



TOWARDS
A NATIONAL
COLLECTION



Arts and
Humanities
Research Council

INTERIM REPORT

FOUNDATION PROJECTS

PERSISTENT IDENTIFIERS AS IRO INFRASTRUCTURE

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The British Library | Royal Botanic Garden Edinburgh |
The National Gallery | University of Glasgow |
Victoria and Albert Museum | Science Museum Group |
Natural History Museum |

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Executive Summary

This is an interim report to AHRC on the *Persistent Identifiers (PIDs) as IRO Infrastructure* project. The project aims to increase the uptake and use of persistent identifiers for heritage collections to enable PIDs to serve as a foundational infrastructure for drawing together the national collection. It will deliver innovation by adopting a cross-disciplinary and cross-collections approach to the use of an existing technology.

As a largely digital project, we are fortunate that impacts on the project due to COVID-19 have been minimal. We are particularly fortunate that none of the project staff have been furloughed.

To date (December 2020) the project has delivered an initial set of investigations to understand how to take forward persistent identifiers as a core component of infrastructure in support of joining heritage collections together as a 'National Collection'. This interim report summarizes those project activities so far and the early findings and recommendations. It also provides a revised timetable and deliverables for the project, with an exploration of next steps. Full early findings can be accessed from <https://doi.org/10.23636/1214>.

Early findings are derived from: a survey of the sector; two webinars; two case studies; a demonstrator of PIDs in use to link between collections and research; and a literature review. These early findings have provided us a set of six recommendations for the project to take forward as next steps, as well as an additional three recommendations for later stages of Towards a National Collection (TaNC). There is also relevance to AHRC's evolving proposals for distributed infrastructure, particularly digital tools for remote access.

Abstract

Heritage organisations in the UK house at least 200 million physical and digital objects. Being able to uniquely identify these objects supports their discovery, use and curation - you cannot provide persistent or even consistent access to an item if you don't know what it is. Accession numbers are a key component in all collection and library management systems but these only cover selected objects within an individual collection. To fully realise the potential of our national collections, we need identifiers that can bring together collections across institutional boundaries.

Persistent Identifiers (PIDs) provide a long-lasting click-able link to a digital object. They are recognised by UKRI as a tool for enabling data discovery, access and citation. Supporting wider use of PIDs for collection objects, environments, specimens and related items will allow long-term, unambiguous linking that will create a digital National Collection. However, the challenges, utility and wider benefits of PIDs are not well understood across the heritage sector.

This project will bring together best practices in the use of PIDs, building on existing work and projects. We will share expertise and provide recommendations on an approach to PIDs for colleagues and institutions across UK heritage. Through a mixture of workshops, surveys, desk research and case studies, the project will answer questions such as 'What are the gaps in the existing PID landscape for heritage collections, buildings and environments?' and 'What should a PID infrastructure, strategy and governance framework look like for a unified national collection?'

Aims and Objectives

The project aims to increase the uptake and use of PIDs for heritage collections to enable them to serve as a foundational infrastructure for drawing together the national collection. It will deliver innovation by adopting a cross-disciplinary and cross-collections approach to the use of an existing technology.

In order to achieve this, it will also identify the organisational and cultural barriers that impact on the adoption of PIDs in the sector. In addition, we aim to help realise the additional benefits of PID use across collections such as improved usage metrics; network analysis of collections; and improved links to enriched or additional information and new perspectives on collections.

We will also produce a suite of resources including the final project report, videos and a demonstrator site that will provide ongoing support for the adoption of PIDs across the sector. These resources will be made available under licences that will encourage their sharing and re-use and contribute to the sustainability of the project outputs.

Questions posed by the project include:

- What are the benefits and implications of assigning and making use of globally unique and interoperable PIDs across national collections?
- What are the barriers to the wide scale adoption of PIDs within heritage institutions?
- What are the gaps in the existing PID landscape for cultural heritage?
- Are existing PID implementations scalable and sustainable at national level?
- What should a PID infrastructure, strategy and governance framework look like for a unified UK national collection?
- What should the strategic plan be for PIDs as part of SPF programme phase 2?

By working across sectors at local, regional and national levels we will identify key requirements for the use of PIDs within cultural heritage in the broadest sense. We will map these requirements to the existing PID landscape to develop recommendations that can be promoted to government, funders and other sectors.

The barriers to applying PIDs to heritage collections are poorly understood; we seek to explore and overcome those barriers. With a coherent set of recommendations on PID implementation for heritage, we hope to bring about a common approach that works with diverse approaches to cataloguing found across the sector. In this way we will deliver solutions that are scalable and provide sufficient benefit to users to ensure widespread adoption and long-term support.

We will develop case studies demonstrating the benefits of PIDs available to potential new users, to encourage and support take-up of the project recommendations. As we uncover these benefits, we will also demonstrate how PIDs can facilitate transparent and reproducible research in all domains, and the collection of metrics on collection use and visibility that can evidence decision making (e.g. on investment in digitisation).

Partnership Structure

The project partnership is formed of seven organisations. Six of the partners represent heritage IROs and the seventh is the University of Glasgow.

The project is led by the British Library, who is responsible for delivery of the project and its partners, in collaboration with the co-investigators and project partners. The British Library is responsible for project management and reporting; budgeting and funding distribution; and for recruitment of the Research Associate.

The co-investigators are staff from the Royal Botanic Garden Edinburgh (RBGE), National Gallery and University of Glasgow. Co-investigators are responsible for working with the PI and Research Associate to feed in their organisational and technical experience to the development and use of PIDs in their respective collections with a particular focus on the organisational challenges to PID implementation and adoption at scale. They will also work on the landscape analysis and technical framework of existing PID use and its future development across their sector as a whole in line with project aims. We are hoping that RBGE will still be able to host at least one physical workshop for IROs and heritage sector stakeholders across Scotland before the end of the project. The National Gallery will liaise with the PI on a number of concurrent EU H2020 funded projects exploring the use of PIDs within the documentation and dissemination of Heritage Science research data and ensure the project outputs are of relevance and mutually supportive to EU developments. The University of Glasgow will deliver the PID demonstrator and contribute expertise and insight to consultations on PID implementation and adoption in a variety of contexts, particularly relating to user expectations for access, discovery and use of collections enabled through PID infrastructures and review and contribute to draft reports, participate in workshops.

Project Partners for the project are the Victoria and Albert Museum (V&A), Science Museum Group (SMG) and Natural History Museum (NHM). They will each work with the Research Associate to feed in their organisational experiences and requirements for PIDs; attend planned workshops; and review the final recommendations prior to release. We originally planned for the Science Museum Group to host a workshop in the North of England, to facilitate a geographic spread for the workshop series as a whole, but since all early events have become virtual, this is unlikely to go ahead, although we will still plan to have a joint event with the *Heritage Connector* project. The NHM will be a vital link between the project and the EU-funded *Distributed System of Scientific Collections* Project (DiSSCo).

Staffing Structure

Staff carrying out responsibilities of the British Library are Rachael Kotarski (Head of Research Infrastructure Services as the Principal Investigator), along with the Research Associate, Frances Madden. Co-investigators are Lorna Mitchell (Head of Library & Archives, RBGE); Joseph Padfield (Conservation Scientist, National Gallery); and Prof. Roderic Page (Professor of Taxonomy, University of Glasgow). Staff from project partners responsible for their respective contributions are Richard Palmer (Senior Web Developer, V&A); Jack Kirby (Group Head of Collections Services, SMG); and Matt Woodburn (Science Data Architect, NHM).

Covid-19 Impacts

As a largely digital project, we are fortunate that impacts on the project have been minimal. We are particularly fortunate that none of the project staff have been furloughed. COVID impacts on *PIDs as IRO Infrastructure* have been in three areas: Physical meetings and collaboration; collaboration with the other TANC Foundation projects; and take up of the PID survey.

Two planned physical workshops for the project have to date gone ahead but in a virtual form. While in-depth discussion and collaboration may be affected by virtual rather than face-to-face meetings, in the early months of the project we were able to benefit from the switch to virtual in particular from

the attendance of non-UK colleagues and colleagues who otherwise do not have the time or resources to attend physically. Virtual meetings have been held in GoToWebinar¹ within the British Library’s corporate licence. Statistics on these events can be seen in [Events and consultations](#), below. We used project funds to purchase a licence for Mentimeter² to enable participation and input from large audiences. Mentimeter allows you to pose questions and polls to an audience and display results in real time to the group. Attendees participate through a browser window or smartphone, and the licence allows creation of Mentimeter slide sets with unlimited slides and questions. Examples of feedback obtained from Mentimeter can be seen in the annexes.

For the *PIDs as IRO Infrastructure* project, we had planned to collaborate across Foundation projects, in particular with *Heritage Connector*, *Practical applications of IIF*, and *Provisional Semantics*. While *Heritage Connector* has also had minimal delays due to COVID, the other two projects have been impacted to a greater extent which has impacted on the planned collaborative activities. To provide us with a period of meaningful collaboration, we have requested a 3-month no-cost extension.

Finally, the survey conducted in the early months of the project to understand the current status and awareness of PIDs across the sector did have a good take-up (with 66 responses). We left the survey open for considerably longer than originally planned due to the high levels of furlough, but there is still a concern that results may not be representative and so prevent a useful comparison between the start and end status within the project. We will highlight any potential disparities in our final report.

Revised Overall Programme

The programme of work for *PIDs as IRO Infrastructure* takes into account slightly adjusted dates of events and responses to COVID-19 impacts. It also includes work up to the end of a three-month extension (up to the end of January 2022). Milestones are also included for additional work identified within early results that will benefit the project and programme.

Start Date	End Date	Milestone Type	Detail
April 2020	April 2020	Deliverable	Webinar #1
May 2020	September 2020	Deliverable	Survey #1 Launched
July 2020	July 2020	Dissemination	Webinar #2 based on interim survey results
July 2020	December 2020	Dissemination	Case study #1 – British Library
August 2020	December 2020	Deliverable	Case study #2 – National Gallery
August 2020	October 2020	Deliverable	Interim report
June 2020	January 2021	Deliverable	Demonstrator tool: in beta
January 2021	February 2021	Deliverable	Project webinar #3. Online Workshop for Discovery phase applicants based on work to date
December 2020	March 2021	Deliverable	Case study #3 – NHM

¹ https://www.gotomeeting.com/en-gb/webinar?c_name=lmi&c_prod=g2w&c_cmp=products

² <https://www.mentimeter.com/>

March 2021	April 2021	Dissemination	Project webinar #4. First year of project summary. Consultation of 5* PIDs proposal
February 2021	May 2021	Deliverable	Case study #4 – RBGE
May 2021	August 2021	Deliverable	Video summarising best practices
July 2021	July 2021	Deliverable	Workshop – Edinburgh
July 2021	October 2021	Deliverable	Survey #2
September 2021	September 2021	Dissemination	Project webinar #5. Joint with other foundation project (IIIF)
December 2021	December 2021	Dissemination	Final event
November 2021	January 2022	Deliverable	Final report

Events and Consultations

Previous events

Event	Event date	Links	Attendees/ Responses	Note
Digitization and the State-of-the-art(world)	2020-03-05	Event summary Recordings	70*	Linked data in the arts
Project launch webinar	2020-04-06	Materials and recording	123	Project webinar #1
Research Data Alliance PID Interest Group	2020-04-09	Materials and recording	30*	
Project survey	2020-05-28	Summary data	66	
DataCite Summer Client Meeting	2020-07-15		34*	
Identifiers in Heritage Collections - how embedded are they?	2020-07-17	Materials and recording	93	Project webinar #2
National Gallery Scientific Consultative Group	2020-11-23	-	21	
Twitter	N/A	@HeritagePIDs	153	

* Figures are approximate

Future events

Event/Consultation name	Event date	Event link	Note
PIDapalooza	2021-01-27	https://www.pidapalooza.org/	Session accepted, " How to get heritage organisations to start using PIDs: a tale of two countries "
Project webinar #3	TBC		See: Revised programme
Research Data Alliance Plenary 17: PID Interest	2021-04-21	https://www.rd-alliance.org/rdas-17th-plenary-	

Group		<u>call-sessions</u>	
Project webinar #4	TBC		See: <u>Revised programme</u>
Project Workshop	TBC		See: <u>Revised programme</u>
End of project survey	TBC		See: <u>Revised programme</u>
Project webinar #5	TBC		See: <u>Revised programme</u>
Final event	TBC		See: <u>Revised programme</u>

Research Approach

The aims and objectives will be met by bringing together the holders and curators of heritage collections (from across the UK as well as select international organisations) to uncover the barriers as well as the existing best practices in the application of PIDs to collections. Workshops - which have now switched to virtual events, although we still hope to hold at least one face-to-face meeting - will be supported by desk-based research to identify best practice in relation to the use of PIDs in different sectors. In addition, in depth analysis in the form of case studies of the project partner organisations use and implementation of PIDs will be carried out. The initial findings of this research will be discussed and explored in the later events in order to create a set of recommendations that will be shared across IROs and holders of local, regional and national collections as a key building block towards a digital national collection.

Additional steps in the research approach are the inclusion of a sector-wide survey at the beginning and end of the project, allowing us to perform an early identification of current status and community needs. These also provide us with a benchmark that can be tested with the end-of-project survey to understand the progress made during the short project.

We will bring together best practices in the use of PIDs from a collection perspective, building on existing IRO work and expertise developed through research projects such as FREYA³ and DiSSCO⁴. Ultimately, we will provide a framework of recommendations on the approach to PIDs for colleagues across the UK heritage sector.

The broad domain coverage of the investigators and partners, and workshops with national and international representatives of wide user groups and usage types will provide the diversity needed to ensure that all outcomes are truly applicable across the sector.

Early Research Outputs and Results

The table contains a list of our project outputs so far.

³ <https://www.project-freya.eu/en>

⁴ <https://www.dissco.eu/>

Output	Link
Early Findings	https://doi.org/10.23636/1214
Persistent Identifiers at the British Library (Case Study)	https://doi.org/10.23636/1242
Persistent Identifiers at the National Gallery (Case Study)	https://doi.org/10.23636/1243
Annotate It! Demonstrator	https://github.com/rmpage/pid-demonstrator

Early Findings

The project has delivered an initial set of investigations to understand how to take forward persistent identifiers as a core component of infrastructure in support of joining heritage collections together as a ‘National Collection’. The Early Findings outline those activities to date and provide an overview of the awareness of PIDs across the sector based on the findings at this stage in the project. They also showcase the requirements of the sector and barriers to adoption we face. In turn, they aim to offer initial solutions to the challenges identified so far.

Survey

The PIDs as IRO Infrastructure Survey was launched on 28 May 2020 and remained open until 14 September 2020. The long response timeframe was deliberate, to accommodate responses from any staff who may have been on furlough due to the COVID-19 pandemic. The survey was designed with a series of questions which can be used for benchmarking the experience and familiarity within the sector. It is planned to issue the survey again in Summer 2021 to enable a comparison over time and allow us to see what impact the project has had. The final results will be included in the final report for the project.

Survey results suggest that there is awareness of PIDs as a technology, but the benefits of them to decision makers within the sector are currently unclear. Some more nuanced views also emerged around a lack of PID creation and management within the technical solutions which are in use by organisations. A graphical summary of survey results is included in [Annexes and links](#), Figure 1.

Webinars

The launch webinar provided an overview of the project, an example of a use of PIDs from the National Gallery and a potential application from the *Heritage Connector* project. The second webinar provided an overview of the interim survey results and a demonstrator developed by Professor Roderic Page from University of Glasgow. A panel discussion followed in response to the interim survey results. Both webinars were well attended and each received 187 and 136 registrations and 123 and 94 attendees respectively. An online feedback gathering tool, Mentimeter, was used during both sessions. The responses to the first webinar’s feedback are included in [Annexes and links](#), Figure 2.

The findings of the webinar are in line with the results indicated in the survey to an extent. There is some awareness of persistent identifiers, but implementations are for the most part, not mature, and the observed barriers to adoption are similar. The main discrepancy seems to sit with the difference in the perceived maturity of PID implementations and their use across organisations. This could be attributed to different cohorts responding in each case. Discussions in both events underlined the need to articulate the specific benefits of global uniqueness, resolvability and persistence for identifiers.

Demonstrator tool

The Annotate It! tool shows how PIDs can be used to understand where collections connect to research. The significance of this demonstrator is that neither the institutions managing those collections, nor the academic publishers hosting the articles need do anything to their existing web sites in order for the links to be discovered, the links themselves are stored in a separate database. So long as the collection objects have PIDs, and those PIDs are cited elsewhere (or if not the PID itself, something such as a catalogue number that could be mapped to a PID) then we can demonstrate links between collection objects and what the academic community is saying about those objects.

Case Studies

The project has completed two case studies, one for the British Library and another for the National Gallery. The key findings from the case studies emphasise an approach to implementing PIDs within lightweight middle-ware, which will allow uptake alongside critical strategic infrastructure.

Persistent Identifiers at the British Library describes the use of PIDs for content and metadata including the use of Archival Resource Key (ARK) identifiers for born digital and digitised materials, Digital Object Identifiers (DOIs) for datasets and publications and International Standard Name Identifiers (ISNI) used to assist with authority control, amongst others. It also covers the gaps where PIDs are still needed.

Persistent Identifiers at the National Gallery describes the pilot and production implementation based on Linked (Open) Data dereferenceable URIs for images and other entities associated with the National Gallery's collection of approximately 2,300 paintings including the use of a middleware solution which uses the PID as a mechanism to connect across different systems.

In an update to the National Gallery case study, there is now a working ARK system⁵, and so the National Gallery has identifiers that resolve in the global Name-To-Thing (N2T) resolver⁶. For example, <https://n2t.net/ark:/75927/0F6J-0001-0000-0000> redirects to <https://data.ng-london.org.uk/ark:/75927/0F6J000100000000>. This updated work will be included in a later blog post for the project.

We have been collecting 'mini case studies', short form exemplar work that sit outside of the planned formal case studies. The first of these is on the topic of Linked Conservation data⁷, and explores how PIDs will have benefits for conservation infrastructure and practice.

Literature Review

Much of the literature focuses on the benefits of PIDs to the sciences and to research communication. While there are fewer examples of PID use and research at heritage organisations, they do start to identify the specific benefits of PID use to the sector.

Conclusions and Recommendations

Our initial work within the first eight months of the *Persistent Identifiers as IRO Infrastructure* project indicates that there is an awareness of identifiers within some cultural heritage organisations, particularly independent research organisations. This is a positive finding as awareness of identifiers in itself is not the barrier to adoption we thought it may be. The biggest barrier to PID adoption appears to be a lack of ability to articulate the full value proposition of globally resolvable persistent

⁵ Archival Resource Key: https://n2t.net/e/ark_ids.html

⁶ <https://n2t.net/>

⁷ <https://tanc-ahrc.github.io/HeritagePIDs/LCD%20Blog.html>

identifiers for collection items. Without this value being clear, organisations will struggle to make the business case for implementation.

Where there is uptake of identifiers, this is not necessarily of identifiers that have third party governance or guarantees of persistence. It became clear from both of the case studies that the drivers for implementing PIDs were to address internal management of content as much as external use. For example, the British Library implemented ARKs to assist in managing the increase in digital and digitised collection items as a result of legislation requiring deposit of non-print material at the Library⁸. It may be that identifiers that are not globally unique and resolvable still support organisational requirements, and that may be enough for the meantime. But a full exploration of the additional benefits that externally governed PIDs would provide is needed to support those business cases.

Based on our early findings, we have formulated an initial set of 6 recommendations for the next 12 months:

- Recommendation 1: The value proposition of PIDs has been articulated, but needs to be addressed directly to decision makers within cultural heritage institutions. The *PIDs as IRO Infrastructure* project will create materials specifically for decision makers.
- Recommendation 2: In support of choosing appropriate identifiers:
 - A: the project will develop a description of broad institutional requirements, defined to a set of 4-5 levels of complexity and matched up to the features of various identifiers. This advice will build on the very early definitions contained in this report's List of identifiers.
 - B: Subsequently, the project will create guidance which will outline practical steps to help organisations move between these levels and work with PIDs that support more complex use cases.
- Recommendation 3: We strongly recommend that heritage organisations start to work with their system suppliers to ensure systems meet their PID-based requirements (as defined in Recommendation 2A).
- Recommendation 4: The project and IROs to continue to gather cost information on PID implementation, in particular across a more diverse sample of organisations.
- Recommendation 5: This project to offer some additional guidance to staff working with collections on how citation practices for heritage artefacts could be enhanced with the use of identifiers.
- Recommendation 6: Sector-wide governance and policies for PIDs should be investigated as an option to encourage uptake and to have a coherent approach to implementations and use of PIDs. The *PIDs as IRO Infrastructure* project will begin this work and make further recommendations on a sector-wide approach, but these will need to be tested and refined by TaNC's future Discovery Projects.

These recommendations partly give us further direction for the remainder of the project (Recommendations 1, 2, 4 and 5), but some require further work that cannot be achieved within the timeframe or scope of the project. To further this work beyond the project, particularly in support of Recommendations 3, 4 and 6, we propose that:

⁸ <https://www.legislation.gov.uk/ukxi/2013/777/contents/made>

- Recommendation 7: More IROs, higher education institutions and heritage organisations should implement policies on use of PIDs to support linking of items and their metadata across institutional boundaries, and identify a minimum technical passive provision for PIDs that future-proofs new tools and systems for their use.
- Recommendation 8: Where key strategic systems cannot be easily reworked for PID use:
 - A: the recommendation is for lightweight add on software which can be integrated alongside existing systems.
 - B: This may still be beyond the reach of smaller organisations with little or no technical capacity, and so shared infrastructure approaches in support of such organisations should be explored.
- Recommendation 9: The TaNC programme, in collaboration with IROs, heritage organisations, higher education institutions and future projects, should explore a sector-wide approach to identifiers that enables the benefits of wider take up, while respecting the diverse internal management needs and processes of organisations.

Next steps

Next steps for the project are largely outlined in the recommendations 1-6 from our early findings. The task of Recommendation 2, in documenting requirements and structuring against PID functionality, along with guidelines on how to move between levels, will likely lead to a tool for helping organisations decide which identifiers they require moving forward. This is a significant piece of work for the project to produce, and will require broad collaboration to ensure it is representative and genuinely helpful to the sector.

Recommendation 9 in particular will require further dialogue with AHRC regarding evolving proposals for distributed infrastructure. Beyond TaNC there is an opportunity to ensure persistent identifiers remain central to cross-domain research infrastructure and that uptake is not dependent on institutional size or research capacity.

We also have two further case studies to conduct for the Natural History Museum and the Royal Botanic Garden Edinburgh. Alongside these, we will continue to work on smaller-scale case studies of specific work to investigate or implement PIDs, which will be presented as blog posts.

Engagement will be a key task to ensure a dialogue between the project and the community. We propose to hold a webinar specifically in support of communicating early findings to groups invited to submit proposals for the Discovery phase of TaNC. We also hope to hold two hybrid events, workshops with in-person attendance to stimulate discussion, one of which will be in Edinburgh.

Work beyond the heritage sector also continues. In particular, the British Library is feeding into the Data Standards Authority's consultation⁹ on the use of DOIs across the UK government. Outcomes of decisions at a government level may also impact IROs. Vigilance of developments across the wider research infrastructure that increase benefits of PID use or influence decisions on which identifiers are recommended, may also impact the next period of the project. In particular, we are likely to see

⁹ <http://bit.ly/3r55c7t>

broader uptake of systems such as ROR and RAiD¹⁰. We will also provide our findings for wider UKRI and AHRC infrastructure consultations and development.

International engagement will ensure that UK use of PIDs is harmonious with peers globally, for instance with the approaches and recommendations coming out of the Netherlands¹¹. Our upcoming PIDapalooza session¹² will be in collaboration with Dutch Colleagues who created the PID Wijzer tool. As well as continuing to work with colleagues involved in the EU-funded DiSSCO project, the *European Open Science Cloud* will also use PIDs as foundational infrastructure¹³. This will provide an opportunity to ensure UK heritage collections and data are seen as key research tools beyond the UK. Not only will international collaboration help us to learn from each other, but use of PIDs to link between European collections will support knowledge sharing (without the need for data transfer) beyond Brexit.

Contacts

Any questions regarding the content of this report can be directed to Rachael Kotarski (rachael.kotarski@bl.uk). Any questions regarding the Annotate it! Demonstrator, should be directed to Prof. Roderic Page (roderic.page@glasgow.ac.uk).

¹⁰ Research Organization Registry: <https://ror.org/>; Research Activity Identifier: <https://www.raid.org.au/>

¹¹ <https://www.pidwijzer.nl/en>

¹² <https://sched.co/gD1s>

¹³ <https://doi.org/10.2777/926037>

Annexes and links

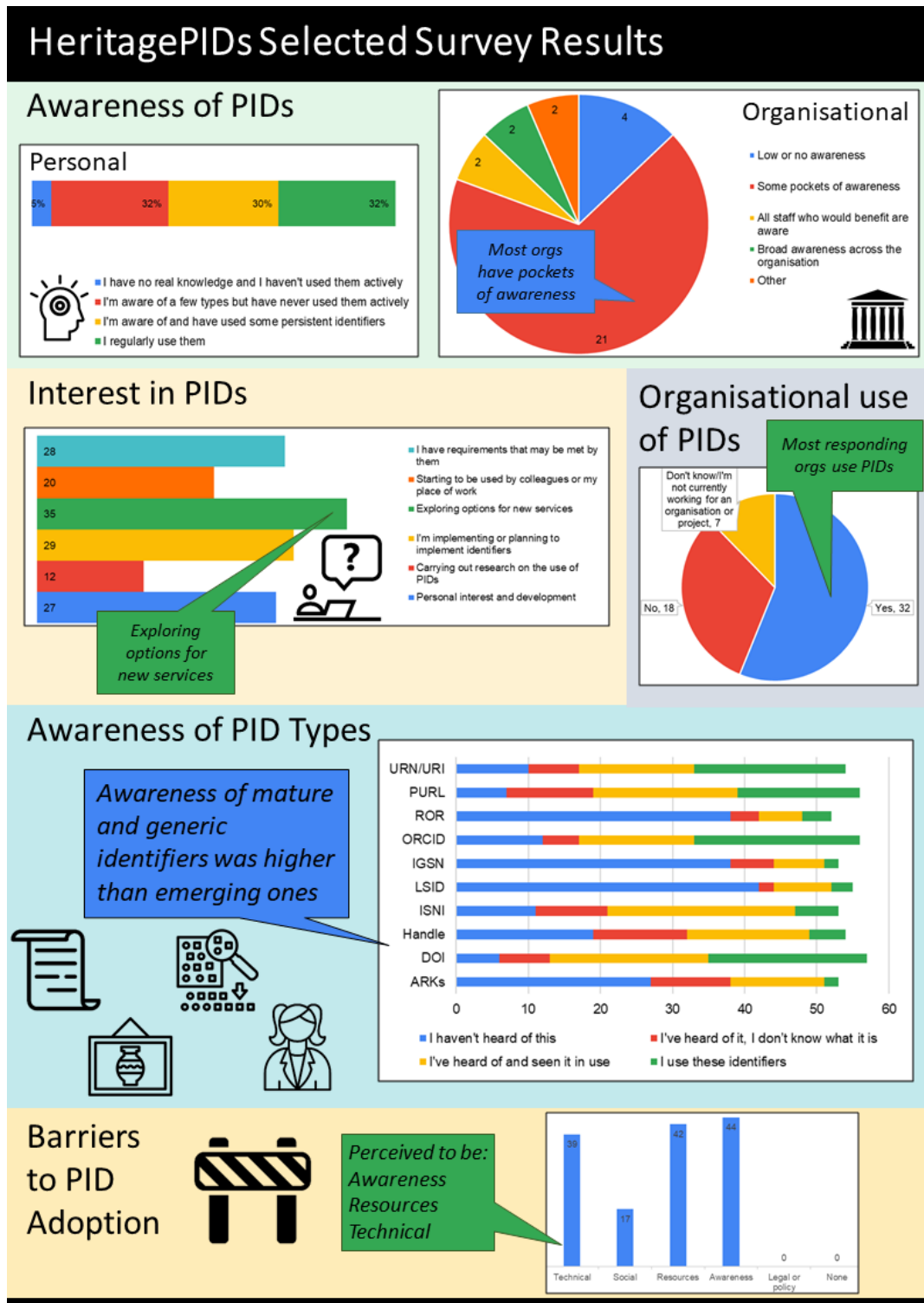
A video of the Annotate It! Demonstrator can be found on YouTube:

<https://www.youtube.com/watch?v=yrlskGRFKps>

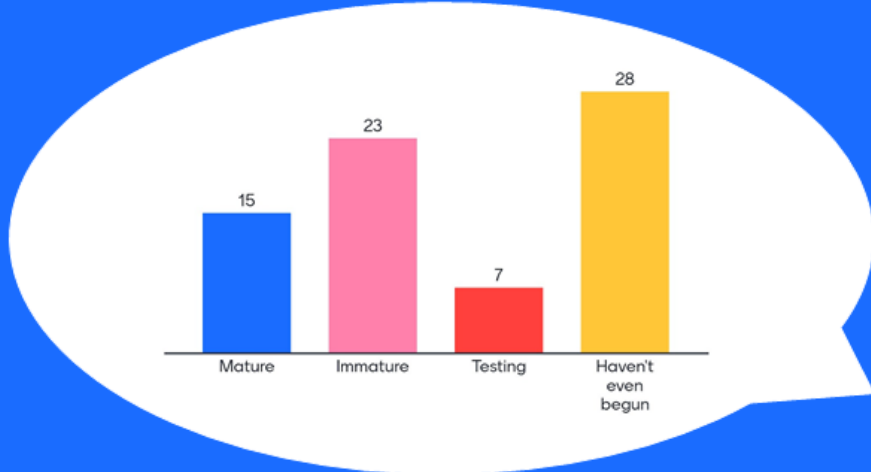
The following two pages contain, in order:

Figure 1. A graphical summary of the survey results.

Figure 2. A summary of results for questions posed at the launch webinar, held virtually on GoToWebinar on 6 April 2020.



What would you say is the state of PID use at your organisation?



Launch
Webinar
Feedback

Do you use any PIDs at your organisation?



What PIDs do you or will you use?

