Book. 1. Part. 5. Chap. 17

Astronomy: figures observing a meteor or comet, G. Freman, Wellcome Collection, United Kingdom, CC BY

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EUROPEANATECH

Impact Assessment Report (December 2020)

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Contents

Acknowledgements

Many thanks to the numerous interviewees who spent time both informing and shaping the narrative of this report. This was a complex investigation and one that benefited from the insights and expertise that they have gained over many years.

Acknowledgements

Executive summary

Introduction

In this impact assessment, we focus on an aspect of work supported by the EuropeanaTech steering group and community (and influenced by Europeana's Research and Development team), namely, EuropeanaTech and Europeana initiative's contribution to the European implementation and development of the International Image Interoperability Framework (IIIF).

Impact Assessment purpose

Our goal has been to document impact relating to IIIF implementation. In doing so, we hope to guide the strategy of EuropeanaTech as an Europeana Network Association (ENA) community. This Impact Assessment will add value to the new EuropeanaTech IIIF Working Group and the work of the EuropeanaTech steering group and community, by offering an insight into its contribution to a valuable resource for the cultural heritage sector.

Methodology

We investigated if Outcome Harvesting would be an appropriate tool to use. This is a methodology that is an increasingly used approach used in complex, multi-stakeholder activity where pre-defined objectives are not in place. Guided by external impact consultants Sinzer powered by Grant Thorton and a specialist in this methodology, we developed a research question and a data collection plan. This is also the first known application of the methodology in the cultural sector. The methodology surfaced only two outcomes that we were unable to substantiate. This does not mean that the methodology is not useful, but it does suggest that it has limitations when used in a complex context with a very slow pace of change and many other influencing factors. Further research, and a longer-term perspective, is needed to adequately address the research question.

To help answer our research question, we asked other interview questions to the consulted stakeholders, and coded the results in terms of what they told us in response to the overarching research question.

Though the Outcome Harvesting methodology was ultimately not suitable for investigating change in this context, the need for the identification of tangible outcomes and the verification of these outcomes with stakeholders is its strength.

Research question

What was EuropeanaTech's and the wider Europeana initiative's role in encouraging the implementation of the IIIF framework between 2015 and 2020?

Findings

We found the following themes emerging through the interview programme.

- Without the work of the EuropeanaTech Community, there would be no IIIF data on the Europeana Platform. Yet we lack the data that would help us investigate if and how EuropeanaTech contributed to an increase in IIIF-compliant data on Europeana. The lack of data is the result of the time it takes to make new or adapt existing technical infrastructures. This timeframe also makes attributing one factor or trigger for change very difficult.
- EuropeanaTech and Europeana increased the visibility of IIIF amongst the CHI community, and increased the momentum around the topic. Europeana led by example in adopting IIIF, and is seen as a trusted peer. Its actions should be seen in the context of a general zeitgeist around technological development, where change becomes easier when there are multiple sources and actors encouraging you to adopt a standard or tool.
- EuropeanaTech facilitates exchange between Europeana and CHIs, and between CHI and tech professionals. The Europeana IIIF group meetings have the highest attendance of all of the online IIIF meetings. Europeana's connections to European CHIs was identified by one IIIF representative as the biggest value of the collaboration. However, the connection to and interaction with national aggregators was not as strong as it could or should be.
- The EuropeanaTech brand is respected. EuropeanaTech's value lies in addressing tech developments not only relevant to Europeana but providing a valuable space for conversations around the sector's tech development more generally.
- EuropeanaTech and IIIF events emerged in the interviews as being vital for the widespread 'exposure' of the European heritage sector to IIIF. They were described as 'energising' to the community. EuropeanaTech widened participation beyond national institutions in the UK and Europe to a wider group of CHIs.
- EuropeanaTech and Europeana's early adoption and promotion of IIIF provided a space for experimentation and technical advancement. Europeana is described as being more than a partner that displayed content using IIIF: it supported experimentation and development.

Conclusions

Without the work of the EuropeanaTech consortium, there would be no IIIF data on the Europeana Platform. We have learned about the complexity of understanding change in this area, and about strengths and weaknesses of this methodology. It is difficult to measure change when technological change and decision-making can be slow-moving. Furthermore, it was a challenge to isolate the degree to which EuropeanaTech and Europeana may have contributed to an outcome in isolation from, or even combined with, the activity of others. In addition, it was difficult for the interviewees to isolate specific cases relating to the adoption of IIIF as a result of Europeana's 'distance' from the CHIs that provide data to it through an aggregator.

Recommendations

For Europeana and the EuropeanaTech community

- EuropeanaTech should continue to showcase the work of IIIF in Europe and act as a conduit of information from the wider IIIF community to European cultural heritage institutions.
- As part of ongoing work into mapping case studies to describe the process and value of providing content into Europeana, more focus should be paid to describing, and thus understanding, the varied factors that can progress and hinder decision-making and action in a CHI. Case studies would be valuable in this regard.
- Communication and reporting should be explicit in its narration of identified short-term outcomes and value generated, moving from a vague narration of activity towards an assessment of how it delivered against its objectives. This demands a more critical narrative approach. In the longer term, it also increases the evidence base should future evidence or document reviews be conducted.

For further research

- Using the themes emerging from the interviews, conduct a survey to see if these views are representative of the wider EuropeanaTech community.
- When looking at the Outcome Harvest presented in Appendix 4, we see that there is a potential demonstrable impact for CHIs at a direct and indirect level as a result of EuropeanaTech and Europeana Foundation's activity. However, the Outcome Harvest raises the question of 'so what?', requiring us to investigate what the additional impact of implementing IIIF on an institution's collections might be. This is an area for further research.
- Further research requires more investment of resources and a longer-term perspective.

Validation and next steps

The report was reviewed by almost all interviewees. The report, noting the complexity of the context under investigation, benefited from the interpretation and perspective of the interviewees. This research is designed to inform the longer-term strategic development of EuropeanaTech.

Introduction

This impact assessment is being conducted in the context of a programme of ten impact assessment case studies being completed under DSI-4. It focuses on a difficult area in which to measure change due to the complexity of the actors involved and the slow pace of technological adoption and decision-making. It looks back at activity that may have led to or inspired the implementation of IIIF among European CHIs.

## Background to EuropeanaTech and IIIF

IIIF was first widely introduced to the EuropeanaTech community at the EuropeanaTech 2015 conference in Paris. At that time, IIIF was a very little-known standard both in Europe and the UK, and EuropeanaTech 2015 was a key point where it was shared with the wider European community. At the time, it was being implemented by national libraries in the UK and Europe, but not by many others. Prior to EuropeanaTech 2015 Europeana Foundation was already in preliminary discussions with IIIF at a strategic level. In 2016, Europeana then hosted a four-day IIIF working group meeting in Den Haag, with stakeholders attending from across the world.

Methodological approach

> *"Unlike some evaluation approaches, Outcome Harvesting does not measure progress towards predetermined objectives or outcomes, but rather, collects evidence of what has changed and, then, working backwards, determines whether and how an intervention contributed to these changes."*
> Ann-Murray Brown (2019)

We used this case study to trial an Outcome Harvesting approach. There are six steps needed to deliver an Outcome Harvest. In Appendix 2, we present the methodology in full, and at each stage, illustrate our approach.
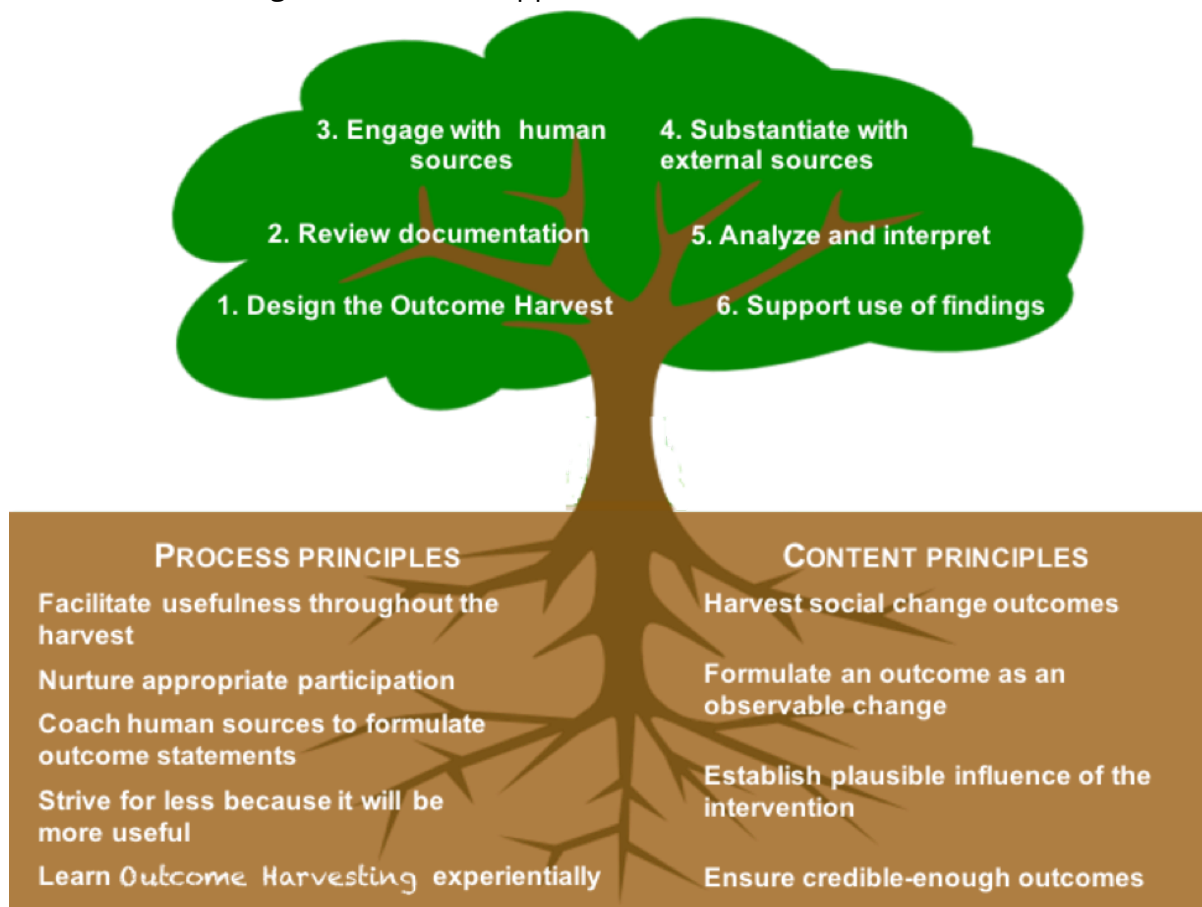
Figure 1. Illustration of the process and content principles of Outcome Harvesting. Taken from Michael Quinn Patton's blog for the American Evaluation Society (2019).

We also conducted a broader investigation through semi-structured interviews held at the same time as our consultation relating to the Outcome Harvest. We interviewed seven stakeholders across the identified *inner circle* in five interviews lasting each between 1 hour to 1.5 hours.

Interviews proved to be an effective way to introduce the consultees to the methodology. At the interview stage, we also asked broader questions that would inform this impact assessment:

- In your own words, what is the value of the activity of EuropeanaTech over the last years?
- What role has EuropeanaTech played (if any) in encouraging the implementation of the IIIF framework among CHIs in Europe?
- More broadly, what is the value (if any) of EuropeanaTech's role with regards to the development and implementation of IIIF?

Limitations to our approach and complexity of the context

The evaluation of one's approach is part of the Impact Playbook methodology[1] and a necessary part of any evaluation or impact assessment. Describing the limitations of an approach also ensures more reliable use of the findings (without misreporting or overclaiming) as well as providing additional information to reviewers to support their assessment of the strength of the evidence presented.

The scope of the research area

The original brief did not fully anticipate the complexity of the research area. This report presents and reports on the findings that have surfaced as part of this programme of research. Further research, and a longer-term perspective, is needed to adequately address the research question.

Timing

An Outcome Harvest requires the investment of a lot of time and dedication. This impact assessment was completed within a relatively short space of time, and the Covid-19 approach presented some limitations with regards to the availability of contactees for interview and reassigned priorities.

Appropriateness of the research area - complexity

In the initial planning stages, Outcome Harvesting seemed like an appropriate methodology that could grasp the complexity at hand, namely, as:
- There is a challenge of understanding what *EuropeanaTech's* actions are, as this is an informal and somewhat organic group incorporating those also directly involved in IIIF development and implementation, Europeana Foundation (including R&D) and the wider Europeana initiative. Separating this is a challenge. Therefore, we have decided to focus instead on activity relating to IIIF, and at the end, consider the role of the community.

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[1] This process is informing the still developing Phase 4 (evaluation and planning) of the Impact Playbook.

- EuropeanaTech was acknowledged from the beginning to have a facilitating or encouraging role, with less direct intervention, suggesting that it would be more difficult to prove impact.
- Europeana Foundation had to go through its own implementation process as well as becoming an advocate for IIIF adoption.

While we aimed for quality of described outcome over quantity, the methodology was, however, not effective in isolating outcomes that were verifiable following the Outcome Harvest steps. Reflecting on this, this could be for several reasons:

- **The complexity of technological change and the aggregation landscape.** Technical change, and decision-making, can be slow.
    - Technology progresses in stages, and different components build on each and are developed over time.
    - For a CHI to adopt IIIF, there are many technical systems that need to be adapted or adopted.
    - European CHIs, by and large, cannot control their pace of technical change. Their technical solutions are often outsourced and they rely on the vendor to include IIIF in their offer.
    - Technical change is enabled (and similarly restricted) by a number of factors, including funding, leadership, agreement and buy-in on the technical direction, for example. The page of technical implementation therefore differs according to each institution.
    - There are also other actors and contexts involved, including the aggregation landscape, which differs in each context.
    - Aggregators must also support the IIIF-extension to the Europeana Data Model: some do not yet offer this.
- **The existence of other influences that could lead to or support the same outcome.** It was challenging to isolate specific elements of EuropeanaTech or Europeana activity that led to a change in adoption of IIIF.
    - 'Literally everyone likes IIIF' - adopters are convinced often years before they can implement it, and other barriers stand in the way.
    - Europeana is not the only advocate of IIIF.
- **The 'remote' context of EuropeanaTech and Europeana's interaction with cultural heritage institutions (CHIs).** In the scale of both the entire European heritage sector and the institutions providing data to Europeana platform, Europeana rarely engages on a firsthand basis with CHIs (it does not have the capacity to do so, and that is the role of national and thematic aggregators). With this in mind, finding cases where IIIF was adopted as a result of Europeana's activity was difficult. IIIF is license-free so there is no way of tracking uptake (beyond an analysis of records in Europeana's platform, which may not be an appropriate measure due to the delay in implementing and aggregating IIIF after an institution has decided they want it).
- **There was little documentation tracking adoption**. A review of documentation showed few examples of IIIF adoption, and it rarely described other outcomes that emerged as a result of Europeana's activity. We mostly relied on cases that emerged as a result of the interview process.

Findings - Outcome Harvest

We identified two outcomes. These relate to a) adoption by a CHI and b) technical development to support adoption by a CHI.

Outcome one: adoption of IIIF by the Nationalmuseum, Sweden's museum of Art and Design, thanks to Europeana exposure of the tool and support from Europeana in implementation

Status: not validated

Identified outcome: The Nationalmuseum, Sweden's museum of Art and Design, found out about and adopted IIIF between 2016-2017. During a period of the museum's closure for renovation, the adoption of IIIF allowed them to have their entire digital collection available to the public in high quality on their own site and on Europeana.eu.

What did Europeana do? (our contribution) Europeana adopted IIIF and Europeana/EuropeanaTech promoted its wider adoption among EU CHIs. The Paris EuropeanaTech conference in 2015 was suggested to be the conference at which the Nationalmuseum possibly became aware of or learned more about IIIF. There were posters and presentations that discussed the early implementation and exploration of IIIF. Europeana was also trusted as a partner of the Nationalmuseum. Europeana adopted IIIF, which encouraged others to adopt the framework. The personal connections to Europeana were suggested to have provided support and encouragement, and an opportunity to bounce-back ideas, as the Nationalmuseum has no digital department.

What is the significance to the research question? It shows an example of a CHI being inspired to adopt IIIF as a result of the activities of Europeana/EuropeanaTech. It creates the connection between their activities (exposure, promotion, adoption) and implementation of IIIF by a CHI.

Findings from the validation phase
We found three core outcomes from the validation interview with a representative of the Nationalmuseum that suggest that the outcome identified could not be substantiated.
1. The Nationalmuseum representative suggests that they first learnt - in detail - about IIIF at a conference that was held in the US in 2016, not at EuropeanaTech conferences (which they had not attended).
2. It was suggested that Europeana was learning about IIIF at the same time as the Nationalmuseum - rather than Europeana being able to lead with their experience.

3. Europeana's contribution to the Nationalmuseum's implementation of IIIF was not crucial to the outcome.

Did we learn anything else?
Yes. We learned that:
- Europeana's adoption of IIIF acted as a reference point for the museum, when showing how others were experimenting with and adopting IIIF, suggesting that Europeana acts as a trusted peer in the sector.
- Participation in the Task Force was a valuable activity for the Nationalmuseum.
- There are improvements that can be made to the presentation of IIIF content on Europeana, as well as in terms of additional features that could support greater adoption of IIIF.
  - Europeana could host its own IIIF server (shared image service) which CHIs could use.
  - IIIF images on Europeana could be improved in terms of user experience. Technical capabilities are good, though it could be investigated to what extent users use this functionality.

Outcome two: Combining Sitemaps with IIIF and further development of IIIF harvesting solutions

Status: not suitable for inclusion, but worth reporting on.

About Sitemaps: Sitemaps[2] are a search engine optimisation tool used by many websites in order to facilitate the scraping of their web pages by search engines. A Sitemap lists the URLs of a website, and provides additional data such as the last known update.

Europeana's contribution: The Europeana R&D team identified implementation of Sitemaps in combination with IIIF as an area for potential research for data aggregation. Many CHIs use Sitemaps as a pre-existing web tool (regardless of a desire to provide data to others) and this could be leveraged to harvest metadata related to IIIF content, especially for Europeana. This was investigated in partnership with the National Library of Wales and University College, Dublin. The investigations showed that using Sitemaps to list IIIF resources could provide a mechanism for harvesting metadata directly from the CHI via the IIIF protocol.[3] Yet in following discussions it appeared that other standardised solutions for supporting the discovery and harvesting of IIIF resources could be desirable. IIIF launched a new Discovery Technical Specification Group to investigate this (and other technical developments), co-chaired by Europeana.

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[2] https://www.sitemaps.org/
[3]
https://pro.europeana.eu/page/issue-8-tpdl#metadata-aggregation-assessing-the-application-of-iiif-and-sitemaps-within-cultural-heritage

Europeana continues to lead this group, contributing to the specifications of its upcoming standards and best practices.

Significance to the research question: EuropeanaTech's direct connections to CHIs supported a technical development that made it more likely - and easier - that IIIF could be adopted by CHIs. It sets the context for easier adoption but does not necessarily encourage adoption of IIIF.

Our process
We identified this outcome through the documentation review, and developed it through further follow-up interviews with Europeana R&D colleagues. This outcome had potential in terms of facilitating easier ingestion of IIIF content to Europeana. However, when investigating further it was clear that it was not SMART enough - namely, there were no specific cases where it *had* facilitated easier ingestion of content, because the functionality is awaiting implementation. We recommend that the outcomes of the IIIF Discovery Working Group are considered in the future, when the functionality is fully available to CHIs.

It is predicted that this could increase the number of providers who give content to Europeana in IIIF format. For some, it may encourage the adoption of IIIF as a means of having data harvested directly to Europeana or to an aggregator. CHIs still have to conform to the Europeana Data Model. For that reason, while it is possible that this could lead to increased direct harvesting of content to Europeana, aggregators are still likely to be a necessary part of the support chain and in many cases they will still first harvest the data of the CHI.

There is an interesting observation here, in that we encounter the slow pace of technological change as a condition of creating and understanding impact.

Did we learn anything else?
Yes. We learned that this work helped inform the IIIF Discovery discussions, and that, in the words of IIIF stakeholders, was a very useful investigation that only an organisation like Europeana could undertake.

Findings - interview programme

This section reports on themes emerging from the interview data.

1. The number of IIIF-records on Europeana does not reflect shorter- or medium-term interest in IIIF or the outcomes of EuropeanaTech activity

There are almost <u>2,800,000 records</u> that conform to IIIF available on the Europeana platform in June 2020. The graph reflects findings found elsewhere, that applying new data models or processes can take time, even for better-resourced museums.[4] However, noting the delay between deciding to adopt IIIF and the actual implementation and aggregation of IIIF-compliant data, such analysis can't help us fully investigate the increase in numbers to EuropeanaTech/Europeana activity.
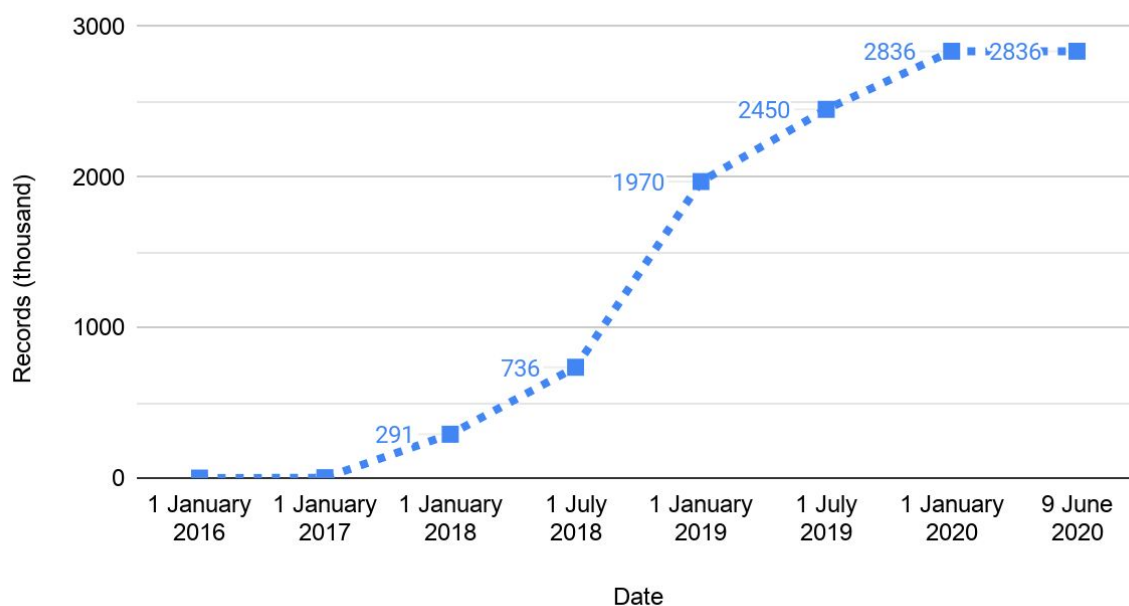
Figure X. *IIIF complaint records available on Europeana.eu by date (in thousands), June 2020 (see <u>search query</u>)*

The graph above is likely to represent early adopters, whose enthusiasm resulted in new records being made available more recently. The plateau could be investigated further, but interviewees do not agree that this reflects a plateau in interest in Europe. As noted in the limitations above, change takes time and a longer-term analysis (e.g. in two to four years) might give a more accurate picture of uptake.

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[4] Source: interview, national workshops impact assessment

2. EuropeanaTech and Europeana increased the visibility of IIIF amongst the CHI community, and increased the momentum around the topic, but it alone is not responsible for its adoption

By becoming visible and actively participating in the IIIF community, **Europeana and EuropeanaTech have promoted IIIF amongst CHIs in Europe**, according to representatives of IIIF. Interviewees frequently referenced the importance of the early events (2014-2016) which helped to spread the word about IIIF, the IIIF community and the results of early experimentation relating to the possibilities of the technology could be presented and discussed. Furthermore, **Europeana led by example**: adopting IIIF was suggested by an interviewee to have acted as a 'seal of approval'. Europeana is seen as a 'trusted body', corroborated in our interview with a representative of the Nationalmuseum, Sweden.

Interviewees acknowledged that **Europeana helped create momentum** behind the growing interest in IIIF through a consistent and supportive approach, but that it (and inclusion in the Europeana platform) was not the catalyst for adoption. This momentum was suggested by one interviewee to be linked to the **general zeitgeist around technological development**, where change becomes easier when there are multiple sources encouraging you to adopt a standard or tool.

3. EuropeanaTech facilitates exchange between Europeana and CHIs, and between CHI and tech professionals

a. Connections to European CHIs

Europeana's connections to European CHIs was identified by one IIIF representative as the biggest value of the collaboration.

As a community and place for discussion, **EuropeanaTech has generated interest amongst European CHIs in IIIF**. Interviewees suggested that most recently this could be seen in the interest generated around the IIIF and Europeana Working Group meetings, where 40 - 50 people joined the first digital call in 2020, many of whom had no experience in IIIF before.[5]

An interview with IIIF representatives suggested that online Europeana IIIF meetings are the most attended than other international group meetings. These calls show the importance of this communication avenue with the wider tech and European heritage community. It was noted, however, that there had been less crossover than expected

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[5] Interview with IIIF representatives

between those involved in EuropeanaTech meetings joining the wider online IIIF community.

In the interview with IIIF representatives it emerged that the **connection to and interaction with national aggregators was not as strong as it could or should be**. One of the goals of the Task Force is to raise awareness within this group.

b. Convening a technical heritage community

EuropeanaTech presents a unique community within the Europeana initiative, notably for its duration to date and its brand. It is suggested that the **EuropeanaTech brand is widely known**. One interviewee suggests that it is the one community that brings together 'tech savvy' professionals with ties to cultural heritage, which can't be found so easily elsewhere.[6] Furthermore, EuropeanaTech's value lies in **addressing tech developments not only relevant to Europeana but providing a valuable space for conversations around the sector's tech development more generally**. There are calls for the EuropeanaTech conference to continue as an event and a brand at least partly separate from the Europeana AGM.

These events emerged in the interviews as being vital for the widespread 'exposure' of the European heritage sector to IIIF. They were described as 'energising' to the community. It is suggested that EuropeanaTech widened participation beyond national institutions in the UK and Europe to a wider group of CHIs.

4. EuropeanaTech and Europeana's early adoption and promotion of IIIF provided a space for experimentation and technical advancement

Europeana was described by one interviewee as being **more than a partner that displayed content using IIIF: it supported experimentation and development.** R&D was acknowledged as an area where collaboration with CHIs was somewhat freer, for example, relating to ingestion of digital content. They were also able to drive changes to IIIF specifications

It was acknowledged that in the early days of exploration of IIIF adoption with newspaper collections, the European Library (TEL) did not pursue IIIF as a result of a risk-averse approach. IIIF was not a common framework at the time.

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[6] We presume this refers to an international/European dimension. Local cases exist, e.g. the museums and computer group in the UK, and the museums and computer network in the US.

Summary and reflection

The outcomes are promising: EuropeanaTech increased the momentum and visibility of IIIF amongst the CHI community, facilitated exchange between Europeana, CHIs and tech professionals, and provided a space for experimentation and technical advancement. Investing in further research is needed to investigate if there are cases of this activity leading to adoption, as the scope of the research area is greater than originally anticipated.

When asked about trends in the implementation of IIIF, one interview suggested that an attendance list from the Europeana IIIF conference in the Hague in the Fall of 2016 would represent those who were, for the first time, informed about IIIF in a comprehensive way, but without surveying each of these attendees, it is hard to corroborate this. This indicates the need for a much more extensive programme of research, if the research question is still a priority by the stakeholders involved. The original brief did not fully anticipate the complexity of the research area and the Outcome Harvesting methodology did not provide many insights into adoption: rather, the findings reinforced the inadequacy of the method in such a complex context. Further research and a longer-term perspective is needed to adequately address the research question.

It is difficult to assess the impact of IIIF on an individual case basis without direct consultation with a range of CHIs that provide content. Europeana has little direct contact with CHIs as this is naturally facilitated through national, domain and thematic aggregators.

Conclusions and recommendations

Reflection on the Outcome Harvesting methodology

We identified two outcomes following the Outcome Harvesting methodology. These relate to a) adoption of IIIF by a CHI and b) technical development to support adoption by a CHI. Only the first outcome was progressed through to a substantiation stage, because the latter did not meet the necessary criteria for inclusion. The first outcome was not substantiated in a verification interview. The original brief did not fully anticipate the complexity of the research area. This report presents and reports on the findings that have surfaced as part of this programme of research. Further research, and a longer-term perspective, is needed to adequately address the research question.

Conclusions based on the interview programme

- Without the work of the EuropeanaTech Community, there would be no IIIF data on the Europeana Platform. Yet we lack the data that would help us investigate if and how EuropeanaTech contributed to an increase in IIIF-compliant data on Europeana. The lack of data is the result of the time it takes to make new or adapt existing technical infrastructures. This time frame also makes attributing one factor or trigger for change very difficult.

- EuropeanaTech and Europeana increased the visibility of IIIF amongst the CHI community, and increased the momentum around the topic. Europeana led by example in adopting IIIF, and is seen as a trusted peer. Its actions should be seen in the context of a general zeitgeist around technological development, where change becomes easier when there are multiple sources and actors encouraging you to adopt a standard or tool.

- EuropeanaTech facilitates exchange between Europeana and CHIs, and between CHI and tech professionals. The Europeana IIIF group meetings have the highest attendance of all of the online IIIF meetings. Europeana's connections to European CHIs was identified by one IIIF representative as the biggest value of the collaboration. However, the connection to and interaction with national aggregators was not as strong as it could or should be.

- The EuropeanaTech brand is respected. EuropeanaTech's value lies in addressing tech developments not only relevant to Europeana but providing a valuable space for conversations around the sector's tech development more generally.

- EuropeanaTech and IIIF events emerged in the interviews as being vital for the widespread 'exposure' of the European heritage sector to IIIF. They were described as 'energising' to the community. EuropeanaTech widened participation beyond national institutions in the UK and Europe to a wider group of CHIs.

- EuropeanaTech and Europeana's early adoption and promotion of IIIF provided a space for experimentation and technical advancement. Europeana is described as being more than a partner that displayed content using IIIF: it supported experimentation and development.

Reflection on the Outcome Harvesting methodology

This methodology was suggested to be appropriate for measuring change in complex situations where there were no clearly pre-defined objectives for an activity. It was felt that this would be a good approach for this investigation. However, on reflection, we feel that the methodology was not in fact suitable for an investigation with the level of complexity represented by the Europeana Initiative and the EuropeanaTech community, and their collaborative processes and extensive partnership working. Similarly, the beneficiaries of the activities were too far removed to help those consulted isolate specific cases relating to the adoption of IIIF. This is a result of the slow pace of technical change and Europeana's 'distance' from the CHIs that provide data to it through an aggregator..

It is difficult to measure change when technological change and decision-making can be slow-moving and influenced by many factors. It was a challenge to isolate the degree to which EuropeanaTech and Europeana may have contributed to an outcome in isolation from, or even combined with, the activity of others.

The need for the identification of tangible outcomes and the verification of these outcomes with linked stakeholders is the strength of the Outcome Harvesting methodology. It is a consultative and iterative process that adds value to those involved. Furthermore, it can be combined into a programme of interviews with stakeholders, allowing additional insights to be gained into what the impact of an activity could be (without verifying it through this methodology, because tangible cases are not identified).

Recommendations

For Europeana and the EuropeanaTech community

- EuropeanaTech should continue to showcase the work of IIIF in Europe and act as a conduit of information from the wider IIIF community to European cultural heritage institutions.
- As part of ongoing work into mapping case studies to describe the process and value of providing content into Europeana, more focus should be paid to describing, and thus understanding, the varied factors that can progress and hinder decision-making and action in a CHI. Case studies would be valuable in this regard.
- Communication and reporting should be explicit in its narration of identified short-term outcomes and value generated, moving from a vague narration of activity towards an assessment of how it delivered against its objectives. This demands a more critical narrative approach. In the longer term, it also increases the evidence base should future evidence or document reviews be conducted.

For further research

- Using the themes emerging from the interviews, conduct a survey to see if these views are representative of the wider EuropeanaTech community.
- When looking at the Outcome Harvest presented in Appendix 4, we see that there is a potential demonstrable impact for CHIs at a direct and indirect level as a result of EuropeanaTech and Europeana Foundation's activity. However, the Outcome Harvest raises the question of 'so what?', requiring us to investigate what the additional impact of implementing IIIF on an institution's collections might be. This is an area for further research.

Appendix 1 - documentation review and bibliography

Document review

- Preparing Europeana for IIIF Involvement Task Force
- IIIF in Europeana
- IIIIF Working Group Meetup at Europeana registration information
- EuropeanaTech Insight: IIIF
- https://pro.europeana.eu/page/issue-8-tpdl#metadata-aggregation-assessing-the-application-of-iiif-and-sitemaps-within-cultural-heritage
- http://ebooks.iospress.nl/publication/46657
- First appearance of IIIF on Europeana Pro
- Digital meet culture - Europeana and IIIF
- Simple ingestion of IIIF content as EDM WebResources - History
- EDM/IIIF profile - Antoine's re-working
- IIIF datasets in Europeana: A scholar's delight
- IIIF adoption by Europeana: future perspectives for the Network
- Europeana & IIIF - what we have been doing with IIIF and why
- Papyrus fragments from the Universitäts- bibliothek Heidelberg
- Designing extensive EDM records
- Re-using EDM in Nomisma.org
- Who's Using What: Rashmi Singhal Harvard University
- IIIF APIs
- Automated image analysis with IIIF
- Improving data quality in Europeana: The Universitätsbibliothek Heidelberg case study
- Europeana and the International Image Interoperability Framework — an update
- Paintings from the Nationalmuseum. Sweden
- Building a rich media experience with the Europeana API and IIIF
- Metadata aggregation of IIIF Resources at Europeana: status and plans — IIIF | International Image Interoperability Framework
- https://iiif.io/apps-demos/#image-viewing-clients
- IIIF in Manuscriptorium
- IIIF and the Europeana mission
- Opening Digitized Newspapers Corpora: Europeana's Full-Text Data Interoperability Case
- LISTSERV 16.0 - EUROPEANA-TECH Archives
- About | IIIF Collections of Manuscripts and Rare Books
- Results of 2018 EuropeanaTech survey

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- "IIIF: Unshackle your images." MW2016: Museums and the Web 2016. Published February 24, 2016. Consulted August 24, 2020. Available here.

- IIIF presentation, Karin Glasemann, Nationalmuseum, Sweden (available on request)

Appendix 2 - Outcome Harvesting methodological approach

Methodology

1. Map the users of the Outcome Harvest and stakeholder identification

We followed the Outcome Harvesting approach to map the *change agent* (those who would initiate change), identifying an *inner circle* of Europeana Foundation and partners who would be most appropriate to consult. The *primary users* of the Outcome Harvest would be EuropeanaTech, IIIF, Europeana Foundation, and the *audience* would be the Europeana Foundation and initiative, European Commission, and broader CHI sector.

2. Define the research question

What was EuropeanaTech's role in encouraging the implementation of the IIIF framework between 2015 and 2020?

3. Map the outcomes

Task: find any outcomes (e.g. cases of implementation that relate to Europeana's activities) in documentation, and articulate these according to the outcome description framework. See Appendix 3 for a template outcome harvesting framework.

a. Document review (see appendix 1)

We were looking for something that describes, or suggests, a change that occurs in an organisation as a result of an activity by EuropeanaTech relating to the implementation of IIIF. It should be quite full - a who, what, where, when, and how description.

The review brought up further issues with the very nature of EuropeanaTech, primarily its informal structure and overlapping nature with other aspects of Europeana's work. We were able to find a number of organisations who were involved in the implementation of IIIF in some way and thus referenced in the documents review. However, we only found one outcome to investigate further.

b. Consultation with relevant partners to capture outcome examples

The EuropeanaTech *inner circle* were invited to contribute observed outcomes, through a google doc that was created to elicit structured information about any potential change. The goal was to find sufficient verifiable outcomes with which to answer the research question. Outcomes must be related directly to a 'who' - that is, there is someone with whom the outcome can be verified.

We set out a preliminary Outcome Harvest framework (see Appendix 3). We asked the respondents to:

- Describe an observable change in the behaviour, relationships, activities or actions of a CHI influenced by the activities and outputs of EuropeanaTech over the past 4-5 years. *Who changed, what, when, where, how?*
- Define what and how EuropeanaTech contributed, namely to specify the activity, processes, products and/or services that you consider that influenced the outcome. The link did not need to be linear, or direct, and EuropeanaTech is unlikely to be the only influence. They were asked to note the other influences, when these are known.

Respondents fed back that proved too time intensive and that it was complex to respond to the framework given. We then scheduled interviews with the consulted stakeholders.

i. Interviews

We interviewed seven stakeholders across the identified *inner circle* in five interviews lasting each between 1 hour to 1.5 hours. These stakeholders were as follows:
- IIIF representatives (Glen, Meg, Josh)
- Europeana R&D (Antoine and Nuno)
- Europeana Newspapers (Clemens)
- Sound and Vision (Erwin), EuropeanaTech lead (Greg)
- David Haskiya (former Technical Director, Europeana Foundation)

Interviews proved to be an easier way to introduce the consultees to the methodology. Though it reconfirmed the challenge of the complexity of the research question, we found one further outcome to investigate in the Outcome Harvest.

At the interview stage, we also asked a broader question that would inform an impact assessment: *in your own words, what is the value of the activity of EuropeanaTech over the last years?*
- What role has EuropeanaTech played (if any) in encouraging the implementation of the IIIF framework among CHIs in Europe?
- More broadly, what is the value (if any) of EuropeanaTech's role with regards to the development and implementation of IIIF?

c. Outcome Harvest review

As a result of the documentation review and the interviews, we found two verifiable outcomes. The next step was to review them to understand if they are SMART[7], and to consider what else were we told about the:
- Significance of the outcome,
- Collaboration with other social actors,
- Contribution of other actors and factors,
- History, context, and
- Evidence of impact on others, and so on.

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[7] Specific, measurable, achieved, relevant, timely

Only one outcome sufficiently SMART, and suitable for verification, after this step and the iteration step below.

d. Iterate

We reviewed the outcomes with different members of the EuropeanaTech inner circle. This meant that one of the two emerging outcomes was removed from our investigation.

4. Substantiate the outcomes with external stakeholders - those who it refers to

We proceeded with the one outcome that was deemed suitable for verification. We designed a process of getting feedback on this outcome. Though email 'agreement or disagreement' templates are often used, we proceeded with a digital interview, noting that this would add richer context and open up other data collection possibilities. We share the outcome with the interviewee in advance of the interview, in order to not bias the results.

5. Interpretation and analysis[8]

The interview data suggested that the outcome we progressed with was not suitable for verification. Therefore, there was no additional need for analysis relating to the Outcome Harvesting methodology. However, in terms of the interview data collected, we coded this and grouped it into themes, which are described in this report.

6. Use of the findings

The Outcome Harvest methodology suggests that all findings should be discussed internally, e.g. in a workshop setting, and the relevant partners should consider how it will influence future work.[9] It should also be communicated with full context to the intended audiences. However, as there were no outcomes found as a result of the Outcome Harvest, we could follow a simpler approach. After a draft of this report was created, it was shared with all of those who contributed throughout the process for their interpretation and use.

Reflection on the Outcome Harvesting methodology

- The validation process required us to substantiate assumptions but the lack of cases does not mean that these assumptions are false. Rather, we need to consider an alternative programme of research. The recommendations help move us forward in this regard.
- The identification of tangible facets of an outcome help us move beyond general outcomes statements. This is a valuable step.
- The iteration round was valuable in terms of making outcomes concrete, or for removing them from the validation list.

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[8] This process is informing the still developing Phase 3 (narration) of the Impact Playbook.
[9] This process is informing the still developing Phase 4 (evaluation and planning) of the Impact Playbook.

- A weakness is that the methodology drives focus on only several cases. However, the outcome creation, interaction and validation process, while they didn't lead to any substantiated outcomes, nonetheless provide pointers for where further investigations could be made in terms of understanding impact. This can be investigated in further research.
- The methodology can be combined with general interviewing practice, allowing other valuable insights to be gained.
- Trialling interview verification seemed to work well. In terms of relationship management, this allows the interviewer to ascertain whether the outcome was appropriate, before sharing it in full (or not, as relevant) for validation. Without this 'check' or iterative process, there could be some surprise or discomfort if the outcome presented was far from what the situation was felt to be by the validator.

Appendix 3 - example Outcome Harvest table

Respondents were shown an outcomes framework, namely this below.

Outcome (behavioural change by a stakeholder)	What did EuropeanaTech do? (contribution)	Significance (to the research question - what does it show?)
Specify **who** (the CHI) did **what** (that represents a change in their behaviour or existing practices), **when** and **where**. The **who** is important; the methodology requires us to go to that person/organisation and validate the outcome with them, understanding to what extent with the statement (completely, partially or not at all). *Example:* *On 5 December 2017, the vice-minister announced that the Ministry of Education had allocated a 50% increase of US$1 million for 2018-2019 to the National Fund for Leadership and Opportunities for Women (FLOW) to strengthen the rights and opportunities for women and girls.*	**How** did the activities of EuropeanaTech contributed to this outcome? It should be tangible to an specific activity, a time, a date, etc. *Example:* *Fund Now compiled research during 2016-2017 and published it in a briefing paper and in the June 2017 edition of Fund Now, that was used by an ad hoc group of five women in middle management positions within the Ministry of Education for internal lobbying for the replenishment of FLOW.*	**Why** is it important? Is it a big change for the organisation who changed their behaviour? Was there value for EuropeanaTech? *Example:* *This outcome demonstrates how a conference programme can lead to tangible changes in institutional policy and trigger change in processes*

Table 1. *Example outcomes framework for the EuropeanaTech and IIIF Outcome Harvest*

Appendix 4 - the Outcome Harvest

Outcome (behavioural change by a stakeholder)	What did EuropeanaTech do? (contribution)	Significance (to the research question - what does it show?)	Stakeholder for verification	Link to original source material
IIIF implemented Sitemaps in the IIIF framework in 2017, a move that would help CHIs to adopt IIIF	This was the result of Europeana R&D's work into understanding how Sitemaps (used by CHIs) could help CHIs implement IIIF. EuropeanaTech researched the application of Sitemaps within the IIIF framework based on their knowledge that this was used within many CHIs. They communicated this to the IIIF group through the Discovery taskforce they co-led (though one interviewee also suggested it might have been a driver for the creation of this group).	EuropeanaTech's direct connections to CHIs supported a technical development that made it more likely - and easier - that IIIF could be adopted by CHIs. It does not show that implementation happened as a result of EuropeanaTech/Europeana, just that it sets the context for easier adoption.	IIIF (in the end, this outcome was not put forward for verification)	Europeana Tech Insight #8
The Nationalmuseum found out about and adopted IIIF between 2016-2017. During a period of the museum's closure for renovation, the adoption of IIIF allowed them to have their entire digital collection available to the public in high quality on their own site and on Europeana.eu.	Europeana adopted IIIF and Europeana/EuropeanaTech promoted its wider adoption among EU CHIs. The Paris EuropeanaTech conference in 2015 was suggested to be the conference at which the Nationalmuseum became aware of or learned more about IIIF. There were posters and presentations that discussed the early implementation and exploration of IIIF. Europeana was also trusted as a partner of the Nationalmuseum. Europeana adopted IIIF, which encouraged others to adopt the framework. The personal connections to Europeana were suggested to have provided support and encouragement, and an opportunity to bounce-back ideas, as the Nationalmuseum has no digital department.	It shows an example of a CHI being inspired to adopt IIIF as a result of the activities of Europeana/EuropeanaTech. It creates the connection between their activities (exposure, promotion, adoption) and implementation of IIIF by a CHI.	Nationalmuseum, Sweden's museum of Art and Design	Interview (recording available)

Appendix 5 - Example substantiation introduction email

Dear <name>,

We are currently conducting an impact assessment on EuropeanaTech's role in supporting and encouraging the implementation of IIIF. We have been using a methodology that encourages the substantiation of any outcomes found with the stakeholders they refer to. When talking to <interviewee name>, they referenced that you and the <institution> would have valuable perspectives with regards to your own adoption of IIIF and the motivations that influenced this.

We'd like to chat with you informally over an online call that should last no longer than one hour.

<plan timeframe>

Many thanks in advance,

<name>

<the institution> had been encouraged to adopt IIIF as a direct or indirect result of Europeana Foundation's adoption and the promotion of IIIF amongst the EuropeanaTech community.

Appendix 6 - example substantiation (survey or email)

This was not used in our approach but is referenced here to give a complete overview of the methodological stages of Outcome Harvesting.

<<Insert outcome description>>
1. To what extent are you in agreement <that the outcome happened>?
    a. Fully agree
    b. Partially agree
    c. Disagree
    d. Comments, to explain your response

2. To what extent are you in agreement with the description of how <EuropeanaTech influenced the outcome>?
    a. Fully agree
    b. Partially agree
    c. Disagree
    d. Comments, to explain your response

Instructions to the organisers: collate the responses, allowing time for follow-up and reminders (approximately one month).

About the Europeana Impact Playbook

The European Impact Playbook is being developed for and with cultural heritage institutions around the world to help them design, measure and narrate the impact of their activities. It helps guide professionals through the process of identifying the impact that their cultural heritage institutions have, or aim to have, as the sector works towards creating a shared narrative about the value of digital cultural heritage.

Two phases of the Impact Playbook have been published alongside tools and a growing library of case studies. Phase one introduces professionals to the language of impact assessment and helps them make strategic choices to guide the design of their impact. Phase two builds on the design brief in the first phase and focuses on data collection techniques. Phases three and four are in development and will focus on how to narrate impact findings and evaluate the process taken.

Find out and join the Europeana Impact Community by going to **impkt.tools!**

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