Collaboration to Clarify the Cost of Curation

D2.5—Project Communication Plan

Deliverable Lead:	Digital Preservation Coalition (DPC)
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Author(s):	Sarah Norris (DPC)
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The 4C participants are:

Participant organisation name	Short Name	Country	No.
Jisc	JISC	UK	1
Det Kongelige Bibliotek, Nationalbibliotek Og Københavns Universitetsbibliotek	KBDK	DK	2
Instituto de Engenharia de Sistemas e Computadores, Investigação e Desenvolvimento em Lisboa	INESC-ID	PT	3
Statens Arkivers	DNA	DK	4
Deutsche Nationalbibliothek	DNB	DE	5
University of Glasgow	HATII-DCC	UK	6
University of Essex	UESSEX	UK	7
Keep Solutions LDA	KEEPS	PT	8
Digital Preservation Coalition Limited by Guarantee	DPC	UK	9
Verein Zur Förderung Der IT-Sicherheit In Österreich	SBA	AT	10
The University of Edinburgh	UEDIN-DCC	UK	11
Koninklijke Nederlandse Akademie van Wetenschappen -Knaw	KNAW-DANS	NL	12
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Author(s):	Sarah Norris (DPC)

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External Links

Note: Many of these documents are dynamic and will be changing throughout the lifetime of the project. Where possible a link has been provided to a snapshot of the document referred to at the time of publication along with a link to current version.

Link	URL	
Project Website	**Current**	http://4cproject.eu/
Shared Engagement Opportunities spread sheet	**Snapshot**	http://4cproject.net/?attachment_id=298
	Current[*]	https://docs.google.com/spreadsheet/ccc?key=0ApI22IWpyBZXdDBUU2RYTEFWTXNHN0pMV19DSl81MVE
Project glossary	**Snapshot**	http://4cproject.net/?attachment_id=302
	Current[*]	https://docs.google.com/spreadsheet/ccc?key=0Au2-xr2TAgEKdEJZN2tRZmRzcEplclBtNkMtZ3g1alE
4C Project Google group	**Current**[*]	https://groups.google.com/d/forum/the4cprojec
Blog schedule	**Snapshot**	http://4cproject.net/?attachment_id=300
	Current[*]	https://docs.google.com/spreadsheet/ccc?key=0ApI22IWpyBZXdEFyNXlqc3p5dVQ5elJVcmkwanYyYlE
P Wheatley Blog	**Current**	http://openplanetsfoundation.org/blogs/2012-06-29-digital-preservation-cost-modelling-where-did-it-all-go-wrong
Standard Abbreviations	**Current**	http://www.britarch.ac.uk/sites/www.britarch.ac.uk/files/node-files/signposts_archpub_3rded.pdf

*Accessible only to collaborators

Executive Summary

There is a sizeable canon of research into cost modelling for digital curation but the research is in many ways preliminary and there has been little uptake of the tools and methods that have been developed. The main objective of the 4C project is to ensure that, where existing work is relevant and provides a useful, useable resource, stakeholders realise and understand how to employ those resources. An additional aim of the work is to examine more closely how they might be made more fit-for-purpose, relevant and useable by a wide range of organizations operating at different scales in both the public and the private sector.

This Project Communications Plan sets out the strategy and communications activities designed to achieve this objective for the 4C Project. Derived directly from the aims outlined in the Description of Works (DoW), the plan and the activities outlined herein, aim to:

- engage with identified stakeholders to gain their commitment to working collaboratively on the 4C project;
- inform stakeholders of the benefits which may be derived from collaborating on the 4C project;
- inform the identified stakeholders of existing work which has been undertaken in the field of cost modelling for digital curation, and how they may use these resources for their own purposes;
- provide a strategic framework for two way communications between the project and its stakeholders throughout the lifetime of the project;
- encourage debate and comment between all stakeholders, supporting development and updates within the field of curation costs;
- facilitate the development and production of the roadmap as well as all other deliverables for the project.

Underpinning the communications plan is the expectation that communication is 'everyone's responsibility'.

This document outlines the key messages which are to be considered in all communications issued by all partners, and provides an analysis of the stakeholders to whom these messages are directed and the channels identified for their delivery; specifically for:

- Internal Communications,
- External Communications, including communication with other EC-funded projects, and
- Communications with the EC.

The project will run for 24 months from 1 February 2013, and communications activities are planned throughout this period.

The implementation of this plan will optimise stakeholder engagement and to maximise the inputs to the project. Successful implementation will see a building of stakeholder trust in the project, and a reassurance of the potential benefits 4C can deliver.

1   Introduction

The 4C Project objectives will be achieved by a coordinated programme of outreach and engagement that will identify existing and emerging research and analyse user requirements. This will inform an assessment of where there are gaps in the current provision of tools, frameworks and models. The project will support stakeholders to better understand and articulate their requirements and will clarify some of the complexity of the relationships between cost and other factors. The outputs of this project will include various stakeholder engagement and dissemination events (focus groups, workshops, and a conference), a series of reports, the creation of models and specifications, and the establishment of an international Curation Costs Exchange framework. All of this activity will enable the definition of a research and development agenda and a business engagement strategy which will be delivered in the form of a roadmap.

4C is classified by the European Commission as a 'Coordination Action'. As such it is different from many of the large collaborative initiatives which have come before. 'Coordination Actions' are not funded to undertake primary research, but to assist the coordination and networking of existing projects, programmes and policies. This has two implications for 4C. Firstly it is a relatively small and relatively short-lived project that makes the most of existing research and adds to it, allowing partners to share and compare know-how rather than inventing new ways to consider the problem. Secondly, 4C is by its nature an outward-looking project that seeks to engage a large and diverse number of stakeholders. Consultation and participation—communication—is a repeated theme.

As a 'Coordination Action,' with an emphasis on this critical theme of communication, the fulfilment of the project objectives are, therefore, the responsibility of all project partners. Where specific deliverable tasks have been allocated, however, these are highlighted throughout the Project Communications Plan.

The Project Communications Plan identifies all the channels, audiences, information and content to be disseminated by the project. It will align key messages for different audiences, the frequency with which communications will take place, milestones for communications, quality controls and performance indicators, as well as responsibilities for undertaking these activities.

The EC project officer will be specifically invited to make recommendations and provide contacts to other projects in the drafting of this plan. This will optimise the impact and utility of 4C, contribute to the development of the other projects, and help to counter fragmentation across a large and expanding research community.

2 Objectives

This Project Communications Plan sets out the activities designed to achieve the communications objectives for the 4C Project. The statement of principle behind the Project Communications Plan is to facilitate access to collaborative tools that anyone can use, in the knowledge that information is shared without commercial exploitation.

2.1   Statements of objective

Recognizing that costs underlie virtually any Research and Development (R&D) initiative and deployment, this Coordination Action will start from a cost-analysis based perspective which will identify and share:

- considerations concerning cost/risk/investment driven R&D in numerous research projects in the field of digital curation, as well as research results achieved by different communities that can influence or be reused within digital curation;
- experiences in the range of investment needed for a range of stakeholders, for sustaining on-going curation activities;
- cost drivers and business plans underlying current service provision models in the field of curation for a range of stakeholders.

in order to:

- enhance stakeholder understanding of the complex relationship between costs, risks, value, sustainability and various other factors that shape investment decisions;
- propose business and service models that meet the needs of various stakeholders, both on the customer, as well as supplier side;
- identify core cost drivers and desired R&D activities to reduce the impact of costs or the likelihood of risks occurring, optimizing the overall investment;
- develop a better understanding of the emerging market in digital preservation, its size, opportunities, and consequences/effects on required research, development and training.

Derived directly from the 4C project objectives, the plan and the activities outlined herein, therefore aim to meet this statement of principle and specifically to:

- engage with identified stakeholders to gain their commitment to working collaboratively on the 4C project;
- inform stakeholders of the benefits which may be derived from collaborating on the 4C project;
- inform the identified stakeholders of existing work which has been undertaken in the field of cost modelling for digital curation, and how they may use these resources for their own purposes;
- provide a strategic framework for two way communications between the project and its stakeholders throughout the lifetime of the project;
- encourage debate and comment between all stakeholders, supporting development and updates within the field of Preservation Costs;
- facilitate the development and production of the roadmap as well as all other deliverables for the project.

The fulfilment of these objectives and the application of an 'open and social' communications model will ultimately facilitate the achievement of the main 4C project objectives by engaging users in sustainable dialogue throughout the lifetime of the project.

2.2 Measures and Indicators

Aligned with the project's classification as a 'Coordination Action,' the ethos of the project is to achieve the outlined objectives in an 'open and social' environment, which aims to engender the collaborative spirit required for the project's success.

The achievement of the objectives will be measured as follows, using both quantitative and qualitative indicators:

2.2.1 Quantitative Measures

Quantitative measures have been calculated using 4C Project members' knowledge of the stakeholders that form the target audience for engagement, as well as the demand for the information the project will make available.

To this extent, we have taken into account the size of the membership of key networks who are 4C partners as well as the usual participation (in the region of a few hundred interested persons) registered in recent digital preservation international open events (conferences, EC information days) and the benchmarking with the actual results of projects of comparable characteristics.

Measure	Indicator
Establishment of Project website* *All requests for information and comments through the website will be captured and reported against this measure as an indicator of stakeholder feedback.	By month 1 Features of the project website are described at Section 6.4 – Project Website.
Number of stakeholders engaged for consultation on the project	>23 (≥5 per group) by month 6
Number of stakeholder workshops and seminars held	As outlined in DoW
Number of conferences/events where 4C is featured or presented	Attendance at events identified within the Shared Engagement Opportunities spreadsheet: http://4cproject.net/?attachment_id=298 (these events are exemplary, and to be updated throughout the project)
Items of publicity material developed	Project pop-up Banner Project poster — By month 6 Project flyer/leaflet

Measure	Indicator	
Number of project meetings held and reports published	As outlined in DOW	
Blogs published	1 blog post per week on website	
Twitter	>250 followers end of year 1 250 tweets per year	>500 followers end of year 2 250 tweets per year
Hits on website	>250 visits per month end of year 1	>500 visits per month end of year 2
Meeting milestone dates for deliverable	As outlined in DoW	

Table 1—Quantitative Measures and Indicators

2.2.2 Qualitative Measures

The focus of the 4C Project will be to engage with the right organisations and individuals who fully represent each identified stakeholder group, rather than skewing the project results through an imbalance in one particular area. The workshops and focus groups will be events which focus on qualitative results; managing to facilitate an effective exchange of findings and knowledge with targeted and informed audiences rather than addressing "the masses".

Event evaluations will be held during and following each focus group and workshop session to capture and analyse the 'value' or the 'quality' of the content, and the results derived from these particular 4C project communications activities.

Furthermore, blogs and other publications made available through the 4C Project website will be analysed to monitor reach through 'most popular' lists as well as numbers of tweets on each post.

3   Key Messages

3.1   Nature of the message

The Project Communications Plan aims to use messages which are benefit led and tailored to each of the audience groups outlined in Section 4—Stakeholders and Audiences.

By conveying messages that are of significant value, stakeholders will be encouraged to offer attitudinal and behavioural responses. The effectiveness of any single message is dependent on a variety of issues. From the stakeholder's perspective, two elements are significant:

- the amount and quality of the information that is communicated; and
- the overall judgment that each individual makes about the way a message is communicated.

The style of the 4C messages should therefore reflect a balance between the need for information and the 'enjoyment' in consuming the message.

As the target audiences are largely from the archiving and curatorial communities within the public sector, it may be generally assumed that benefit led messages should be 'rational' or factual in nature.

Even when engaging with private sector stakeholders, individuals within this group are likely to consider the very collaboration desired by the project as a high-involvement decision, especially given the nature of the information they may be asked to share. In this instance the emphasis of the message should be on the information content, in particular the key attributes and the associated benefits and fact-based.

3.2   Message content

The project will tailor messages for each audience group, but all communications issued by any member of the project team should reflect one of the following four key messages:

- strategic opportunities for revenue, efficiency gains, better decision making, greater transparency and organisational distinctiveness may be achieved through effective digital preservation.
- value through long term access to digital assets may be provided through proper funding and investment in digital preservation.
- resources to support the process of cost modelling for data preservation will be made available, through collaborating and information sharing between stakeholder groups;
- shared information relating to the costs and benefits of digital preservation, and used to facilitate the availability of cost modelling tools, will be used without commercial exploitation;

The channels through which these messages will be conveyed, to optimise 'enjoyment,' are outlined in Section 5—Internal Communications, Section 6—External Communications and Section 7—Communications with the European Commission (EC).

3.3 Message timing

The delivery of the four key messages will be phased throughout the duration of the project as follows:

Early stages	Who we are and what we do • strategic opportunities for revenue, efficiency gains, better decision making, greater transparency and organisational distinctiveness may be achieved through effective digital preservation. • value through long term access to digital assets may be provided through proper funding and investment in digital preservation.
Middle stages	Participation, debate, emerging findings • resources to support the process of data preservation will be made available, through collaborating and information sharing between stakeholder groups; • shared information relating to the costs and benefits of digital preservation, and used to facilitate the availability of cost modelling tools, will be used without commercial exploitation;
Final stages	Dissemination, legacy, recommendations • resources to support the process of data preservation will be made available, through collaborating and information sharing between stakeholder groups;

Table 2—Phases of message timing
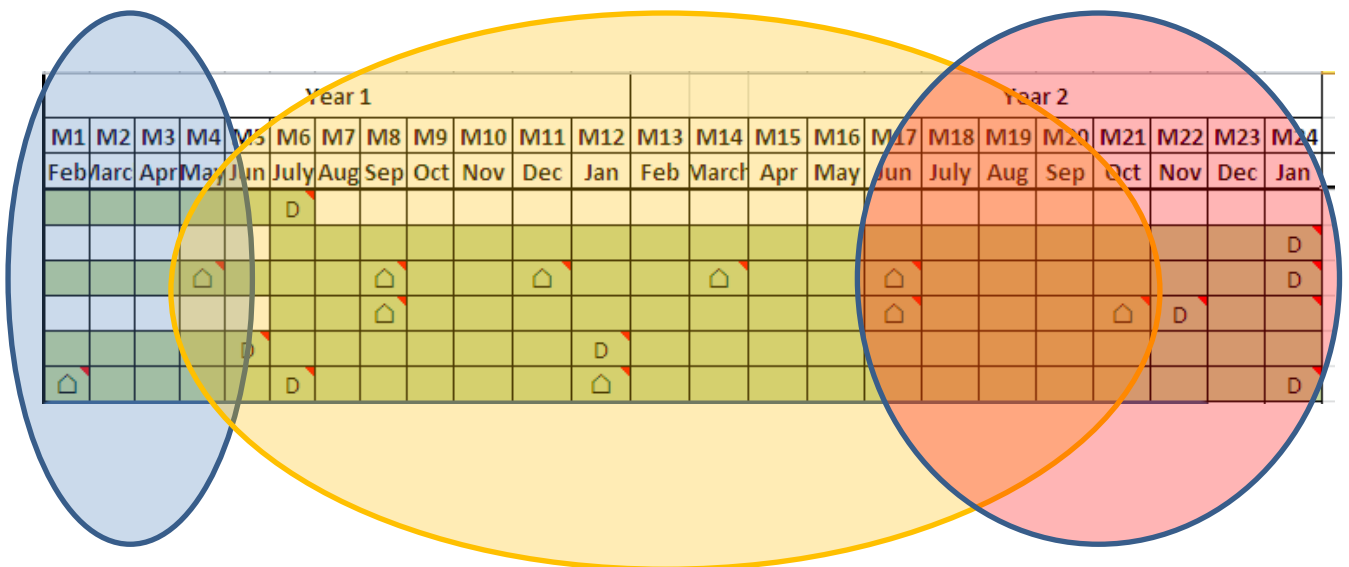
Figure 1—Message Calendar, demonstrating message timing

3.4   Managing message consistency

All project partners are responsible for maintaining consistency with the messages outlined above when conveyed verbally. Standard terminology for the project has been developed, defined and contained within the glossary which may be found on the Google Drive. http://4cproject.net/?attachment_id=302 shows a snapshot of the Glossary at the time of printing.

The 4C project assumes that reports and other major deliverables will have persistent identifiers. As DPC (Project partner #9) is hosting the website, 4C will adopt the rules in force for publications from the DPC.

The appearance of all written or published messages must also conform to the 4C Style Guide, which is attached as Appendix 1—4C Project Style Guide, and adapted from the DPC's own guidelines.

4 Stakeholders and Audiences

4.1 Segmentation

The target audiences for the communications arising out of the 4C Project may be broken down into internal and external stakeholders, and within these groups into the following segments:

	Communication requirements
4C Project Partners	Project Information Management; Project Progress reporting; Meeting Schedules; Coordination of Reports to the European Commission.

Table 3—Internal Audiences

Communications with the EC will be addressed in Section 7—Communications with the European Commission (EC).

External target audiences for 4C are broad for such a small project. The development of the Project Stakeholder Registry is currently in progress and is the responsibility of KEEPS (Project Partner #8). At present[1] the target audiences include the following groups:

Audience	Characteristics	Communication requirements
Research funders	Institutions that provide funding for scientific research.	What value is expected from projects in terms of data outputs? What strategic actions are needed to realise this?
Cost model experts	Institutions that have developed and/or implemented a digital preservation cost model.	Engaging to capture experiences with the costs and benefits of preservation and demonstrate how these might be optimised. Assessment of the information they would be willing to share?
Big data science	Institutions for scientific research that deal with large amounts of data, e.g. space and high-energy physics research.	Engagement to assess the tools currently in use and/or what tools might they like to see used?
Digital preservation vendors	Companies with products in the area of digital preservation, e.g. storage vendors, software providers.	Engaging to capture experiences with the costs and benefits of preservation and demonstrate how these might be optimised. Assessment of the information they would be willing to share?

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[1] The target audiences are regularly re-assessed by the project.

Audience	Characteristics	Communication requirements
Universities	Higher education institutions with responsibility for maintaining digital collections	Gauge extent to which the costs of curation are understood and whether enhanced use of tools and models would assist with long-term planning
Government agencies	Public administration institutions that must maintain data for long periods of time, e.g. central banks, medical records, police, health care, cartography, local authorities.	What economic or strategic value would they like to get from data beyond its initial creation and use? What regulatory or policy change is needed to release greater value or drive down costs?
Publishers & content producers	Publishers of books, scholarly materials, media and related services. Audio, video, and document producers.	Engaging to demonstrate the perceived value of data they create and how this value is made real.
Data intensive industry	Companies that deal with a great amount of data, e.g. aviation, space, bioinformatics, cartography, automotive, banks & finance, pharmaceutical, defence industry.	Engagement to assess the tools currently in use and/or what tools might they like to see used?
Memory institutions and content holders	Institutions in which the main mission is to preserve cultural heritage, e.g. national libraries and archives.	Engaging to demonstrate the perceived value of the data they use and how their actions add to it.
Small medium enterprises	Enterprises that are legally or operationally compelled to maintain data for long periods of time, e.g. escrow services.	Engagement to assess the tools currently in use and/or what tools might they like to see used?
Media	Organisations concerned primarily with broadcast, print and digital media with a corresponding audience.	Engagement for communication of the project to a wide and interested audience
Miscellaneous Contacts	Relevant contacts to be addressed in the initial consultation but do not fit easily in the stakeholder group contacts	To be determined—potentially a combination of all previously listed requirements.

Table 4—External Audiences

Once complete, the management of the Stakeholder Registry will become the responsibility of HATII-DCC (Project Partner #6).

Using the Stakeholder Registry, the 4C Project will engage with the identified representatives of each stakeholder group for consultation and information exchange during the project. The groups identified in the list above will also form the target audience for communications throughout the project process and

post project completion, in order to inform them about the resources which may be made available as a result of the 4C Project activities.

4.2   Stakeholder Analysis

The categorization of stakeholders helps to define the types of stakeholders that the project should focus on. For each category, an assessment of the difficulty in reaching the stakeholder is provided with the impact that the 4C project will have towards that particular community. The combination of these assessments results in a final score that allows the prioritisation of effort within the project to reach those communities. High scores represent a priority prospect which may be reached with ease and create maximum impact, low scores represent prospects which are hard to reach and may derive little from the project (Table 5).

The difficulty and the impact are evaluated according to the following scale:

- Low, with a numeric value of 1
- Medium, with a numeric value of 2
- High, with a numeric value of 3
- The final score is given by the formula:

$$Score = Impact \times (4 - Difficulty)$$

Stakeholder category	Description	Difficulty	Impact	Score
Research funders	Institutions that provide funding for scientific research.	Low	High	9
Cost model experts	Institutions that have developed and/or implemented a digital preservation cost model.	Low	High	9
Big data science	Institutions for scientific research that deal with large amounts of data, e.g. space and high-energy physics research.	Medium	High	6
Digital preservation vendors	Companies with products in the area of digital preservation, e.g. storage vendors, software providers.	Low	Medium	6
Universities	Higher education institutions with responsibility for maintaining digital collections	Low	Medium	6
Government agencies	Public administration institutions that must maintain data for long periods of time, e.g. central banks, medical records, police, health care, cartography, local authorities.	Medium	Medium	4
Publishers & content producers	Publishers of books, scholarly materials, media and related services. Audio, video, and document producers.	Medium	Medium	4

Stakeholder category	Description	Difficulty	Impact	Score
Data intensive industry	Companies that deal with a great amount of data, e.g. aviation, space, bioinformatics, cartography, automotive, banks & finance, pharmaceutical, defence industry.	High	High	3
Memory institutions and content holders	Institutions in which the main mission is to preserve cultural heritage, e.g. libraries and archives.	Low	Low	3
Small medium enterprises	Enterprises that are legally or operationally compelled to maintain data for long periods of time, e.g. escrow services.	High	High	3
Media	Organisations concerned primarily with broadcast, print and digital media with a corresponding audience.			
Miscellaneous contacts	This category holds contacts that seem relevant and should be addressed in the initial consultation but do not fit easily in the stakeholder group contacts	?	?	?

Table 5—Prioritized list of stakeholder categories

This table is to be updated following the completion of the Stakeholder Registry.

4.3   Focus of Communications Activities

In his blog, Paul Wheatley[2] identifies some of the reasons why an organisation might want to estimate digital preservation costs:

- Build a new repository from scratch—plan and budget for it,
- Add new collection to our repository—can we afford it?
- Evaluate/refine/compare lifecycles between organisations,
- Outsource your digital preservation or do it in house?
- How much to charge for providing a preservation service to clients?

Within each of the identified stakeholder groups, it is the executives within their organisations, as well as decision makers, policy makers, and leaders across the board who are concerned with these problems, and so it is that these individuals are the focus for communications activities.

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[2] Wheatley, P 2012 'Digital Preservation Cost Modelling: Where did it all go wrong?' Open Planets Foundation, weblog post 29 June 2012, http://openplanetsfoundation.org/blogs/2012-06-29-digital-preservation-cost-modelling-where-did-it-all-go-wrong, accessed 24 April 2013

5 Internal Communications

Internal communications are the responsibility of the Work Package 1 (WP1)—Project Management Team, and will be used to facilitate the development and production of the roadmap as well as all other deliverables for the project. The identified channels for effective internal communications are as follows:

- Day to day communications
- Project Meetings
- Reporting

5.1 Day to day communications

In addition to individual emails and phone calls, the project has set up a Google group for project emails; the4cproject@googlegroups.com is also accessible by invited participants at:

> https://groups.google.com/d/forum/the4cproject

Messages can be posted to the group via email or through a web interface. At present all participants are members of the group. All messages sent to the group go to all members as individual emails whenever they are posted (members can change this setting on an individual basis). Messages sent to the Google group can also have attachments, but members should consider if sending a link to a shared document might be a better option.

At the time of writing leaders for Work Packages 2 and 3 have also set up smaller mailing lists for their sub groups as follows:

> 4c-wp2-@googlegroups.com

the4cprojectWP3@googlegroups.com

A similar group has been set-up for the Advisory board.

> 4c-advisory-board@googlegroups.com

Messages from the Google group are easy to identify, they are from the4cproject@googlegroups.com. Project Partners are still encouraged to prefix 4C relevant messages with "[4C]" and the appropriate Work Package number to help others rapidly identify messages about the project (and filter them if filtering is being employed).

4C uses two basic sharing platforms, a shared development area and a repository area. Project partners use Google Docs for files under development and to use Dropbox as a repository. In addition, published materials will be made available on the project website.

Google docs allows multiple users to work on a Google document at the same time, has built in version control and also allows commenting. It can also be used off-line when implemented in conjunction with Google drive. Dropbox allows updates to be propagated to all users effortlessly.

5.2   Project Meetings

Meetings fall into one of two types; face to face and online (virtual)[3]. Face to Face meetings occur at various times in the project and are generally planned well in advance. On-line meetings will normally take the form of Skype (or similar) audio conferences.

When using Skype one participant should be nominated to take contemporaneous on-line notes in the Instant Message (IM) window and one participant—the nominated recorder—should be identified as being responsible for producing the official record. These two roles don't necessarily need to be the same person. These notes should consist of key points/questions/actions (actions should be time bound—to be done by a particular date). All participants are encouraged to add their own comments in the IM window as the meeting progresses and to keep their own record, especially of actions that fall under their auspices. After the meeting the nominated recorder should write up and circulate the notes to all involved (especially people who were unable to attend).

All participants at *all* meetings are expected to supply their own notes to the nominated recorder in a timely fashion[4] after the meeting to enable them to be incorporated into the official record.

A current programme of meetings has been established as follows:

Month	Date	Meeting and Location
1	12 -13 February	Project kick Off Meeting, Lisbon
2	20 March	Management Co-ordination Group, Virtual Conference (VC)
3	15 April	Project Board Meeting, VC
4	8 May	Management Co-ordination Group, VC
5	12 June	Management Co-ordination Group, VC
6	2-3 July	Project Meeting, Frankfurt
7	14 August	Management Co-ordination Group, VC
8	11 September	Management Co-ordination Group, VC
9	14 October	Project Board Meeting, VC
10	13 November	Management Co-ordination Group, VC
11	11 December	Management Co-ordination Group, VC
12	21-22 January	Project Meeting, Location TBC

Table 6—Year 1: Internal Meeting Schedule

Month	Date	Meeting and Location

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[3] Occasionally, face to face meetings will also have virtual participants when circumstance have prevented an "attendee" from traveling.

[4] Normally within 5 working days

Month	Date	Meeting and Location
13	TBC	Management Co-ordination Group, Virtual Conference (VC)
14	TBC	Management Co-ordination Group, VC
15	TBC	Project Board Meeting, VC
16	TBC	Management Co-ordination Group, VC
17	TBC	Management Co-ordination Group, VC
18	TBC	Project Meeting, Location TBC
19	TBC	Management Co-ordination Group, VC
20	TBC	Management Co-ordination Group, VC
21	TBC	Project Board Meeting, VC
22	TBC	Management Co-ordination Group, VC
23	TBC	Management Co-ordination Group, VC
24	TBC	Project Meeting, Location TBC

Table 7—Year 2: Internal Meeting Schedule

All meetings will have an agenda circulated beforehand and minutes/notes will be circulated after the event. The agenda and notes (and associated meeting resources such as presentations, documents, etc.) will be published in the appropriate folder on Dropbox.

5.3   Reporting

The project team will generate quarterly 'Interim Time/Expenditure and Communications Reports' as a means to provide progress updates against the programme and the budget. This will be managed by the WP1 Lead as part of the Project Management activities, and will require all project team members to submit their timesheets to the Project Manager in the month prior to the report's delivery date, or as instructed e.g. for report to be issued on 31st May, timesheets to be submitted by 10th May.

The following schedule for reports has been established:

Month	Date	Report
4	31 May 2013	Interim time/expenditure and communications report – to end April 2013
7	31 August 2013	Interim time/expenditure and communications report – to end July 2013
10	30 November 2013	Interim time/expenditure and communications report – to end October 2013

Table 8—Year 1: Internal Reporting Schedule

Month	Date	Report
13	14 February 2014	End of period time/expenditure report due – to end January 2014
14	31 March 2014	Project review Month
16	31 May 2014	Interim time/expenditure and communications report – to end April 2014
19	31 August 2014	Interim time/expenditure and communications report – to end July 2013
21	30 November 2014	Interim time/expenditure and communications report – to end October 2013
24	14 February 2015	End of period time/expenditure and communications report due – to end January 2015

Table 9—Year 2: Internal Reporting Schedule

6 External Communications

The 4C project is designed explicitly to maximise two way communications between the project team and a large range of external stakeholders. External communications are the responsibility of *all* Project Partners.

The project team has judged that the active engagement of a large number of stakeholders is of more value to the success of the project than revenue generation. The outputs of the project will support planning and procurement of services in the long term but are not likely to be exploitable in financial terms. Non-commercial outputs will include:

- community development and relationship building;
- knowledge transfer and exchange;
- new methodologies to understand costs, benefits and economics of preservation including an 'Economic Sustainability Reference Model;'
- refinement of enquiry and research agenda;
- case studies of cost modelling from commercial and industrial communities not currently well represented in digital preservation;
- a Curation Cost Exchange (CCEx);
- refinements in preservation planning;
- refinements to advocacy, executive briefing and training through empirical evidence.

4C is aware that the questions it raises are international in scope. External communication to achieve these outputs has therefore been planned with explicit consideration of how best to engage an international stakeholder community, and will use the following channels:

6.1 Communication and information exchange with EC-funded and other projects and organisations

Based on their own activities which address costs as part of digital curation, the 4C project has identified the following EC-funded and other projects, with which to exchange information:

- APARSEN
- PrestoPRIME
- SPRUCE
- DigCURV
- SCAPE
- TIMBUS

The full list of projects with which the 4C Project will engage will be finalised as part of the Stakeholder Registry development exercise by KEEPS (Project Partner #8).

6.2 Stakeholder focus groups and workshops

Stakeholder engagement activities will be managed by the WP2—'Engagement' Lead DNB (Project Partner #5) unless otherwise specified, and are split into two broad groupings:

- 'Formative and Consultative Activities' - which will progress through the life of the project and be used as a two-way information exchange between the project and the wide range of stakeholders;
- 'Summative Dissemination Activities' - dissemination activities which represent the settled views of the project. These are addressed in Section 6.8—Reports.

4C places a particular emphasis on interaction with stakeholders throughout the project because we believe this adds quality and credibility to the final outcomes as well as building momentum for them. Planned 'Formative and Consultative Activities' or 'Tasks' (T) include:

- Interviews with stakeholders (T 2.3)
- Focus group meetings (T 2.3)
- Outreach workshops (T2.4)
- Public consultation on roadmap (T 5.1—to be managed by Jisc, Project Partner #1)
- Conference workshop session on roadmap (T 5.—to be managed by Jisc, Project Partner #1)

A schedule of Focus Groups and Workshops is outlined below:

Month	Date	Event and Location
8	6 September 2013	Focus group and Outreach workshop, iPRES in Lisbon
11	December 2013	Focus group
14	March 2014	Focus group
17	June 2014	Focus group and Outreach workshop
17	June 2014	Public Consultation on Roadmap
21	October 2014	Conference workshop session on roadmap

Table 10—Years 1 and 2: Focus Group and Workshop Schedule

6.3   Advisory Board Meetings

The advisory board is a diverse and international group of influential stakeholders and experts who have been appointed to provide the project with advice and guidance.

Three face-to-face meetings of the Board (including representatives from the project) are scheduled at strategic points during the project, and will be co-ordinated by WP1—'Project Management' Lead, Jisc (Project Partner #1). Board members represent varied domains including: cultural heritage, academia, industry (corporate and SME), and government, providing the project with highly motivated stakeholder views from public and private sector organisations. Advisory Board members also provide the project with additional expertise in relevant subject areas such as economics and lifecycle costing. The programme of Advisory Board Meetings is as follows:

Month	Date	Meeting and Location
5	11th June 2013	Project Advisory Board meeting (1), London
11	December 2013	Project Advisory Board meeting (2), TBC
18	July 2014	Project Advisory Board meeting (3), TBC

Table 11—Years 1 and 2: Advisory Board Meeting Schedule

6.4   Project Website

The project website is the responsibility of the DPC (Project Partner #9). A preliminary web presence has been established at: http://4cproject.eu/ and the project team is committed to keeping the website online beyond the duration of the project's funding period.

The set up and transfer of information to a Developed Project Website is to be completed by 31 July 2013. This website will be transferable to the existing .4cproject.eu domain and have the following functionality:

- user management functions to gather personal details and provide access to private areas;
- search function, searching within PDF and DOC files as well as HTML;
- RSS out news section;
- 4C twitter display, encouraging users to follow;
- upload of images, files and documents and enables embedding remote media, e.g. FLICKR/ VIMEO enabled;
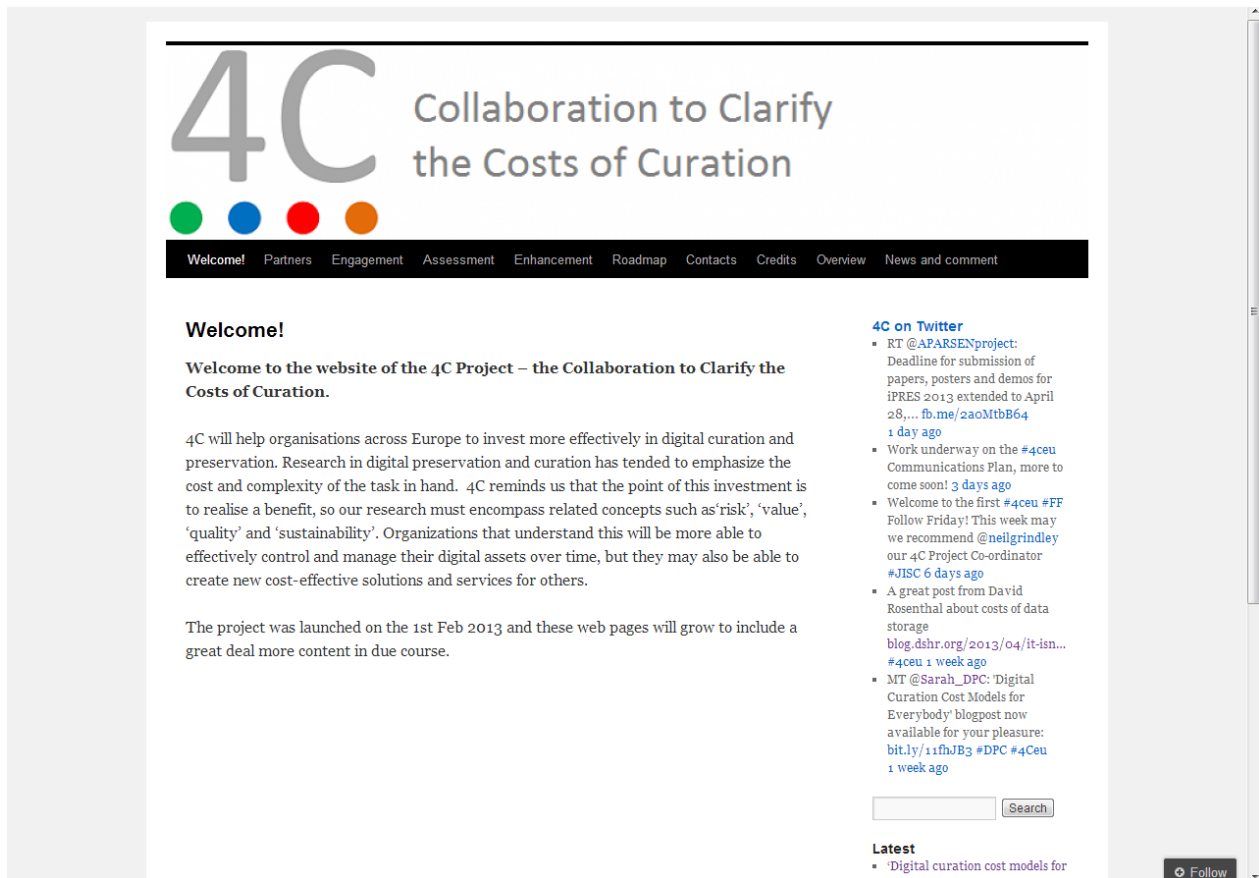- repository to hold and publish major deliverables.

Figure 2—Current 4C Project Website

The 4C website will be hosted by a project partner and preserved as a lasting record of the project.

As part of maintaining an enduring web presence and awareness of the project, the project partners have committed to a schedule of blog posts, as shown in the table below. The 4C blog highlights a variety of topics relevant to the project and the 'News and Comments' stream draws attention to new blog publication.

The blog schedule may be found on the Google drive and will be updated on a rolling basis to provide at least one blog post per week. http://4cproject.net/?attachment_id=300 shows a snapshot at the time of printing.

Date (w/c)	Author	WP	Topic
Mar			
4	William Kilbride	2	Welcome
11	Neil Grindley	1	Kickoff - Let's Collaborate
18	William Kilbride	2	Briefing Paper
25	William Kilbride	2	Press Release
Apr			
1	Alex Thirifays	3	CCEx (Age of Exploration)
8	~		
15	Sabine Schrimpf	2	Engagement - "Digital curation cost models for everybody"
22	~		
29	William Kilbride	2	Cache in the Attic
May			
6	Paul Stokes	1	A very European Enterprise
13	Neil Grindley	1	DigCurv
15	Luis Faria	2	Introduction to stakeholder consultation
27	Paul Wheatley	Guest	
June			
3	Alex Thirifays	3	Talk about Advisory Board?
10	Ulla Bogvad Kejser	3	
17	Kevin Ashley	4	
24	Sarah Norris	2	Project Communication Plan
Jul			
1	Paul Stokes	1	F2F report
8	Kat Haage	2	Outreach events?
15	Stefan Strodl	3	
22	Herve L'Hours	4	
29	Neil Grindley	5	Roadmap
Aug			

Date (w/c)	Author	WP	Topic
5	Paul Stokes	1	
12	Joy Davidson	2	
19	Neil Grindley	1	
26	Kevin Ashley	3	
Sep			
2	Paul Stokes	1	
9	Sabine Schrimpf	2	IPRES
16	Stefan Strodl	5	
23	Andreas Rauber	4	
30	Neil Grindley	1	
Oct			
7	Heiko Tjalsma	3	
14	Raivo Ruusalepp	5	
21	William Kilbride	2	
28	Paul Stokes	1	
Nov			
4	Luis Faria	4	
11	Paul Stokes	5	
18	Herve L'Hours	3	
25	Neil Grindley	1	ANADP conference report
Dec			
2	Miguel Ferreira	2	
9	Raivo Ruusalepp	4	
16	Paul Stokes	1	
23			Xmas
30			New Year

Table 12—Year 1: Website Blog Schedule

The developed website will incorporate a blogging platform which allows multiple authors to write their own blog posts after logging in, and allow readers to comment on blog posts and other pages subject to editorial control / moderation. The subject of blogs will be coordinated to reflect the publication of reports or resources, as well as workshops and focus groups.

The website and the blogs will be designed to prompt comment, discussion and enquiry and will provide a mechanism to capture comments and requests for further information. A 'Community Builder' function will request high level member information to register and login for certain areas and functions of the website and will enable the project team to analyse members with categorization, lists and reporting features.

Figure 3—4C website blog post, example format

Website analytics will be used to identify the subject areas of most interest to users through an auto-generated 'most popular' list and simple forms will be used to gather information from polls/surveys/questionnaires.

A virtual community platform for the Curation Costs Exchange (CCEx), a functional framework for the exchange of curation costs-related information, will also be setup on the 4C project website. This will be established by DPC (Project Partner #9). Close coordination with WP3 (Assessment) will be required to establish the best platform and online environment for gathering and disseminating information about the economic determinants of digital curation. Further Information exchange and analysis will be undertaken and captured through the schedule of workshops and focus groups as outlined in the following section.

6.5 Social Media

The stakeholder analysis has presented a diverse audience, including those outside the digital preservation research community. In order to reach these audiences, and maintain an enduring web presence and awareness of the project, the 4C Project has assessed the available social media channels. The project will use the 4C website and blogs, plus Twitter feed and a #4ceu hashtag to publicise activities, encouraging debate and participation, as these are channels which are accessible by all communities.

Project activities will also be advertised through the LinkedIn Groups of related projects, e.g. APARSEN, (although a specific 4C LinkedIn Group will not be established) in order to maintain the ethos of an 'open and social' project.

The management of the twitter account is undertaken by DPC (Project Partner #9) and the @4C_Project account currently publishes one project related tweet per day. This online tool will be used to monitor interest outside the immediate partner organisations and involved stakeholders, by reviewing followers and use of the #4ceu hashtag.
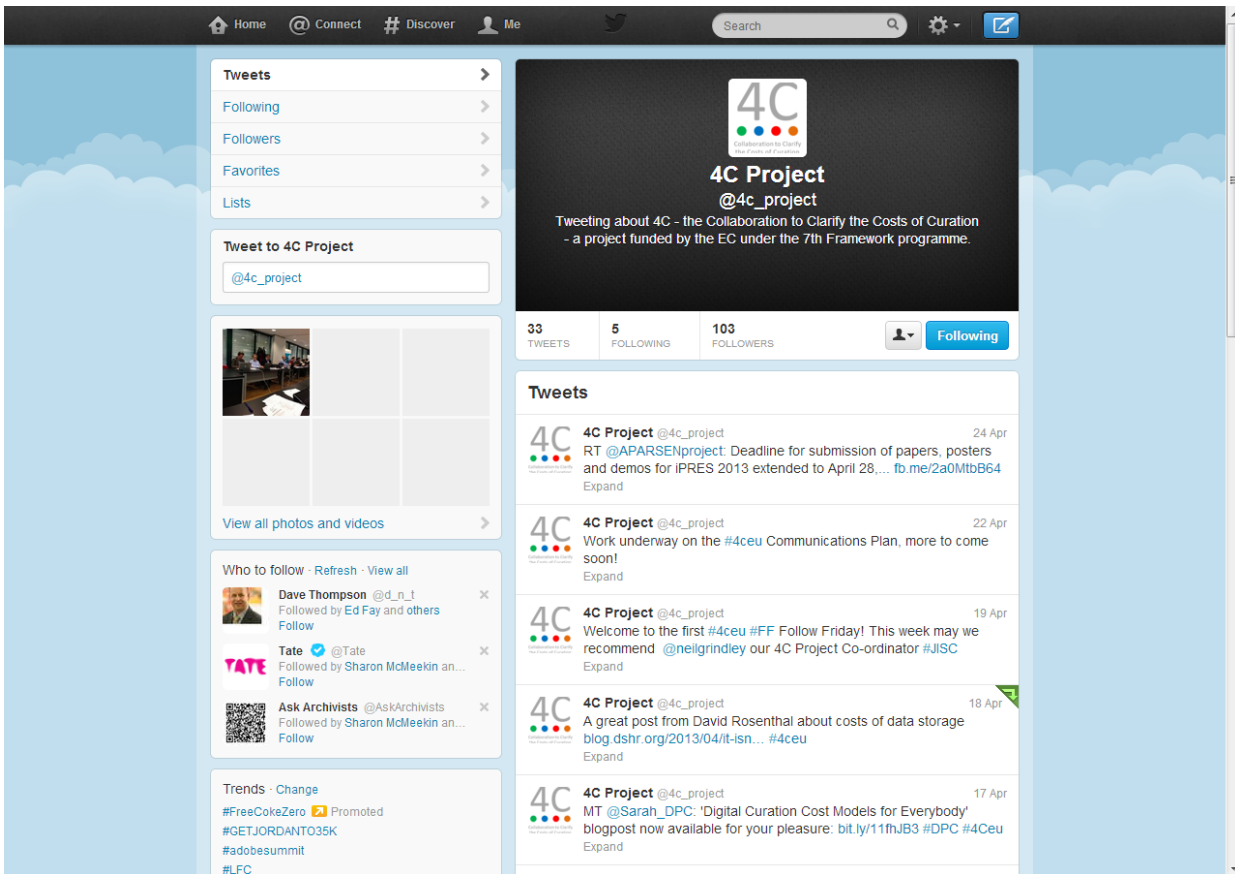

Figure 4—the @4C_Project Twitter Profile

6.6   Conferences and Events

In addition to the 4C project scheduled towards the end of the project, the project team has identified a series of other conferences and events which may provide fora, not only to disseminate outcomes of the project, but also to attract relevant stakeholders and organize side events (meetings and workshops).

Co-ordination of and attendance at events is the responsibility of WP2—'Engagement' Lead DNB (Project Partner #5), supported by identified 'owners' and the proposed schedule of conferences and events may be found on the Google Drive, and is shown below. The schedule a the time of printing can be found at http://4cproject.net/?attachment_id=298

Month	Date	Event	Location	Owner/ Affiliation	Activity	Topic
3	2 April 2013	IS&T Archiving 2013	Washington D.C.	Diogo Proença INESC-ID	Conference paper	The role of risk analysis to support cost models for digital preservation
4	6 May 2013	DigCurV Conference	Florence, Italy	Neil Grindley JISC	Keynote presentation	Economics of Digital Curation Training and Education
8	2 Sept 2013	IPRES 2013	Lisbon, Portugal	Neil Grindley JISC	Conference paper	Value, sustainability & preservation
				Sabine Schrimpf DNB	Workshop	4C Workshop
10	18 Nov 2013	Aligning National Approaches to Digital Preservation II	Barcelona, Spain	Neil Grindley JISC	Presentation and workshop session	General 4C information
16	May 2014	Nordic Conference National Archives, "NorDig"	Copenhagen, Denmark	Alex Thirifays DNA	Presentation - maybe workshop	TBC

Table 13—Years 1 and 2: Conference and Events Schedule

This schedule will be updated as other suitable events become known, or further invitations are made.

The success of each occasion will be measured by monitoring and reporting on the indicators outlined in Section 2—Objectives, following each event.

6.7   Journal and Conference publications

Publicity and briefing materials will be produced at strategic points during the project. Project partners will publish relevant articles and papers throughout the project duration in a range of academic journals or relevant conferences, selected to optimise message delivery and information dissemination to target audiences.

6.8 Reports

Throughout the course of the project, and subsequent to each Advisory Board Meeting, minutes will be written up into a report designed to communicate progress to external stakeholders. The co-ordination and issue of these reports will be undertaken by Jisc (Project Partner #1) and will be made available through the project website within 14 days.

The 4C project will culminate in the production of a Roadmap report which outlines strategies for the provision of cost-effective digital curation. This management of this deliverable will be undertaken by Jisc (Project Partner #1) and made available to all stakeholder groups and the wider digital preservation community through an immediate extension of the 4C project web presence, or (an)other member website to provide more sustainable and long term access.

A project partner with genuine capacity is to be designated as the 'trusted repository' for the project and all reports, deliverable and publications arising out of the project. This partner will be responsible for creating an archive of the project at the end and this will inform the development of the sustainability plan.

6.9 Event Evaluations

The success of each event will be measured by monitoring and reporting on the indicators outlined at Section 2—Objectives, particularly:

Focus groups

- Qualitative rather than quantitative
- 'Originality' of audiences reached
- Overall number of participants

Workshops

- Overall number of participants
- Subsequent engagement of participants with the project, 'come back rate'

Conference

- Overall number of participants
- Number of participants that have had interaction with the project before

Evaluations will be reported by DPC (project Partner #9) in the Communications Activity Report delivered to the EC at month 12. More details are provided in Section 7—Communications with the European Commission (EC.

6.10 Tailored Propositions for each stakeholder group

The project team has been assembled in such a way as to optimise communications through the existing communications channels of each Project Partner. This is aimed at reducing the time necessary to set up communications and it also reduces the cost while maximising impact.

The information channels and planned materials outlined above, will be applied to each external stakeholder group in conjunction with existing channels, as summarised in the table on the following page:

Stakeholder Group	Planned Communication Channels	Other Existing Channels Available
Data producers	Interviews with Stakeholders, Focus Group Meetings, Stakeholder Engagement Report, Outreach Events and Final Conference, Final report and publicity	Subject specific media, including liaison with JISC Research Data Management programme, DPC industrial contacts, Presto Centre, IMPACT Centre
Data users	Interviews with Stakeholders, Stakeholder Engagement Report Focus Group Meetings, Outreach Events and Final Conference, Final report and publicity	Subject specific media, including Jisc Research Data Management Programme, DPC industry contacts, Presto Centre, IMPACT Centre
Digital preservation staff	Advisory Board, Interviews with Stakeholders, Focus Group Meetings, Stakeholder Engagement Report, Outreach Events and Final Conference Web presence, project twitter, project reports	Existing professional networks (DPC, DCC, nestor etc) Existing training providers, APARSEN NoE, Major Conferences (such as iPRES, IDCC, APA), Major journals and publication series (such as IJDC, DPC TWR, DCC Pipeline, DPC/DCC What's New), Email lists (digital preservation)
Other EC-funded preservation projects	Advisory Board, Interviews with Stakeholders, Focus Group Meetings, Stakeholder Engagement Report, Outreach Events and Final Conference, Reports to EC project officer, Direct contact from project manager, Final report and publicity	Digital preservation research conferences and publications, APARSEN NoE, Presto Centre, IMPACT Centre
Funders	Interviews with Stakeholders, Focus Group Meetings, Stakeholder Engagement Report, Outreach Events and Final Conference, Reports to the EC project officer	Jisc channels reports to senior people in national libraries (DNB, DNA, KBDK, NLE); DPC, Nestor and OCLC Advocacy Activities and 'executive briefing'.
Policy and decision makers	Outreach Events and Final Conference, Interviews with Stakeholders, Reports to the EC project officer, Stakeholder Engagement Report, Final report and publicity	Jisc reports amplified and contacts obtained to national level funders from national agencies (DNB, DNA, KBDK, NLE); DPC, Nestor and OCLC Advocacy Activities Reports to EC project officers and senior officials
Media	Publicity, briefing and report publication	Project publicity amplified by partners' own press and publicity offices

Table 14—Tailored propositions for stakeholder groups

Full propositions for each stakeholder group will be fully developed with the completion of the Stakeholder Registry.

7 Communications with the European Commission (EC)

The 4C Project will seek to engage with the EC as a stakeholder as well as funder, in order to develop contacts with cognate EC-funded projects and initiatives. The channels defined in Section 6—External Communications, will be used to engage with the EC and other EC funded projects in this way.

Contact with the EC project officer is the primary responsibility of the Project Manager, and formal reporting to the commission is described in Task 1.4 (Coordinate Reports to the European Commission).

7.1   Formal Communications

Communications with the EC will be used to demonstrate 4C's accountability, "good use of public money" and a principle of efficient and effective spending of the funding.

All reports will be submitted to the Project Officer as outlined in the Description of Work, and summarised in the table below:

Month	Date	Report/Deliverable
5	30 June 2013	D2.5—Project Communication Plan
6	31 July 2013	D2.1—Initial Report on Stakeholders and Relevant Work
6	31 July 2013	D2.7—Developed Project Website
6	31 July 2013	D4.1—Prioritised Assessment of Indirect Economic Determinants
12	31 January 2014	D1.1—Draft Sustainability and Benefits Realisation Plan
12	31 January 2014	D2.6—Report on Communication Activities
12	31 January 2014	D3.1—Final Cost Models Study / Needs & Gap Analysis Report
12	31 January 2014	D4.3—Report on Trustworthiness and Quality

Table 15—Year 1: EC Reporting and Deliverables Schedule

Month	Date	Report/Deliverable
13	28 February 2014	Form C—Covering period 1 Feb 13 to 31 Jan 14
16	31 May 2014	D5.1—Draft Roadmap
18	31 July 2014	D3.2—Cost Concept Model & Gateway Requirement Specification
18	31 July 2014	D4.4—Report on Risk, Benefit, Impact and Value
21	31 October 2014	D3.3—Curation Costs Exchange Framework
22	30 November 2014	D2.4—Final Report on outreach events
24	31 January 2015	D1.2—Final Sustainability & Benefits Realisation Plan

Month	Date	Report/Deliverable
24	31 January 2015	D2.2—Register of Stakeholders and Relevant Work
24	31 January 2015	D2.3—Final Stakeholder Report
24	31 January 2015	D2.8—Curation Costs Exchange
24	31 January 2015	D4.2—Assessment of Community Validation of the Economic Sustainability Reference Model
24	31 January 2015	D4.5—From Costs to Business Models
24	31 January 2015	D5.2—Final Roadmap Report
25	28 February 2015	Form C—Covering period 1 Feb 14 to 31 Jan 15

Table 16—Year 2: EC Reporting and Deliverables Schedule

Reports are to be submitted within 60 days after the end of each reporting period and include:

- progress of the work, achievements, differences between plans and actual work, future planning
- use of resources (efforts, costs)
- final report includes publishable summary and a plan on use and dissemination of results
- financial statements (forms C)

All submissions must be made electronically; paper copies may only be submitted for signed originals of audit certificates.

All deliverables must be e-mailed to the Project Officer with copy to the project mailbox.

Reports are to be submitted using the online tool "NEF" for input of costs and uploading periodic reports.

Project reviews will be held for every reporting period (intermediate reviews are possible) with the Commission, together with independent peer experts in the activity areas of the project. Reviews will be managed through a remote review of deliverables and/or a review meeting and the findings of each session will be communicated through review or report.

Project reviews will comprise:

- the degree of fulfilment of the project work plan;
- the resources utilised in relation to the achieved progress (principles of economy, efficiency and effectiveness);
- quality and efficiency of project management;
- the beneficiaries' contributions and integration within the project;
- dissemination and exploitation activities;
- implementation of recommendations from previous review;
- further planning;
- description of the project products.

8 Roles and Responsibilities

This section defines the roles and responsibilities related to communications activities within the 4C project and includes and expands upon the roles and responsibilities defined with the Description of Work (DoW).

8.1 All 4C Partners

All partners will:

- be responsible for communication activities;
- assist in the implementation of the 4C Project Communications Strategy and Plan of Activities as defined in this document by carrying-out communications tasks as directed by the Project Co-ordinator, Work Package (WP) or Task Lead;
- include the 4C logo and website address on at least one page of their organisational website;
- ensure communications reflect the 4C Project messages as described in Section 3—Key Messages;
- use the 4C project mailing list, and specific work package lists, for general communication and to notify other participants of the availability of new dissemination materials, results and papers uploaded to the Google Docs and Dropbox. Documents should not be attached to emails but a link to the appropriate location must be included;
- participate in scheduled project and project team meetings to communicate progress to partners;
- keep contact details on the 4C Project Dropbox up to date;
- include the 4C Project web address and contact details in external communications related to the project;
- use 4C appropriate templates for relevant project-related communications;
- use their own organisations' contacts and established communication channels in support of the 4C project as appropriate;
- include the #4ceu hashtag when mentioning the project on Twitter;
- acknowledge EU funding through communications, as specified in the grant agreement.

8.2 WP2 'Engagement' Lead

The Lead Partner for WP2 Engagement will:

- manage the undertaking of all external communication activities defined as part of WP2 in Section 6 of this document;
- act as the central point of contact for all external communication activities defined to be part of WP2 in Section 6 of this document;
- delegate particular communications tasks to WP2 participants as required;
- monitor, update and add to the Communication Plan annually; and
- identify a designated alternate who will provide additional support and cover for communications management duties.

8.3   Work Package Leads

To aid in the communication of information about their work package, Leads will:

- provide regular updates on work package progress at the scheduled project team meetings;
- contact the WP2 Lead or their designated alternate at least two weeks before important milestones or the dissemination of results or deliverables to allow the discussion and planning of required communication activities;
- ensure that all deliverables include an accessible summary section that can be repurposed for communication purposes and similar 4C activities; and
- provide information and content on the work carried out within their work package as required by WP2 Participants producing communications outputs.

9 References

1. Wheatley, P 2012 'Digital Preservation Cost Modelling: Where did it all go wrong?' Open Planets Foundation, weblog post 29 June 2012, http://openplanetsfoundation.org/blogs/2012-06-29-digital-preservation-cost-modelling-where-did-it-all-go-wrong, accessed 24 April 2013

Appendix 1   4C Project Style Guide

A1.1 Achieving consistency and quality

This guide is based on good practice within publishing and is designed to establish consistency as a quality of presentation. Variations in usage are confusing to readers, especially those who may be dealing with digital preservation for the first time: often-times, readers assume that the variations have meaning.
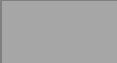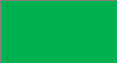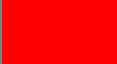
A1.2 Logo

In order to maintain the integrity of the logo, and the message it conveys to our collaborators, partners and stakeholders, it must always be clearly and prominently displayed. Maintaining the shape and appearance of the logo protects the integrity of the 4C Project's primary brand mark.

Do not alter the shape / aspect ratio of the logo; size adjustments should be made by dragging the corner/s of the logo 'image:'

A1.3 Colour

The colour shades within the 4C logo have been combined to create a suite of instantly recognizable hues. When a stakeholder sees a 4C publication, they should recognise it as a 4C publication without having to read a word.

Colour	Sample	R	G	B
Grey		166	166	166
Green		0	175	79
Blue		0	112	192
Red		255	0	0
Orange		228	108	10

Where available, please use templates for communications, but enhance communications by making use of the RGB breakdowns above in Microsoft programs such as Word and PowerPoint.

A1.4 Font and formatting

Text should be submitted in the appropriate template for the publication, and should follow the formatting guidelines below[5]:

- Use single-spacing,
- Insert one space after a full stop, not two;
- Please use Calibri (11pt) as the typeface;
- Use a simple and consistent system of numbered headings and subheadings;
- Don't indent paragraphs;
- Insert a line space before starting a new paragraph.

5. Templates

The following templates are available for use:

- **Deliverable template:** ...\Dropbox\The 4C Project\Resources\Templates\Documents\4C – Deliverable.dotx
- **Meeting Minutes:** ...\Dropbox\The 4C Project\Resources\Templates\Documents\4C – Minutes.dotx
- **PowerPoint Presentation:** ...\Dropbox\The 4C Project\Resources\Templates\Documents\4C Blank Presentation.pptx

A1.5 Spelling

As a general guide to spelling, the first spelling given in the *Concise Oxford Dictionary* should be used. This gives priority to certain norms including 'z' spellings (for example, 'digitization' not 'digitisation' and 'organize' not 'organise'), though it provides commonly used exceptions: advertise, advise, analyse, chastise, compromise, improvise, televise. Note the following preferred spellings: artefact, medieval, homogeneous, millennium.

Foreign place names should consistently follow either the anglicised or the country of origin's form—don't swop between them.

A1.6 Terminology

Concise and plain language, which describes the Project's aims clearly, should be used within all communications. A glossary of terms for use in the context of the 4C Project has been prepared and is available through the Google Docs drive. http://4cproject.net/?attachment_id=302 shows a snapshot of the glossary at the time of publication of this deliverable.

A1.7 Text, illustrations and tables

Complete text should be supplied – all illustrations and text should be there, and in final form. Pages are to be numbered and text supplied in the correct sequence – indicate which is the title page, list of contributors, preface, contents list, list of captions/illustrations, copyright acknowledgements, bibliography, appendices etc. Avoid long or complicated tables, and if these are required then include them in an appendix and gloss them within the text.

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[5] Many of the features are built into the supplied MS Office templates.

A1.8 The nuts and bolts: an A to Z guide to the 4C style

- **4C:** The 4C Project should always be referred to as '4C' or '4C Project' using upper case 'C' and Capital 'P' in Project, unless in the case of the twitter hashtag where this appears #4ceu.

- **Abbreviations and acronyms:** Abbreviations which use the first and last letters of a word should not have a full stop, for example, 'Dr' not 'Dr.' Note that editors is abbreviated to 'Eds' but editor is 'Ed.' because the last letter of editor is not 'd'. In main text, use 'for example' and 'such as' rather than 'e.g.', 'that is' rather than 'i.e.', and 'and so on' rather than 'etc' (although these may be used in tables). A comma should precede e.g. Full stops are used in 'i.e.', 'e.g.' and '*et al*.'. When using acronyms, at the first occurrence give the full name with the abbreviation/acronym in brackets following it—for example, the American Federation of Arts (AFA). After that, the abbreviation/acronym may be used. Page numbers are indicated by 'p.' followed by the number for a single page, or 'pp.' followed by the page numbers. Where appropriate, please refer to a standard list for the abbreviations of the names of periodicals for the sector in which you work, such as that published by the CBA (http://www.britarch.ac.uk/sites/www.britarch.ac.uk/files/node-files/signposts_archpub_3rded.pdf).

- **Capitalization:** Capitals should be kept to a minimum. They are used for proper names, titles (including local or central government departments, directorates or sections), and for prefixes forming part of a compound name, such as the Archbishop of Canterbury, and the Duke of Edinburgh. Where a prefix or title is used in a general sense, it is lower case, such as 'a duke', 'the kings and queens of Scotland', 'county archaeologist', 'member', 'curator'. The definite article—'the'—is capitalized where it forms part of the name of an organization or institution, so it's worth checking the letterhead or website of organizations you are referring to. It is also capitalized where it forms part of a title of a publication, such as *The Times*, or *The History of Mr Polly*. We don't capitalize the definite article in names of museums such as the Burrell Collection or the McLellan Galleries. Parts of geographical names are capitalized when they refer to recognized divisions of a country. For example, Northern Ireland (a political division), but northern Scotland (a general geographical description). Capitals are used for proper names of institutions and movements, including schools of painting, so that Christianity, Buddhism, Islam, Marxism, Colourists and the Church (when it refers to the Christian Church as a whole) are capitalized, but lower case when a building or church in a general sense is referred to. Words in the titles of books or exhibitions should all have initial capitals, except for words such as 'it', 'and', and so on. However, in subtitles of books or exhibitions, only the first letter of the first word should be capitalized, for example, *Castles and Glens: The landscape from above*.

- **Compass points:** North, south, north-west, north-north-east to west-south-west and so on should be spelt out in publication text. N, S, NE, SSW can be used in labels, illustrations and tables.

- **Contractions:** words like 'it's' and 'can't' should be spelt out in full. Contractions and abbreviations are not generally followed by full stops, except to avoid ambiguity – for example, 'no.' for 'number' (a contraction of numero). We use full stops in 'i.e.', 'e.g.' and '*et al*.'.

- **Copyright and quotations:** Short quotations should be incorporated into the text, using single quotation marks. Longer quotations should be set off from the text by indenting or centring, without quotation marks, so that they are clearly identifiable. Quotations must be

given exactly as they appear in the original and shouldn't be altered to conform to our house style. If you add or omit any words, use square brackets to indicate additions, and the mark of elision (…) for omissions. If necessary, '[sic]' can be added after any unusual spellings to indicate that they appear in the original.

Any quoted material in the publication which is a quote from other sources, and which may be subject to copyright restrictions, should be highlighted. The source should always be cited, giving author, title of the publication the material is taken from, the publisher of the original material, the year, and page number (where known). Permission needs to be sought for the use of most copyright material—there are very few exceptions. If a colleague has given you verbal permission to reproduce something, please get this in writing so we have it on file. When requesting permission to reproduce we will ask for worldwide English language rights, which ensure that we can publish globally without breaching copyright. Please remember that copyright fees can be expensive.

If the quotation you have given is in a language other than English, a translation should be provided so that your readers do not miss important facts or opinions.

- **Copyright and illustrations:** all the illustrations to be included in the publication are to be supplied with the submitted final draft. If this is not possible, a comprehensive list of what is to be included should be provided in the event that redrawing or new photography is required. Captions for each illustration are to be supplied where appropriate, keeping these as succinct as possible.

  Copyright fees for reproducing images can be expensive, and we will need to factor these into the publication's budget. If there is a copyright-free alternative to the image you want to use, please consider this. Anything handled by DACS (Design and Artists Copyright Society, www.dacs.org.uk) is likely to be expensive. Contacting copyright holders takes time, so we need as much advance warning as possible.

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- **Cross references:** Cross references within the text should be kept to a minimum because they can only be added at final proof stage. More general references to a chapter or section should be used where possible. Rather than saying 'on the next page' or 'on the previous page', please put '(see p.00)' and the correct page number can be added at proof stage. References should be to chapter or section headings and to table and illustration numbers as far as possible. Similarly, please don't refer to 'the table below/above', as what appears below/above in the manuscript may appear on the following/previous page once typeset.

- **Dates:** Dates should be given as in the sequence day/month/year, as in 1 January 2005. Decades should be expressed as the 1970s, not 1970's or '70s. Names of months should not be contracted, except in figures, tables, or marketing materials for reasons of space. The names of periods are usually capitalized, for example, the Middle Ages, the Jurassic, the Holocene, Iron Age, but note medieval. Centuries should be written out in words, unless they are in a table and space is short. Use 'fourteenth century' rather than '14th century'. Dates BC should always be given in full to avoid confusion. We prefer to use BC and AD for dates as they are widely understood. BC follows a date, while AD precedes a date. Both appear in print in small capitals. Refer to World War I and World War II, rather than the First and Second World Wars. Pairs of dates are usually elided to their shortest pronounceable form, e.g. 1914–18, 1878–79. However, an oblique is used when referring

to financial years because they are made up of parts of two calendar years, and should be indicated as 2003/04.

- **Footnotes and endnotes:** With the sole exception of bibliographic citation, footnotes and endnotes should not be used. If the information was not useful or interesting enough for the main text, it should be omitted from the text entirely. If you absolutely have to include footnote material, the material should be incorporated into the text where possible or else relegated to the end of the chapter or section to appear as an appendix to the text.
- **Hyphens:** Hyphens should be used sparingly but consistently. Compound adjectives should be hyphenated, so 'a nine-year-old-child', a 'seventeenth-century document', but 'the child was nine years old', 'the chair was made in the seventeenth century'. Don't use a hyphen between an adverb and part of a verb used adjectivally—for example, badly drawn boy, ineptly scripted presentation. Numbers from 21 to 99, and fractions, are hyphenated when written out—twenty-one, ninety-nine.
- **Italics:** Italics are used for the names of books, exhibitions, paintings, journals and magazines, newspapers, plays, films, legal cases, epic poems and ships (although note that HMS and SS in ships' names are not italicized). Many words from other languages are commonly italicized, although there is no need to italicize words that are now in common English language usage. For example, vice versa, chic, ersatz, naïve, facade and prima facie should not be italicized, although *ipso facto, Zeitgeist, ibid.*, *et al.* and *ad hoc* often are. *c.*, for about, is italic. Biological classification—in descending order, phyllum or division, class, order, family, genus and species. All group names from family upwards are Latin with an initial capital letter. Genus and species names are italic, with the generic name having an initial capital. Italics should not be used for emphasis.
- **Lists:** There is no need for a comma after the last item in a list before the 'and', unless it would add to the clarity of the sentence. A bullet point list containing substantial sentences should have a semi-colon at the end of every bullet point, an 'and' following the second-last item in the list, and a full stop at the end of the last item. A lower-case letter follows the bullet point. For example:

"His aims were to:
   o get up an hour early and read two chapters of the textbook;
   o go for a jog at lunchtime;
   o eat five portions of fruit and vegetables a day; and
   o go to bed before midnight."

There is no need to punctuate if the list consists of single words.

- **Numbers and measurements:** There are several conventions governing the use of numbers. In the text, spell out numbers up to ten; after that, use numerals. The exception is when a number starts a sentence, as then it should be written out in full. Where possible, try to avoid this by rephrasing the sentence. If a percentage contains a decimal point, as in 5.4%, use figures. Numbers from 21 to 99, where spelt out, and fractions, should be hyphenated—e.g. twenty-one. The percentage sign (%) should be used in tables, illustrations and text. Use '0' in front of decimals, for example, 0.6. Use 'No.' as the abbreviation for 'number'. Use numerals for measurements and weights, for example, 3 metres, 25 km, 4 kg. When citing measurements, use a form that conveys the precision of the measurement. For example, the ditch is 0.85m wide, the brooch is 35mm wide and 87mm long—not the ditch is 850mm wide, the brooch is 0.035m wide and 0.087m long. All measurements should be metric units unless there is a good reason for using imperial units.

Numbers from 1,000 onwards should have commas as it makes numbers easier to read. Note no full stops in am/pm. Elide numbers to the shortest form consistent with clarity— 254–8, 343–7, but 214–18.

- **Punctuation**: always use single quotation marks for speech and quotations. For quotes within quotes, or speech within speech, double quotation marks should be used. Colons and semi-colons should be followed by a lower case initial letter, except where the colon precedes a quotation or the subtitle of an exhibition or book. For example, *The History of Glasgow: A walk through time*. Full points should not be used at the end of headings or lists of single words. Ampersands should not be used in text, but may be used to save space in tables. The % sign is used in tables and captions, but spelt out as 'per cent' in running text.
- **Superscript and Subscript:** Depending on your computer settings, Word may automatically make the 'rd' in 23rd or the 'th' in 18th superscript. Superscripts and subscripts when used appropriately are not problematic so long as they are used consistently. They should only be used within equations or as abbreviations for cardinal numbers and should defer to guidance on dates and numbers: they should not be used when referring to calendar dates.

A1.9 References and bibliography

The sources of quotations and references and acknowledgements of other people's work must always be given. This also helps to avoid any charges of plagiarism. The 4C Project uses the Harvard (author–date) system of references and authors may wish to consult the Internet for a comprehensive description of Harvard referencing.

In simple terms, the author, publication date (and where appropriate page number) references should be given in the text and a full reference given in the list of references or bibliography at the end of the paper. For example, 'The findings of other researchers (Bloggs, 1994, 157) showed that…'. If the author's name forms part of the sentence it is not repeated in the reference, for example 'Bloggs' findings (1994) showed that…'. If the author published more than one work in a year, publications should be labelled 1994a and so on. If more than one is included in a reference, it should appear as 1994a, b. Citations of references with three or more authors should give all the authors at the first instance, for example, Bloggs, Smith, Jones and Wharton, 1994, shortened to Bloggs *et al*. thereafter.

As a rule of thumb when citing unpublished material, if the reader will be able to obtain the material without too much difficulty (for example, a thesis lodged at a university), please include the reference. If the material is in preparation or in press, please try to confirm that it has been accepted for publication and will definitely become available at some point.

Please be as careful and consistent as possible with references. E ditors spend a great deal of time checking and chasing up references, and you will endear yourself greatly if you can be as meticulous about these as you are with the rest of your manuscript.

All references within the text should appear in the Bibliography in Harvard format. The list of references should be in alphabetical order, with titles by the same author listed chronologically. Works by the author individually are listed before works co-written or works which the author has edited. Joint works are listed alphabetically by second author.

When an association, agency or organization has produced the publication, and no author's name appears on the title page, the name of the organization usually acts as the author for text references and the bibliography. Where a work has a compiling editor or editors rather than an author, the text reference is

(Brown and Thomson, Eds, 2003). References to two or more works given together are separated by semicolons, for example (Brown and Thomson, 2003; Brown and Smith, 2004).

Full bibliographical references should appear as the following examples:

A journal article:

Smith, M and Brown, S 2003, The origins of label writing in Glasgow and environs. *Journal of Museum Practice 5*, 77–89.

A book:

Smith, M and Brown, S 2003, *The Origins of Label Writing in Glasgow and Environs*, 3rd edn. Glasgow: Glasgow Museums.

Articles in books:

Smith, M and Brown, S 2003, Pleasure or pain: the art of the successful label. In J Bloggs and A Smith (Eds) *The Origins of Label Writing in Glasgow and Environs*, 3rd edn. Glasgow: Glasgow Museums.

An e-journal article:

Kilbride, W 2001, Whose Beowulf is it any way? *Internet Archaeology 9,* online at: http://intarch.ac.uk/journal/issue9/reviews/beowulf.html (last accessed 28/07/09)

A webpage:

DPC 2008, Tackling the preservation challenge: practical steps for repository managers, Digital Preservation Coalition, http://www.dpconline.org/graphics/events/081212RepMngrsWkshp.html (last access 28/07/09)

A1.10   Other inclusions

Appendices: these should be only be included if they provide access to details that are too bulky or repetitive to include in the main text. As a general rule they supply depth to an argument but should not extend its breadth. Appendices should be numbered consecutively, included in tables of content and be referenced numerically from within the text (page number references are to be avoided). House style rules should apply as normal.

Further reading: this should follow the style of the references/bibliography, but may contain annotations directing the reader to particularly useful chapters or sections in the publication, or a brief description of the contents of the book or article. A couple of sentences usually suffice.