



ICEDIG.EU

Innovation and consolidation for large scale digitisation of natural heritage

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Policy Component of ICEDIG Project Website

Deliverable D7.1



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Introduction

This report summarises the outputs of Deliverable 7.1 under Work Package 7 – the policy component of the ICEDIG project website. As described in Milestones 41-43, this deliverable comprises a dashboard showing outputs from the institutional policy analysis carried out in Task 7.1. This, along with further contextual information, has been embedded in a new section of the existing ICEDIG website (www.icedig.eu).

The overall goal of WP7 is to “examine national, European and international policy commitments, and best practices to help design a comprehensive actionable policy framework for the development and operation of the new infrastructure”.

This deliverable consolidates these aims by synthesising policy data and presenting it in an accessible way. The dashboards, alongside their descriptions and interpretations, provide a starting point for identification of common priorities and gaps between institutions. The web page also provides a platform where useful shareable policy documentation can be stored in the future, which may aid other institutions in their policy-writing decisions and strategies.

This report illustrates these additions to the website and describes future planned developments to the web content. The new policy area is linked to both from the front page of the website, and from within the “Deliverables” page. Direct links to the pages are as follows:

<https://icedig.eu/content/policy-analysis>

https://icedig.eu/content/policy_methodology

<https://icedig.eu/content/policy-data-descriptions-insights>



Task 7.1 institutional policy survey

Data collection

A survey to identify the policies relevant to natural science collections was sent out and completed by six ICEDIG partners (Naturalis, MNHN, APM, UTARTU, NHM, CETAF, RBGK). All participants completed the survey and, where applicable, provided relevant policy documents.

Key policy components within 16 policy areas were identified in order to create an analytical framework – these can be seen summarised in the visualisations. Each policy was analysed to identify the presence or absence of each component. Policies were received in a range of languages including English, French, Dutch and Estonian – therefore the possibility for interpretation error should be noted. Presence of a component was indicated with a boolean (yes/no) flag. In some cases, additional data from a controlled list was requested (e.g. types of data licenses). The data model (see Milestone 42) is set up to flexibly manage additions and changes to the component list as the survey is expanded.

An example of the survey template can be found here:

[Example WP7.1 Template](#)

The survey data was collected in Google Sheets, and Airtable was subsequently used to build a relational data repository. The data underlying the dashboards is currently held in a local database server at the NHM, London.

The dashboard is designed to highlight the following areas:

- institutional coverage within each policy category
- current status of policy documentation: complete, in draft, partially complete or not in existence
- a yes/no review for each institution on policy component existence filtered by policy category
- confidentiality of policy documentation

Further background

A full summary of the survey, methodology and results can be found in the following Milestone reports:

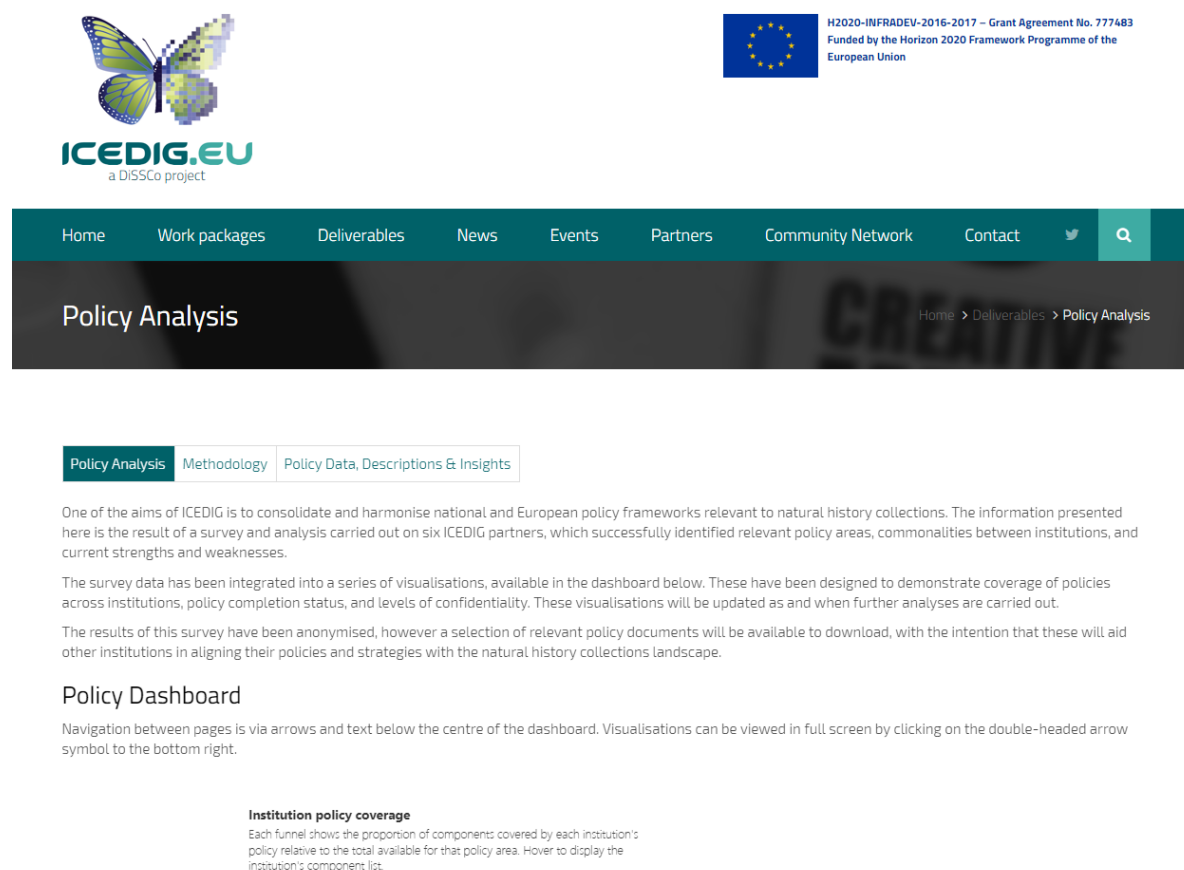
- Milestone 41 – Specification for the web database on policies
- Milestone 42 – Policies and legislation affecting collection holding institutions
- Milestone 43 – Common policy elements and institutional priorities of institutional digitisation strategies
- [Link to the full Power BI report](#)





Web pages



The website section is currently divided into three pages:

- Policy Analysis (Main page)
- Methodology
- Policy Data, Descriptions and Insights




ICEDIG.EU
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Policy Analysis Methodology Policy Data, Descriptions & Insights

One of the aims of ICEDIG is to consolidate and harmonise national and European policy frameworks relevant to natural history collections. The information presented here is the result of a survey and analysis carried out on six ICEDIG partners, which successfully identified relevant policy areas, commonalities between institutions, and current strengths and weaknesses.

The survey data has been integrated into a series of visualisations, available in the dashboard below. These have been designed to demonstrate coverage of policies across institutions, policy completion status, and levels of confidentiality. These visualisations will be updated as and when further analyses are carried out.

The results of this survey have been anonymised, however a selection of relevant policy documents will be available to download, with the intention that these will aid other institutions in aligning their policies and strategies with the natural history collections landscape.

Policy Dashboard

Navigation between pages is via arrows and text below the centre of the dashboard. Visualisations can be viewed in full screen by clicking on the double-headed arrow symbol to the bottom right.

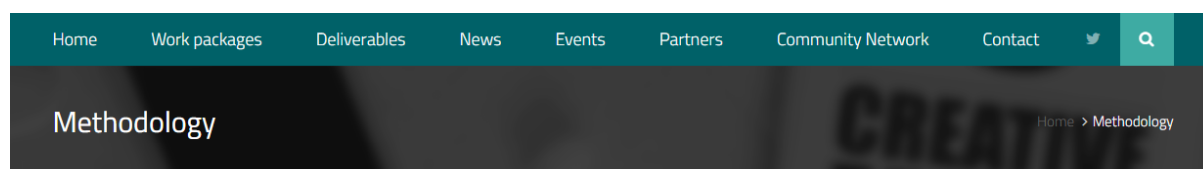
Institution policy coverage
Each funnel shows the proportion of components covered by each institution's policy relative to the total available for that policy area. Hover to display the institution's component list.

Figure 1 - Policy Analysis Homepage (<https://icedig.eu/content/policy-analysis>) 31.07.2019

This page summarises the work done under Work Package 7 Task 7.1. It features a full embedded version of the 6-page Power BI report created from the WP7 policy survey data, allowing the user to browse the visualisations.

Each page contains links to the other pages within the section to allow for ease of navigation.





Policy Analysis **Methodology** Policy Data, Descriptions & Insights

To date, the survey has been completed by six ICEDIG partner institutions. It is intended that this will be expanded in the future to more participants within and outside of the project consortium. Existing data may also be updated where applicable.

The policies examined have been assigned to three broad categories:

- Data management
- IT strategy and policy
- Collections strategy and management

A list of policy subjects within each category was identified, and a further set of key components was defined through a review of documents provided by the NHM London and discussion with relevant stakeholders. This provided an initial structure with scope for expansion once documentation from all participants had been reviewed.

To allow quantitative comparisons between institutions, and to allow the questionnaire to scale up to wider participation, responses to the more granular components were restricted to either a yes/no flag, or a value from a controlled list. Policies were received in a range of languages including English, Dutch, French and Estonian. In some cases documents were interpreted using Google Translate. The possibility for interpretation errors should therefore be noted.

The following documents provide further methodological information:

- Milestone 42 - Policies and legislation affecting collections-holding institutions
- A full list of policy subjects and components

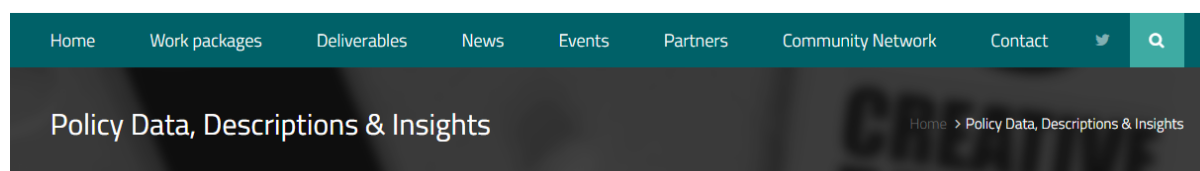
Future Developments

The results from this work will be further developed under another DISSCo-linked project, SYNTHESYS+ (Synthesis of Systematic Resources). Work under the Networking Activities will seek to streamline and simplify communication around policy requirements and best practices, and guidance will be developed on implementing policy mandates within institutions. Policies relating to digitisation and access will also be harmonised in relation to DISSCo and other EU frameworks. More information about SYNTHESYS+ can be found on the project website.

Figure 2 - Summary of the survey methodology (https://icedig.eu/content/policy_methodology) 31.07.2019

This page provides a brief summary of the survey methodology so that it can be quickly referred to by anybody using the dashboard. The description is kept brief for presentation and readability purposes, but a link is provided to Milestone 42 to allow the user to read a more in-depth description of the methodology.





Policy Analysis | Methodology | **Policy Data, Descriptions & Insights**

A more detailed description of each visualisation and the associated data is available on this page. Possible insights and interpretations of the information are also discussed.

The following documents provide further contextual information:

- Table of policy subjects and related components
- Milestone 42: Policies and legislation affecting collection-holding institutions
- Milestone 43: Common policy elements and institutional priorities of institutional digitisation strategies

Visualisations can be viewed in full screen by clicking on the double-headed arrow symbol to the bottom right. Also, underlying data for some visualisations can be viewed by right-clicking the graph and choosing "Show Data".

Policy Data & Descriptions



Figure 3 - Data, descriptions & insights page (<https://icedig.eu/content/policy-data-descriptions-insights>) 31.07.2019

Here the individual visualisations from the Power BI report are split out and separately embedded. Each visualisation remains interactive so that users can view the underlying data, or hover over the charts to see further information. Each chart can also be expanded to view in 'Focus Mode'. Further descriptions of the data are associated with each visualisation. This information is contained in an accordion for visual simplicity.



Dashboards

The Power BI-generated visualisations summarising the Task 7.1 survey data were first reported in Milestone 43. Prior to their publication on the website these visualisations were reviewed, and some amendments were made to optimise their representation of the underlying data.

An image of each featured visualisation is shown here alongside the accompanying website text, as they appear on 31 July 2019.

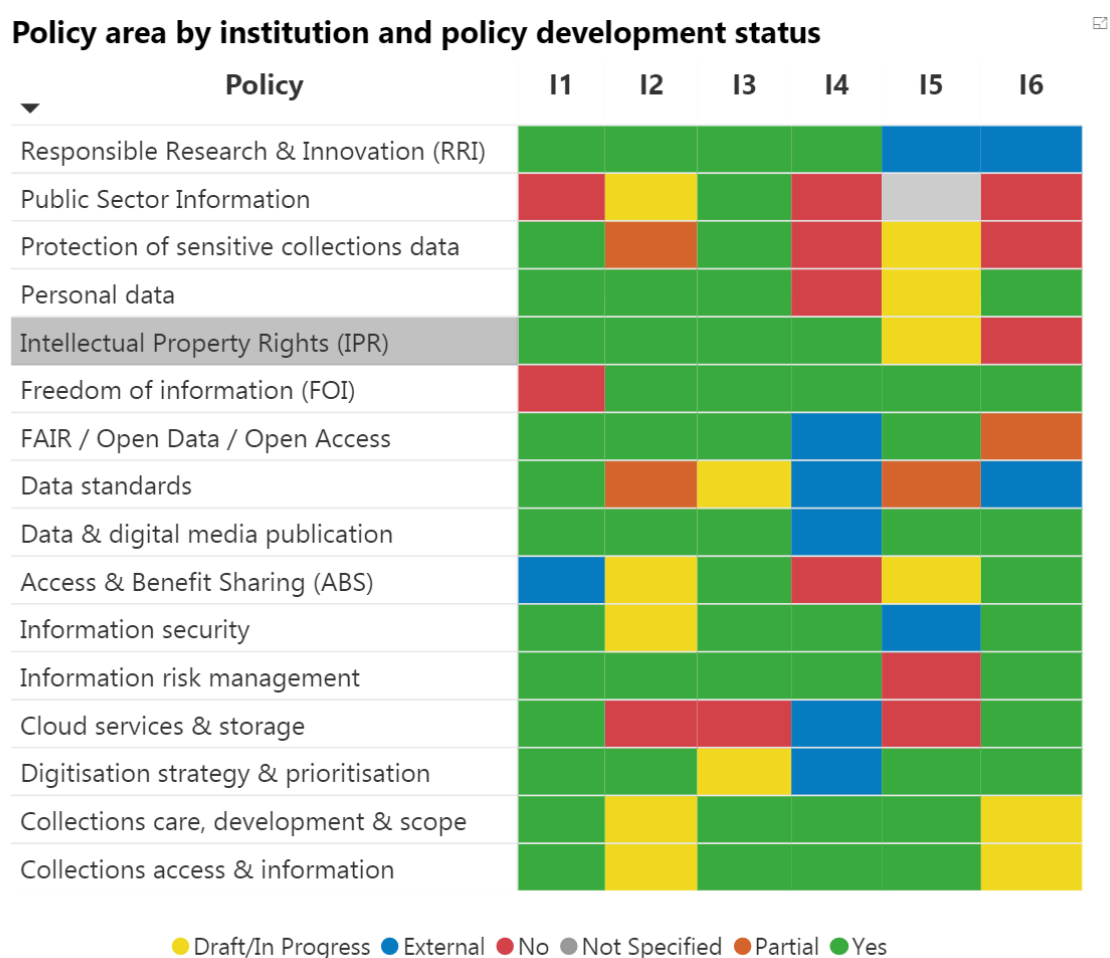


Figure 4 - Policy development status

Web text: "This illustrates the completion status for each policy subject within each institution ('Yes'), and also indicates where external policies are applied to a subject area ('External') - 4/6 institutions implement at least one external policy. In some cases, policies are in draft stage or are only partially implemented.

Policies are listed absent or not specified in only 14% of cases. Future updates to the survey data may help to indicate the rate of progression in those policies which are currently under development."



Policy category by development status

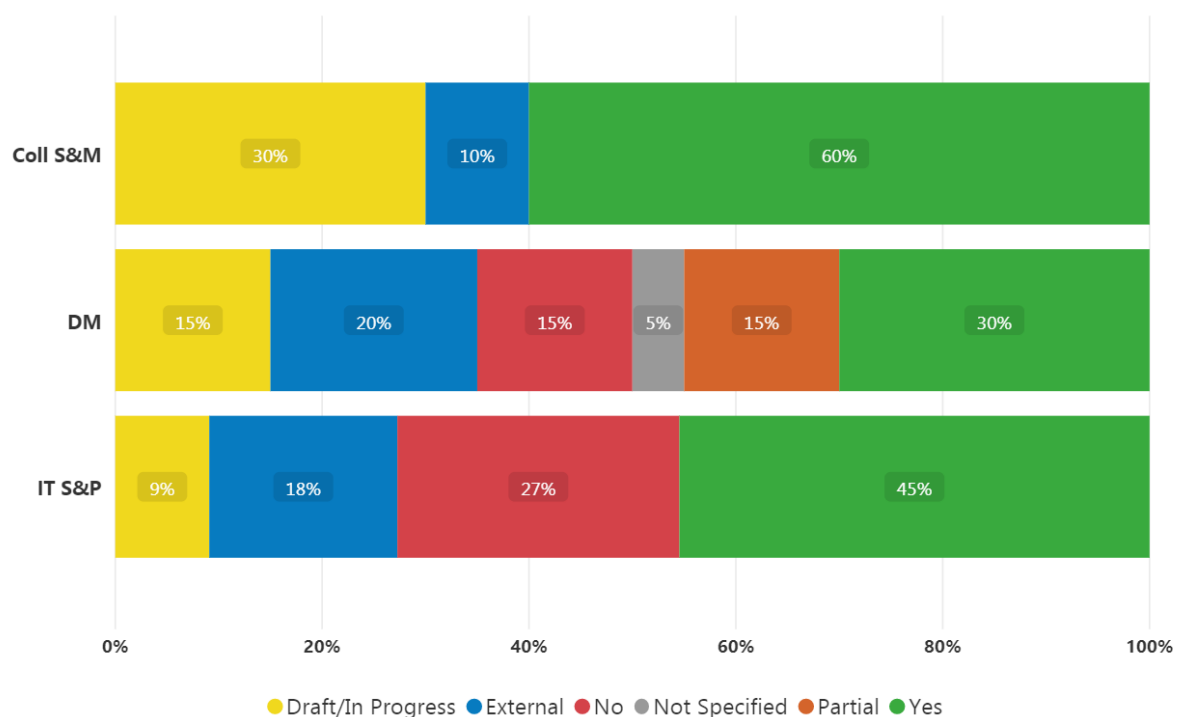


Figure 5 - Policy Category & Status

Web text: "This visualisation illustrates a greater proportion of external policies within Data Management (20%), and IT Strategy and Policy (18%). We can also see a higher policy completion rate within Collections Strategy & Management (60%) and the lowest within Data Management (30%)"



Interactive component map

Component exists: ● No ● Not Specified ● Yes

Policy component	I1	I2	I3	I4	I5	I6
Permits	● No	● Yes	● Yes	● No	● No	● Yes
Oversight and governance	● No	● No	● Yes	● No	● Yes	● No
Living collections	● No	● No	● Yes	● No	● No	● No
Limitations on collecting	● No	● No	● Yes	● No	● Yes	● No
Interventive conservation	● No	● Yes	● Yes	● No	● No	● No
Field collecting and preparations that restrict use	● No	● No	● Yes	● No	● No	● No
Disposal	● No	● No	● Yes	● No	● Yes	● No
Destructive and invasive sampling	● No	● Yes	● Yes	● No	● No	● Yes
Conservation in the field	● No	● No	● Yes	● No	● No	● No
Collections development goals and prioritisation	● Yes	● Yes	● Yes	● No	● Yes	● No
Acquisitions	● No	● Yes	● Yes	● Yes	● Yes	● No
Access and benefit sharing	● No	● Yes	● Yes	● No	● No	● Yes

Filter by policy

Collections care, development & scope	Access & Benefit Sharing (ABS)
Collections access & information	FAIR / Open Data / Open Access
Digitisation strategy & prioritisation	Freedom of information (FOI)
Cloud services & storage	Intellectual Property Rights (IPR)
Information risk management	Data & digital media publication
Information security	Data standards
Personal data	Public Sector Information
Responsible Research & Innovation (RRI)	Protection of sensitive collections data

Figure 6 - Interactive Policy Component Map

Web text: "This visualisation allows for interactive exploration of the presence/absence of policy components within each institution and by policy subject.

It should be noted that in some cases where an institution has listed a policy as 'present', none of the individual policy components within that subject were identified in the analysis (for example - Institution 5 and FAIR/Open Data/Open Access).

Two policy components were identified for all participants: Curation and GDPR. The following components are almost universally covered by 5 out of 6 institutions:

- Attribution & Citation
- Collections development goals and prioritisation
- Copyright
- Default license(s) for 2D images
- Default license(s) for collections data
- Digital licensing
- Incoming & Outgoing Loans
- Object Entry
- Publicly Available Data & Digital Media
- Visitor Access

The majority of these sit under Data & Digital Media Publication - within this subject area, 6/10 components are represented by 5 of the 6 institutions. Access & Benefits Sharing (ABS) issues are also well-covered in the majority of surveyed institutions."



Institution policy coverage

Each funnel shows the proportion of components covered by each institution's policy relative to the total available for that policy area. Hover to display the institution's component list.

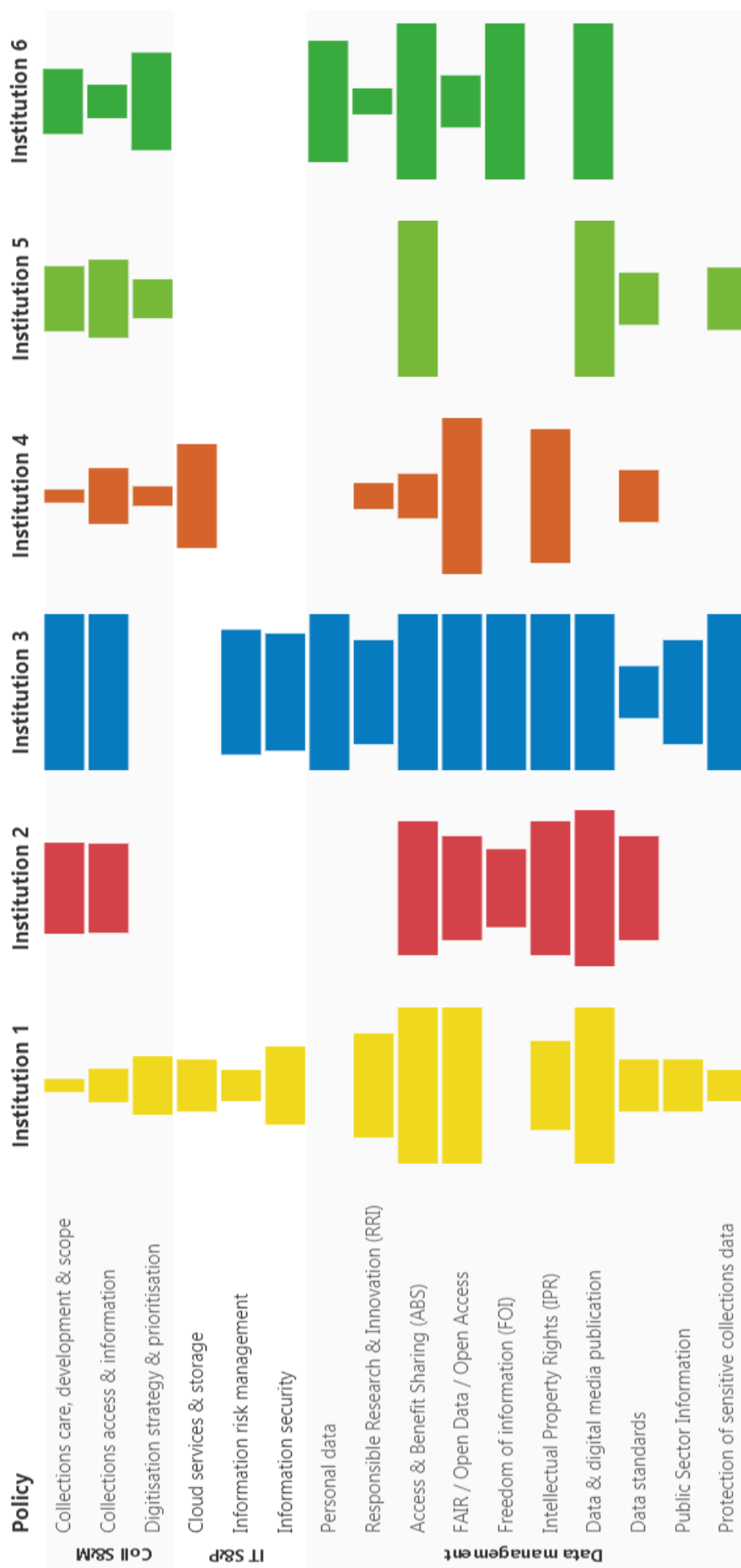


Figure 7 - Institutional Policy Coverage



Web text: “This illustrates the comparative proportion of policy components per subject covered by each institution. It shows significant variation in how comprehensively the subject areas are addressed by each participant. However, it should be noted that many of the individual policy components were identified from a review of documents from institution 3, thus explaining the higher overall coverage. Despite this, there are some areas which show notably greater coverage in the majority of cases, such as Access & Benefits sharing. Areas with consistently lower coverage include Digitisation Strategy and Prioritisation, and Public Sector Information.”

Policy visibility

The chart below shows the proportion of each institution's policies that are accessible internally and externally. Hover for policy list.

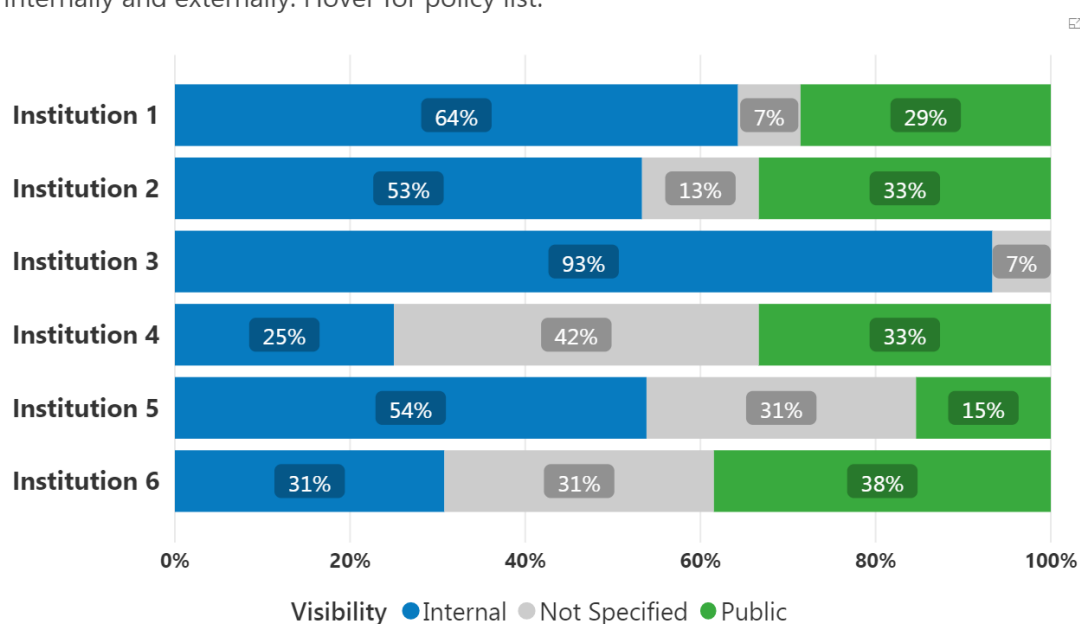


Figure 8 - Policy visibility

Web text: “These graphs illustrate the shareability and accessibility of these policies present at each institution. In this case, **shareability** refers to whether policies can be shared with peer institutions. **Accessibility** refers to whether policies are visible in the public domain.”

“Shareability of policies varies widely, with 64% of one institution's known policies unshareable, and 93% shareable in another. Whether shareable policies are also publicly shareable is not fully identifiable, although can be inferred for some policies through the 'visibility' data below.”

Shareability of policies

The chart below shows the proportion of each institution's policies that can be shared with peer institutions. Hover for policy list.

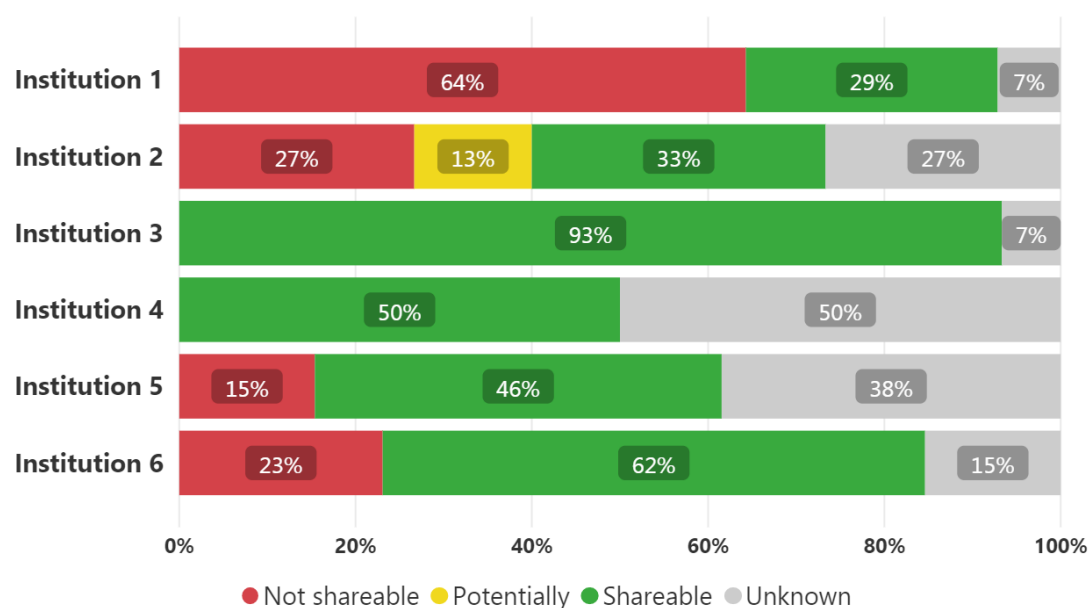


Figure 9 - Policy shareability

“Shareability with peer institutions does not always correlate to public visibility: here we can see that institution 3, with 93% policies shareable, has exclusively internal visibility. Whilst institution 2 has 33% public visibility and 33% peer shareability, this does not refer to the same policies. Overall, the degree of known public visibility is low, ranging from 15-33%.”



Further development

These web pages have the potential for development and expansion to incorporate outputs from future tasks and other work packages. Suggestions for possible additions and improvements are outlined here.

Documentation

In order to provide more useful, contextual information alongside the policy survey data, we intend to add a page which contains links to relevant policy documentation. The data collected in the survey allowed us to assess peer-to-peer shareability of policy documents in participating institutions, as well as current public visibility, however it did not specify which policy documents were publicly shareable (if not currently visible). Therefore, some further investigation needs to be carried out to establish which policy documents are publishable on a public-facing web page.

This page may also contain links to governmental and national policies, and/or community standards, such as:

- Access & Benefits Sharing (ABS) Code of Conduct (CETAF)
- CITES Convention
- General Data Protection Regulation
- RCUK Good Research Conduct Policy

Wider survey participation

It is intended that the policy survey will eventually be completed by a wider range of institutions. This will help to further enrich the data and may also lead to expansion of the policy component list. The dashboards will be updated where new data becomes available. The survey will also be carried forward into work done under SYNTHESYS+ Networking Activity 2, which will expand upon the results of ICEDIG WP7 to aid institutions in the implementation of policy mandates through best practice guidance.

WP7 Task 7.2 outputs

As stated in the Work Package description, this area of the site will also eventually be expanded to contain the outputs of Task 7.2. This task – “the development of a common digital research agenda” – aims to do the following:

- Extract digital components of institutional digitisation strategies across ICEDIG, CETAF and DiSSCo to analyse common institutional priorities
- Summarise the technical capacities of digitisation centres within ICEDIG participants, through completion of another survey on digitisation capacity and digitisation policy
- Carry out a series of workshops which will identify a common digital collections strategy across participating institutions, identifying prioritised collections and suggesting provisional centres of excellence.



At the time of writing, several of the above activities are complete or in progress, and the outputs are due to be added to the website by Month 26 (February 2020).

