.cjh.org. Although this step is outside of the original project parameters, the Center added this to provide an additional access point from which researchers can discover and access the materials. Additionally, to promote further discovery and access of the WDJ materials, a link to the Center’s OPAC is added to the master record in OCLC WorldCat as soon as the digital assets become available.

c. Accomplishments

The project successfully completed its goal of digitizing approximately 1,000 books/150,000 images. The Digital Lab exceeded the image estimate of 150,000 images by producing 167,820 images. The final title count was 967 titles, 75% of which have been uploaded to the Freimann portal in Frankfurt, where they are fully discoverable, accessible, and full-text searchable to the public. In addition, the images have been and are continuing to be ingested into the Center’s OPAC, as noted in the “Activities” section. This collaborative international project has achieved its goals of completing the virtual Freimann collection of missing books, 40% of which were found among the Center’s partners’ collection holdings.
This project’s importance cannot be overstated. It has served as a model for large-scale digitization projects at the Center, as well as for collaboration. The WDJ project allowed the Center to further develop uniform standards for image quality, digital storage, and workflow, and it fostered the ability to adjust quality assurance workflows without compromising the quality of the digital surrogates.

The project also promotes a model for collaboration among international partners. In addition to fostering enhanced workflows for digitization and access, new ways of communication and data transfer were put together between JSF and the Center so that both institutions were able to move forward with the work and fulfill their respective commitments to NEH and DFG. This project has constructed a model which other institutions can emulate.

Because of this project, the Lab is in a much better place to take on digitization projects of broader scope. Establishing models for large-scale digitization, international collaboration, and communication puts the Center in a good place to pursue future opportunities of this nature. The WDJ project elevated productivity levels, staffing configurations, communication protocols, and discussions about digital storage. With the WDJ project as its impetus, the Center was able to expand lab services and infrastructure, and be more forward-thinking about long-term planning for the sustainability of digital infrastructure and access. From a digital preservation perspective, it is vital to have the digital assets stored in two different geographical locations as well as on multiple servers, at both Frankfurt and at the Center. In addition, the Digital Lab is equipped at this point to handle more than one large-scale digitization project at a time.

d. Audiences

The scholarship of the Wissenschaft movement formed the foundations of such intellectual projects as the Leo Baeck Institute at the Center, Hebrew University in Jerusalem, Jewish Theological Seminary in New York, and Conservative and Reform Judaism in general. Due to the rarity of Wissenschaft collections, neither the Center nor the JSF allows for their lending, requiring researchers to travel to their reading rooms to view the works on-site or have photocopies sent abroad.

Researchers at both institutions as well as worldwide have benefited from access to these materials. This collaboration has produced the most comprehensive digital library of Wissenschaft des Judentums in existence, and because of this, users can closely examine these works without having the materials in hand.

The graph below illustrates activity for the Freimann collection, which includes the Wissenschaft materials. It shows the steady growth of visits over the period from January 2013- July 2014.
Note that individual sessions were counted; this translates as individuals working directly with the material. (Each month there are about 1.4 million hits for all the collections, and about 60% of those hits are to the Freimann and Compact Memory collections.) The graph below shows that the Freimann collection receives the most activity among the JSF collections.

The Center’s digital collections at access.cjh.org receive over 150,000 search sessions annually, and can be accessed from anywhere in the world. The Center’s single-search portal at search.cjh.org allows researchers to search across all Center holdings as well as languages and formats, so users can potentially find results from not only the digital collections but from ancillary sources related to Wissenschaft des Judentum scholarship.

e. Evaluation

The project was evaluated via the following mediums/methods:

- Internal meetings between CJH and LBI staff
- Email communications between CJH, LBI and JSF staff
- Monitoring progress in the master project management spreadsheet
- Final presentation on the project to staff
- Authoring of the white paper.

The project’s strengths have been primarily the ways in which addressing challenges led to elevated productivity levels, more advanced staffing configurations, better communication protocols, and proactive discussions about digital storage. All collaborating institutions evaluated
the processes and output as the project progressed, and this was done by adhering to criteria noted in the original project proposal. When the goals of the project were not being met, protocol adjustments were made, as discussed in previous sections. The project has led to an expansion of services the Center can now offer to its partner institutions. Lab staff time for ingest of digital assets and metadata into the digital asset management system will be incorporated into future projects and already has been reflected in current on-going projects.

f. Continuation of the Project

Due to the success of this project, both the Center and JSF want to continue this important work together. Both have proposed a second stage of the collaboration, and have worked hard on putting together a prospective framework and work plan for this next stage. This project would similarly digitize materials from the Wissenschaft des Judentums collection. While this project focused on books, the next stage of the project proposes to digitize the periodicals in the Wissenschaft des Judentums collection. Since their development in the 18th century, Jewish periodicals were an integral part of the corpus of Jewish publications, having their own specific characteristics. From the beginning they were created as a temporary product only, meant to serve for daily, weekly or monthly use. Today—after the extinction policy of the Nazi regime and the Second World War—it is unusual to find complete sets of Jewish periodicals.

While the proposed project, called *Compact Memory: German Jewish Periodicals Online*, is its own distinct endeavor, it does continue the vital work of this initial WDJ collaboration. The shared, integrated portal for German-Jewish periodicals will create a single portal for researchers to search German-Jewish periodicals and it will integrate the collection materials from several institutions. The further development and enhancement of the existing integrated search portal, *Compact Memory*, will take place as part of the initiative. At the end of the project, this enhanced Compact Memory portal will have over 400 periodical titles, thus increasing the size of the existing database by 57%. An estimate of 150,000 images will be digitized—100,000 at the Center, and 50,000 at JSF. Lessons learned from this first project have greatly informed the stage two proposal.

g. Long-term Impact

The Freimann portal is now online and provides full-text access to these important works. Both the JSF and the Center are committed to the long-term access and sustainability of these resources. *Wissenschaft des Judentums: An International Digital Collection* speaks to the core of the Center’s work to provide access to materials that help scholars and members of the public achieve more complete and nuanced understandings of history. In addition to having been made digitally available for research, select materials that were digitized as part of this
project will be featured in two upcoming online exhibitions that are part of the Center for Jewish History’s Holocaust Resources Initiative (HRI). The HRI seeks to contextualize and promote the use of Holocaust-related materials within the collections of the Center partners. The HRI sites will also include teaching guides for elementary and high school teachers interested in bringing virtually primary sources into their classrooms. The websites are funded by a private foundation who decided to support the project in part because the *Wissenschaft des Judentums* initiative was progressing so successfully at the time the proposal was submitted.

In recent years the Center has given increasing priority to digital projects that expand its institutional reach. The onsite Digital Lab provides an enormous opportunity to deliver content so that it can reach large and diverse audiences. This international project was an excellent test case for the ways in which the Center can play a role in digitally unifying resources that have been physically scattered across the globe due to world events. It inspired the Center to establish best practices for partnering with other institutions and created a new confidence among both leadership and staff that future collaborative projects—especially ones that deliver digital sources and humanities content—are an important way to expand the influence of this public research institution.

**h. Grant Products**

Due to its collaborative, international and distinct nature, the Wissenschaft project has garnered both publicity and support, and in addition to the production of over 160,000 images, several news articles have been written about the project. Its activities have been presented at three conferences in 2014, and participating institutions have written blog posts detailing the project activities and accomplishments.
Freimann Portal and Center for Jewish History OPAC Examples

Freimann Portal Example – Bibliographic Record

Freimann Portal Example – Page Overview
Center for Jewish History Digital Collections OPAC Example – Object Viewer

Selected Digital Surrogates

Der Talmud und sein Recht, Berlin, 1912, YIVO
Der jüdische und christliche Monotheismus, Koenigsberg, 1919, LBI

The Jews of the Empire and the Great War, London, 1919, YIVO
Israël sur la Terre des Ancêtres, Paris, 1927, YIVO

Histoire des Juifs de Bayonne, Paris, 1893, ASF
Selected Links

http://www.nytimes.com/2011/03/08/nyregion/08books.html?module=Search&mabReward=relbias%3Ar%2C{%222%22%3A%22%22%3A%22RI%3A16%22%22}

LBI News: Leo Baeck Institute and Frankfurt Library Work to Reunite Legendary “Science of Judaism” Collection, March 10, 2011

PR Newswire: NEH Grant Makes Possible the Reuniting of Science of Judaism Texts Lost During the Holocaust, August 18, 2011

LBI News: Progress Filling Gaps in Frankfurt Wissenschaft des Judentums Collection, November 7, 2013


Digitale Judaica-Sammlungen der Universitätsbibliothek Frankfurt (JSF) Facebook page, which has featured articles about the Wissenschaft project:
https://www.facebook.com/judaica.frankfurt/timeline?ref=page_internal

Zeitschrift für die Wissenschaft des Judenthums / hrsg. von dem Verein für Cultur und Wissenschaft der Juden, publication on Wissenschaft collection
http://sammlungen.ub.uni-frankfurt.de/cm/periodical/titleinfo/2969091

Enhanced Wikipedia entry for Wissenschaft des Judentums:
https://en.wikipedia.org/wiki/Wissenschaft_des_Judentums
Enhanced Wikipedia entry for Aron Freimann:
https://en.wikipedia.org/wiki/Aron_Freimann

**Conference Presentations**

“Digitization through Discoverability: Digital Initiatives at the Center for Jewish History,” presentation by Laura Leone, included report on Wissenschaft des Judentums project, Ex Libris Users of North America (ELUNA) annual conference, Montréal, Canada, April 30, 2014.


### i. Conclusion

The WDF project virtually re-created the historically significant Wissenschaft des Judentums book collection and made it discoverable and accessible online. It achieved its goals by producing well over 160,000 digital surrogates of objects whose originals were destroyed during World War II. Wissenschaft materials continue to enhance scholarship worldwide. Components learned and to be considered for future projects:

- Building preparatory and testing time into the work plan and budget is an important step for success;
- Making sure that materials are comprehensively surveyed, and condition needs addressed, so that materials are camera-ready is a crucial early step;
- Establishing metrics for projecting productivity levels is vital for determining realistic, attainable project goals;
- Addressing organizational changes in the moment may bring forth challenges, but can lead to more efficient workflows in the longer term;
- Making sure allocated staffing matches the workload should be considered when project is conceived;
- Being able to be flexible and adapt/adjust workflows as challenges arise is essential;
- Managing Digital Lab functions, such as quality assurance, to be more efficient without compromising the quality of output or sacrificing the bigger picture is a key to success.

Through the unified work of several institutions, this international collaboration encountered a variety of challenges, which, when addressed, ultimately elevated the production and final output, and will lead to a second stage of the project.