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# Funding for Sustainability: How Funders' Practices Influence the Future of Digital Resources

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# Funding for Sustainability:

## How Funders’ Practices Influence the Future of Digital Resources

Prepared by:  
Nancy L. Maron and Matthew Loy  
Produced and funded by JISC through the Strategic Content Alliance



Ithaka S+R ([www.ithaka.org/ithaka-s-r](http://www.ithaka.org/ithaka-s-r)) is a strategic consulting and research service provided by ITHAKA, a not-for-profit organization dedicated to helping the academic community use digital technologies to preserve the scholarly record and to advance research and teaching in sustainable ways. Ithaka S+R focuses on the transformation of scholarship and teaching in an online environment, with the goal of identifying the critical issues facing our community and acting as a catalyst for change. JSTOR, a research and learning platform, and Portico, a digital preservation service, are also part of ITHAKA.

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# Executive Summary

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**Over the past decade, government agencies and philanthropic organisations have made significant investments in the creation of digital content in the not-for-profit sector.** The grants have facilitated major digitisation efforts, helped to spur development of significant new digital collections and encouraged innovative work, paving the way for new forms of scholarship possible only in an online environment. Many of these investments are bearing fruit, developing from research projects into resources that are updated constantly and are valued by the communities they serve.



And yet, all too often, digital resource projects struggle as they transition from grant funding to a longer-term plan for ongoing growth and development. On the surface, the issue may appear to be strictly financial, as projects urgently seek new sources of revenue to cover their costs; but more often the issues run deeper, as projects must justify their value not just to their funder, but to their host institution, to their users and to others whose support they require. Without a clear understanding of their value to users and other key constituencies and robust plans to build upon that value, even the most ambitious digital resource can be at risk. Content developed through the course of a grant may end up on a platform that is not well maintained or developed over time, where few are likely to find and use it. In a worst-case scenario, a project team disbands and the resource languishes, available to those who may know where to find it in the short term, but at risk in the long term. For those grant-making programmes where investments are intended to create, update or aggregate digital content, or to develop communities of active users or shared research

resources that are meant to endure, detailed planning is needed early in the project life cycle to improve the likelihood of long-term availability.

The challenging economic environment in 2011 has brought this issue into even sharper relief, as dramatic funding reductions in the higher education and cultural heritage sectors put strain on every section of the pipeline, from funder, to institution, to communities of users. As grant-makers are forced to make difficult choices about how to disburse funds, and those who distribute public funds are under increasing scrutiny to demonstrate that they are yielding returns on investment (whether social return or economic return), what can funders do to help the digital resources and projects they fund have the best chance for success and long-term impact?

With support from the JISC-led Strategic Content Alliance, Ithaka S+R conducted a study to examine the ways that both public and private funding bodies in academic and cultural heritage sectors are defining sustainability and encouraging the digital resources they help to create to endure and continue to provide value well beyond the term of the grant. The project explored the funding practices of over 25 funders that support various forms of digital resources, and included over 100 interviews with more than 80 programme officers, foundation directors, project leaders and other experts. Our goal was to gain an understanding of how funders think about the long-term viability of the digital resources they support, and the policies and practices they have put in place to encourage successful outcomes.

## Among the findings in the report:

- 1. Those who fund digital resources agree that ‘sustaining’ these outputs is important, but their definitions and criteria for sustainability vary widely.** Among the funders we studied, most have taken steps to think about what it means to sustain digital content, but this broad notion masks a wide range of practices of varying rigor, even within different programmes at the same funding body. Some funders pinpoint ongoing access as a goal, others focus on technical preservation and still others stress the need to demonstrate impact through reaching an audience of users. While all of these goals may be part of a sustainability plan, they require different tactics and different resources to carry out, and so need to be clearly defined at the earliest stages.
- 2. Grant-makers often identify the sustainable outcomes they would like to see; they often do not, however, ask the hard questions about just how the applicant intends to achieve these outcomes.** Much of the dialogue about long-term sustainability stops once the end-goal (e.g. “We will make the resource openly available”) has been agreed upon. Digging deeper to have project leaders articulate their thinking about the specific activities that will need to be carried out, the costs this will entail and possible sources of revenues to cover these costs, could be a valuable exercise that would provide funders and grantees with a baseline for evaluating progress and would help to clarify for project leaders the funder’s expectations around end-of-grant outcomes and planning needs.
- 3. Funders and project leaders alike tend to rely very heavily on the host institution as a backup (or primary!) provider of needed resources and services when planning for the long-term support of a digital resource.** Many funders spoke of making investments in projects at well resourced, elite universities, assuming that this was a good proxy for a sustainability plan. In other words, if the host institution is in good financial shape, many funders assume that it will likely continue to support the projects it has agreed to sponsor in a research or start-up mode, even if there is no explicit agreement to that effect.
- 4. Many funders engage with their fund recipients only at the very beginning of the grant period, and efforts to follow up post-grant are rare. During the grant, reporting is most often used to identify and avert crises.** On the one hand, there seem to be valuable opportunities to provide meaningful non-financial support – advice, introductions to others in the community, deeper engagement in the project’s management and other contributions – during and after the grant period, when project leaders may most need guidance and strategic advice. On the other hand, several grantees we spoke with made clear that they do not look to their funders for anything more than financial support. Determining what sort of support is most valuable and how it can be most effectively delivered at different stages of a project’s life cycle is an important opportunity to enhance sustainability.
- 5. Digital resources are a significant type of output and represent a growing share of spending for many funders in higher education research, and this is increasingly the case in the cultural heritage sector as well.** While the main focus of this report are those funding programmes that seek to create dynamic digital resources, it is clear that almost every grant now produces some form of digital output. Sometimes these outputs are not the primary objective of the grant; nevertheless, as ‘digital’ becomes the default format for many types of content and communications, it will be increasingly important to understand how to efficiently and effectively support these outputs for long-term impact.

## Potential roles and actions for funders

For funders who are directly engaged in the creation of dynamic digital resources, as well as many of those who find themselves funding digital projects through a less direct path, sustaining the value of the digital outputs is an acknowledged priority, though the best way to accomplish this has not been determined.

During the course of our interviews with programme managers, grantees and other experts, certain techniques and strategies emerged that funders themselves are currently engaging in and find to be most useful. Among these are:

- **‘Building in’ sustainability:** Funders see the proposal stage as their point of maximum leverage, and have come up with many ways to ensure that project leaders are thinking about some of the factors that will be vital to the longer-term health of the project they are proposing. Some of these include terms and conditions governing the type and length of support a host institution must contribute, open sharing of data or other content and provision for the costs of content preservation.

- **Thinking about projects in developmental stages, to allow funders – and the project leaders themselves – the opportunity to evaluate progress or potential along the way.** Funders do this in several ways: some choose to build firm milestones into a grant, with progress towards a specific, well-defined goal as a requirement for receiving the next release of funds. Others use staged grants as part of a broader strategy of first seeding the terrain with a wide field of experimental projects, and then selecting those best positioned for further growth. Both measures, in different ways, allow funders to create incentives that motivate projects to develop plans and practices that strengthen long-term sustainability.
- **Taking steps throughout the funding process to encourage or assist grantees to plan for ongoing sources of support.** Programme officers and others at funding bodies possess a wealth of knowledge about the fields and institutions that they make awards to, from helping to secure ‘buy-in’ and ongoing financial support from a host institution, to advice on staffing, governance and partnerships, to assistance in implementing earned-revenue models. Grant-makers may want to consider ways that they can add value to the project through non-financial engagement over the course of the project life cycle.

In addition, our research suggests certain practices, which though perhaps now less widely-adopted, could help funders allocate their limited resources to support projects in ways that maximize their impact and potential for sustainability:

- **Establishing a clear definition of what sustainability means for the specific project.** What does the funder want to see persist and grow beyond the grant period in terms of technology, content, access, building audience and so forth? If a project defines its long-term prospects around being able to garner a large and engaged audience of users, for example, is this goal being stated explicitly from the very earliest stages? And are the grantee and funders’ visions for what will need to be sustained the same?
- **Working together to identify the steps needed to attain the desired sustainability outcomes, and the resources likely to be needed to accomplish them.** Every set of goals will require its own set of activities. These activities will require resources and support of some kind, whether provided free of charge by volunteers, through in-kind donations from a host institution, or in the form of financial contributions from paying customers. Even if developing a detailed business plan is not possible at this early stage, project leaders should be able to express the primary objectives they intend to accomplish over a multi-year time period and where the resources might come from to support these activities. Describing how the grant funds are to be spent is important, but not enough; it is the activities beyond the duration of the grant that deserve more attention.
- **Developing closer ties to administrators at a grantee’s host institution.** Funded projects will need to have provosts, vice chancellors, and other administrators invested in their future if commitments to them are to remain solid during difficult budget sessions, and if funders have the will and capacity to help build personal relationships with administrators, such relationships could be quite helpful in assuring the future sustainability of these projects. Because host institutional support is so important to so many digital projects in the higher education and cultural heritage sectors, a high degree of communication and outreach will be needed – both from project leaders and from funders – to the administrators who will ultimately decide what level of support to offer these projects in the long term.
- **Offering non-financial support to help grantees to plan for long-term sustainability throughout the funding process.** Programme officers and others at funding bodies possess a wealth of knowledge about the fields and institutions to which they make awards, from helping to secure ‘buy-in’ and ongoing financial support from a host institution, to advice on staffing, governance and partnerships, to assistance in implementing earned-revenue models.

Although not all funded digital resources need to exist indefinitely or be updated continuously, those that do require this need to start planning for a strong, dynamic support structure early on, based on clearly defined goals and desired outcomes. As funders see greater demands on their time and resources than ever before, being able to quickly identify the projects that require a long-term sustainability plan, and to efficiently deliver the support, both financial and non-financial, that will be needed, will be pivotal in their ability to see the value of the investments they have made resonate long after the grant funds have been spent.

# 1. Introduction, Background and Methodology



## 1.1 Introduction

Over the past decade, government agencies and philanthropic organisations have made significant investments in digitisation and digital innovation that have yielded a rich array of online resources and a wealth of easily accessible online content: millions of documents – not only text, but also images, recordings, and multimedia resources – have been made available to audiences far beyond the physical domain of a library or museum. Their funding has facilitated major digitisation efforts, developed significant new digital collections and encouraged innovative work that paves the way for forms of scholarship possible only in an online environment. Many of these investments are now bearing fruit, developing from research projects into resources that are updated constantly and are deeply valued by the communities they serve.

*Despite projects meeting very high standards, offering valuable content to users and being delivered on time and as promised, will the value of that work endure?*

But this considerable achievement has not been without its challenges. Just as the full reach and power of digital content is still emerging and is likely to keep delivering astonishing results for years to come, so the systems of funding that support the creation of this content are still very much in a stage of experimentation, and the path from initial funding to long-term sustainability can be challenging. Projects struggle to cover expenses once their grant funding ends. Even for those projects with minimal operating costs, the value of the initial investment is often at risk post-grant: content developed during the course of a grant may end up on a less well-trafficked platform, where few are likely to find and use it, and it may not be well maintained. Or, in cases where content, to be valuable, must be up to date, the original content may be accessible but not current, undermining people's confidence in its value and decreasing its discoverability, the engagement of its users, and ultimately, its broader impact.

As many grant-funded projects mature beyond their early launch years, several types of undesirable outcomes have begun to emerge even for successful projects. In our interviews, funders and project leaders alike identified:

- Digital projects that return again and again to funders because they have not developed alternative revenue streams
- Completed projects for which online content remains stagnant and/or little used once funding ends
- High-quality content existing in silos; that is, hosted on a variety of platforms that are not truly interoperable and are unable to effectively drive usage
- Digitised and born-digital content for which preservation strategies are uncertain
- Project leaders struggling to piece together operating costs in the waning days of a grant, and in a best case, relying heavily on the largesse of a host institution
- Projects that cease to secure ongoing funding and are obliged to shut down

Despite projects meeting very high standards, offering valuable content to users and being delivered on time and as promised, will the value of that work endure? Could the post-grant challenges these projects face end up undermining the long-term success of the work?

Not all digital projects face this risk in quite the same way, and not all require extensive sustainability planning. The projects that are the focus of this report are larger-scale efforts where the intention is for the content to be accessible and available for a long period of time. To succeed, this content must be actively maintained so that it can evolve with the dynamic networked environment; this may involve staff or complex groups of volunteers and the time and other resources to manage them. For shorthand, we call these more complex projects 'digital resources' throughout the report. Among projects of this type are larger digitisation initiatives that provide access to scholarly materials, historical documents or cultural heritage content; large databases of user-contributed content; social networking initiatives that rely on maintaining and increasing the participation of their users, and online educational resources that depend on a constant refresh of learning materials by instructors and others. Community-based software and tool development, particularly as it relies on the ongoing engagement of volunteer developers, has much in common with the dynamic resources listed above, but was not a focus of this study.

*Could the post-grant challenges these projects face end up undermining the long-term success of the work?*

It is important to acknowledge that this type of project stands in contrast to other grant-funded efforts that do not have long-term sustainability as a main objective. Such projects have an explicit beginning, middle and end, and they result in specific deliverables, often in the form of a published book, article or report. The outputs generated by this kind of grant-supported effort are intended to be closed-ended, finished projects. They certainly require safe keeping, access and preservation to insure their technical integrity, but they do not need ongoing, active management for continued development. One way to think about the distinction between project types is this: while a reasonable 'sustainability path' for a research article might be to deposit it in a reliable repository, the repository – which may house thousands of articles and require software upgrades, a complex user interface and a permanent team to manage it – will require a complex sustainability plan to guarantee its long-term value.



The challenging economic environment in 2011 has brought the issue of sustainability into sharp relief. Dramatic cuts in the higher education and cultural sectors and reduced funding streams, particularly among public funders, pose serious challenges to those who lead digital resource projects. Funders with shrinking endowments and budgets have had to make hard choices about how to disburse funds, and those who distribute public funds are under increasing scrutiny to demonstrate that the money is being well spent. And the issue is not purely financial. In a project economy in which slim operating budgets are undergirded by systems of barter, donation of in-kind services and volunteer time, human resources are being stretched thinner than has been the case in recent years. This raises questions, both for funders and for the project leaders they support, about how to secure the resources needed to achieve their goals.<sup>1</sup>

Some recent examples provide sobering illustration of what might be at risk. The authors of a 2006 final evaluation of the digitisation strand of the now-closed New Opportunities Fund noted that of the 147 projects that ultimately received grant funding, 'We estimate that 70 percent of projects in the Digitisation programme have risen to meet the challenges and are maintaining and enhancing their project websites in some way, beyond the Fund requirement to keep the sites live for three years post-programme'.<sup>2</sup> An independent assessment of the same digitisation programme conducted in 2009 was somewhat bleaker, finding that while most of the projects could still be accessed online,

<sup>1</sup> The effects of the economy on funders and fund recipients during the time of our research (March 2010–March 2011) has been noted in numerous articles and reports. See, for example, Nicole Wallace, 'Nonprofits Strategize to Help Them Cope with a Perilous 2011', *Chronicle of Philanthropy* (9 January 2011), [www.philanthropy.com/article/Nonprofits-Seek-Ways-to-Cope/125838/](http://www.philanthropy.com/article/Nonprofits-Seek-Ways-to-Cope/125838/). The changes in the United Kingdom, where many of the funders we studied are based, have been particularly rapid: in October 2010, the UK Spending Review outlined plans for a 40% reduction in higher education spending, with significant cuts to teaching and research in fields outside the sciences. See HM Treasury, 'Spending Review 2010' (October 2010), [cdn.hm-treasury.gov.uk/sr2010\\_complete.pdf](http://cdn.hm-treasury.gov.uk/sr2010_complete.pdf).

<sup>2</sup> Education for Change, 'The [New Opportunities] Fund's ICT Content Programmes: Final Evaluation Report' (March 2006), p. 61, [www.biglotteryfund.org.uk/er\\_eval\\_ict\\_final\\_rep.pdf](http://www.biglotteryfund.org.uk/er_eval_ict_final_rep.pdf).

over two-thirds had either not been updated since their launch years earlier, or were characterised as having 'no known URL or URL not available'.<sup>3</sup>

A 2007 risk assessment of the performing arts collections hosted by the now-closed Arts and Humanities Data Service (AHDS) assessed the catalogue of their 61 projects already deposited, as well as another 41 funded projects that had yet to be deposited, according to the risks posed by a number of factors, including staff team dispersal, age of project, lack of repository, high volume of content, 'funding only secured for finite timeframe; completed several years ago' and more. Among the findings of this investigation was that 'most collections face significant risk of loss as a consequence of the decision to withdraw AHDS funding'. Those most at risk were felt to be the 'finite, small-scale projects, often run by a lone academic based at a university without the necessary infrastructure to support the preservation of complex digital resources'. As the authors pointed out, 'very few institutions have the necessary infrastructure and expertise to curate the complex research outputs being created in the performing arts'.<sup>4</sup>

In the United States, even projects that have had long-term support are being reassessed. In February 2011, the National Science Foundation (NSF) announced that the National Science Digital Library (NSDL), a complex, multi-year programme for creating and curating collections of educational resources in the sciences, would no longer be funded.<sup>5</sup> The \$16.25 million budgeted for this programme in 2010 will go to zero in the 2012 budget. Although the NSF may continue to provide ongoing access to these materials through the platform to host the content, the ongoing value of these collections of educational resources is likely to diminish if their main – and, for many of the projects, only – source of support will soon be gone.<sup>6</sup>

These are cases that made headlines because an entire funding programme or support infrastructure is at risk. Many other individual projects run into similar problems for a host of other, less visible reasons, which culminate in the project teams' inability to acquire the resources they need to continue building the projects they began.



With support from the JISC-led Strategic Content Alliance, Ithaka S+R conducted a study to examine the ways that both public and private funding bodies, in the academic and cultural heritage sectors, are defining sustainability and encouraging the project leaders they support to create not only digital resources but also the means to ensure that those resources will continue to provide value well beyond the term of the grant. The landscape we explored was rich with ideas, but muddled in part by the use of terms (including 'sustainability' itself) that masked a suite of disparate strategies and intentions of varying value to long-term sustainability. Definitions varied not just from funder to funder, but even from programme to programme within a funding body – creating the potential for unclear expectations for grantees.

This study seeks to offer funders a look at how others are coming to terms with funding for long-term impact, and to suggest a framework for understanding the many facets of this question that anyone engaged in developing dynamic digital resources will at some time need to address. While in the past this question might

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<sup>3</sup> See UK Digitisation Projects, 'New Opportunities Fund (NOF) Digitisation Projects 1999–2004', [web.me.com/xcia0069/nof.html](http://web.me.com/xcia0069/nof.html), for an update as of August 2009 of the status of 155 NOF digitisation projects, 1999–2004. This review, unlike the one commissioned by the NOF, evaluated 155 grants, which may have included some that were subsequently withdrawn. Even if these inflate the 'no known URL' category, the percentage of those with little updating/no URL remains high, over 68%.

<sup>4</sup> Sarah Jones, Daisy Abbott, and Seamus Ross, Risk Assessment for AHDS Performing Arts Collections: A Response to the Withdrawal of Core Funding (Glasgow: AHDS-Performing Arts, December 2007), [www.ahds.ac.uk/performingarts/news/reports/ahdsipa\\_collection\\_risk\\_assessment.pdf](http://www.ahds.ac.uk/performingarts/news/reports/ahdsipa_collection_risk_assessment.pdf).

<sup>5</sup> According to the NSF's FY2012 Budget Request to Congress, 'In FY 2012, the NSDL program will be eliminated based in part upon recent evaluation findings that point to the challenges of sustaining such a programme in the face of changing technology and the ways educators now find and use classroom materials' (p. EHR-20), [www.nsf.gov/about/budget/fy2012/pdf/27\\_fy2012.pdf](http://www.nsf.gov/about/budget/fy2012/pdf/27_fy2012.pdf).

<sup>6</sup> The concern here may be for preservation, as well. In the early years of the NSDL, the NSF funded the creation of a central technical infrastructure service for all NSDL projects, hosted at Cornell University. In recent years the costs of maintaining this service have been covered through a 15% subsidy on all NSDL grants. With the closing of the NSDL program, it is unclear whether the core technical infrastructure team at Cornell will continue to receive funding.

have resonated with just a small group of influential grant-makers focused on digital outputs, as 'digital' becomes the medium of first resort, we expect that this issue will be increasingly relevant to those funding in other areas as well.

In the remainder of Part I of this paper, we provide the background to our study and review our methodology. In Part II, 'Defining the Sustainability Challenge', we offer a glimpse of the tangle of definitions and goals funders are working with today, and propose a framework to assist funders and others in thinking about key elements of sustainability for the projects they fund. The framework represents our effort to capture and organise the large classes of questions and issues facing projects as they struggle with developing sustainability plans. Part III, 'Current Funder Strategies for Sustainability: Stages of the Funding Process', examines the policies, tactics, and mechanisms that funders are using today to influence the sustainability of the projects they support. Overall, we hope that the report will serve to stimulate further discussion among grant-makers seeking to allocate their funding and time in ways that will best support the long-term viability of the digital outputs they fund.

## 1.2 Background

In the past several years, researchers have sought to understand the sustainability challenges that leaders of digital projects face, from converting physical assets into digitised collections at cultural heritage institutions to identifying long-term sources of support for innovative digital resources in the academic sector.<sup>7</sup> Our group, Ithaka S+R, has examined different aspects of these challenges in two previous reports. *Sustainability and Revenue Models for Online Academic Resources*<sup>8</sup> presented a framework for thinking about the mindsets and cultural factors needed to create sustainable resources and included a high-level survey of different revenue models that support digital content. *Sustaining Digital Resources: An On-the-Ground View of Projects Today*<sup>9</sup> took this approach a step further, examining in detail twelve digital resource projects to understand how their leaders have defined and worked towards sustainability, and drawing out lessons that other project leaders might apply to their own work.

In workshops hosted by Ithaka S+R in 2009, programme officers discussed what might be required to foster the creation of digital projects in the not-for-profit arena that are robust, valuable to the community for which they are intended, and able to generate the resources they need to ensure their continued value to users. Some felt that the solution lies in training grantees to be more 'businesslike' and to adopt more entrepreneurial mindsets as they run their digital projects. Others wondered if there weren't lessons to be learned 'upstream' in the process, from the funders themselves. They expressed a clear need to understand more about the wide range of techniques that different funders use to assess the sustainability plans of grant applicants and the methods used to measure project impact and progress toward sustainability.

With this in mind, Ithaka S+R undertook this research in order to better understand the funding landscape for digital resources in the United Kingdom, the United States and elsewhere and, more to the point, to explore how funders conceive of digital resources and their long-term needs at the moment of initial funding and beyond. How did funders and their grantees define sustainable outcomes for their projects? What steps were funders taking to help project leaders to achieve those outcomes? And how did funders know *which* of their digital projects to focus time and resources on, given capacity limitations and funding constraints? These were our guiding questions for the report that follows.

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<sup>7</sup> Liz Bishoff and Nancy Allen, *Business Planning for Cultural Heritage Institutions* (Washington, D.C.: Council on Library and Information Resources, 2004), [www.clir.org/pubs/reports/pub124/contents.html](http://www.clir.org/pubs/reports/pub124/contents.html); Diane Zorich, *A Survey of Digital Humanities Centers in the United States* (Washington, D.C.: Council on Library and Information Resources, 2004), [www.clir.org/pubs/reports/pub124/contents.html](http://www.clir.org/pubs/reports/pub124/contents.html); Diane Zorich, *A Survey of Digital Humanities Centers in the United States* (Washington, D.C.: Council on Library and Information Resources, 2008), [www.clir.org/pubs/reports/pub143/contents.html](http://www.clir.org/pubs/reports/pub143/contents.html), esp. section 5.2.

<sup>8</sup> Kevin Guthrie, Rebecca Griffiths, and Nancy L. Maron, *Sustainability and Revenue Models for Online Academic Resources* (2008), [www.ithaka.org/ithaka-s-r/strategyold/sca\\_ithaka\\_sustainability\\_report-final.pdf](http://www.ithaka.org/ithaka-s-r/strategyold/sca_ithaka_sustainability_report-final.pdf).

<sup>9</sup> Nancy L. Maron, Kirby Smith, and Matthew Loy, *Sustaining Digital Resources: An On-the-Ground View of Projects Today* (2009), [www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/report/SCA\\_Ithaka\\_SustainingDigitalResources\\_Report.pdf](http://www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/report/SCA_Ithaka_SustainingDigitalResources_Report.pdf).

A final note in the interest of disclosure: Ithaka S+R<sup>10</sup> has been fortunate in having received funding from many of the funding bodies studied in this report, and this research was itself funded by the JISC-led Strategic Content Alliance. That said, we have made every effort to be impartial in our treatment of funders in this report. Our objective is to share what these various funders have done and are doing so that they might learn from one another's experience.

## 1.3 Methodology

In Spring 2010, Ithaka S+R identified a set of funders and requested interviews with representatives from those funders, in order to understand how they:

- Prioritise the role of digital resources as a part of their overall mission
- Define 'sustainability' for their funded projects, particularly digital projects
- Employ strategies to require, or create incentives for, project leaders to sustain the digital resources created with grant funding

First, we sought to identify those funders with grant programmes that produced digital resources, particularly those with content as opposed to software or tools alone. Some were already known to us or were recommended by colleagues and by members of the Advisory Council created for this project.<sup>11</sup> Others we learned of through searches on several useful websites, including those of the Foundation Center, the Center for Effective Philanthropy, and GrantCraft, and by pursuing references and citations in works dealing with digital resources.<sup>12</sup> While we focused on learning about their grant programmes that yielded digital outputs, we found it worthwhile to also explore their work in related areas (software, for example) where we thought they might offer useful models. Beyond that, we sought diversity in the funders we chose to study, in a number of respects:

- **Geographical location:** United Kingdom, United States, Canada, and continental Europe (France, Germany, and Denmark)
- **Type:** Public and government funders; private charities; corporate foundations
- **Sector:** Academic research and cultural heritage funders
- **Size:** Very large funders (in terms of overall funding and/or amounts awarded to individual projects) and funders smaller in size
- **Role of digital resources within portfolio:** Funders centrally focused on digital projects, funders with a dedicated programme for digital resources, and funders of programmes with other primary aims, but from which digital outputs may arise

Willingness to speak candidly about what can be a sensitive topic was a general requirement, as well, and not all of those we approached accepted this invitation. Ultimately, we identified more than 25 funding bodies supporting various forms of digital resources whose programme officers and other representatives were able and willing to speak with us, and we conducted over a hundred interviews, either on-site or by telephone, with more than 80 individuals. In most cases, we were asked to keep part or all of our conversations confidential, and for this report we have anonymised quotations and excerpts from documents not publicly available, so as not to compromise the identity of the programme officers, project leaders, and other experts and stakeholders who were willing to share their experiences with us.

Our qualitative approach included gathering data in several ways:

- **Conducting background research of the literature concerning funding styles and methods.**

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<sup>10</sup> Ithaka S+R is the research and consulting arm of ITHAKA, a not-for-profit organisation that also includes JSTOR, a digital archive of more than 1,000 scholarly journals, and Portico, a digital preservation service.

<sup>11</sup> For a full listing of members of the Advisory Council, see Appendix C.

<sup>12</sup> The Foundation Center, [www.foundationcenter.org](http://www.foundationcenter.org); the Center for Effective Philanthropy, [www.effectivephilanthropy.org](http://www.effectivephilanthropy.org); GrantCraft, [www.grantcraft.org](http://www.grantcraft.org).

- **Analysing documents that funders produce to facilitate their funding process.** These are often publicly available on funder websites, and include mission statements, annual reports, calls for proposals, applicant guidelines, and evaluator guidelines. In addition, many of the funders we spoke with shared informal documents, white and grey papers, and drafts of internal documents that dealt with the current state of thinking about sustainability at their organisation.
- **Interviewing programme officers and other staff at funding organisations,** as well as project leaders who have received funding, researchers working in this space, and other stakeholders. We were fortunate to be able to interview representatives at many funding bodies, usually at the programme manager or programme officer level. In addition, we spoke with heads of libraries, evaluation officers, programme directors, foundation directors, and others who were extremely helpful in providing a fuller picture of the policies and practices in place at their institutions. Finally, we interviewed several project leaders who have received grant funding in the past, to get a sense of how the policies their funders had in place may have helped them in formulating their sustainability plans.<sup>13</sup>
- **Drawing on previous research on sustainability, including interviews with project leaders.** Our previous research on sustainability has provided us with a useful base of information from project leaders as well as from funders about the challenges of sustaining digital resources. The knowledge we gained from those projects has guided us and has been valuable context for analysing the interviews and other research we conducted for this report.

This project offered some significant challenges to the research team, some of which were inherent in the nature of the project, and others of which emerged through the course of the work. These included:

- **Reluctance on the part of some funders,** given the sensitive nature of the topic. Some funding body representatives declined to participate, specifically citing the sensitivity of the topic; others did not feel the subject was of direct relevance to their organisation; and others were concerned that allowing our organisation to interview grant officers could pose a conflict of interest, since our organisation, Ithaka S+R, is also a grant-seeker.
- **The difficulty of making comparisons.** In an attempt to scan the landscape for models of good practice concerning sustainability of digital resources, we chose to look widely, examining models from higher education as well as cultural heritage funding; from six different countries; from both the private and public sectors. This, clearly, makes it quite difficult to draw direct comparisons, and we have attempted to be sensitive to the contextual differences that may make models difficult or impossible to recommend in other settings.
- **The need for confidentiality.** Finally, some of the richest detail to emerge through the course of our research involved cases where funding expectations were not met, where funders were clearly dissatisfied with outcomes produced by grantees or with their own organisation's lack of a clear set of expectations to guide themselves and grantees toward developing robust plans for the long term. And yet these are the most sensitive stories to tell. We have tried to include the greatest level of detail possible without compromising those who spoke candidly with us, and we hope that the anonymised examples offered will provide helpful illustrations of the kinds of problems being faced and addressed by the many grant-makers that support the burgeoning field of digital resources.

The research and writing process was informed and guided by our Advisory Council, comprised of a combination of funders and other experts on the funding environment in the United Kingdom. This group was convened at the start of our work and reviewed drafts throughout the process. In addition, we shared drafts of the paper with several of the funders with whom we had spoken throughout the course of the research, to seek their feedback on our findings.<sup>14</sup>

The wide range of types of funding practices, goals and outputs we examine in this report made it difficult to judge the success of this or that practice or this or that funder. Rather, by showing individual funding practices mapped onto the broad spectrum of activity, the report is meant to suggest new avenues to consider, for funders and their grantees considering future digital projects and investments. We are grateful to those who spoke freely with us, and welcome further contributions to this work.

<sup>13</sup> See Appendix A for a list of interviewees.

<sup>14</sup> See the Acknowledgements section for a listing of the participants in our peer review meetings.

## 2. Defining The Sustainability Challenge

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### 2.1 Digital Resource Funders and Sustainability

Over the past decade, a fairly small group of funders, public and private, has been responsible for catalysing the creation of substantial collections of digital content at university libraries, museums, archives, and other organisations with heritage collections. These major initiatives have included The Andrew W. Mellon Foundation's support of large aggregations of digital content via JSTOR and ARTstor; the Institute of Museum and Library Services' National Leadership Grants programme; the National Science Foundation's investment in teaching materials in the National Science Digital Library; the William and Flora Hewlett Foundation's investment in the open course materials movement; and the New Opportunities Fund digitisation programme, which invested mainly in library digitisation projects, to name a few.

Today, however, the funding of digital content is no longer the purview of a small vanguard of funders, as even the humblest research paper often begins life as an electronic file, physical media of all types are migrating to digital formats, and many creations and communications are born digital. It is safe to say that most, if not all, funders working in the higher education and cultural heritage sectors are likely to be funding, or considering funding, activities that yield a digital resource of some sort.

#### 2.1.1 Rationales for funding digital resources

The aims of funders in supporting the creation of digital resources can be very different. Among the funders we studied, public and private, supporting academic research or cultural heritage institutions, from different national regimes, the logic for 'creating and supporting digital resources' looked very different from funder to funder in terms of mission goals, size of investment and definition of success. To provide a sense of the diversity of funders we interviewed, here are some illustrative profiles of the funders we studied:

- A non-departmental public body distributing National Lottery funds to heritage projects, for whom digital material is one type of output among a range of grants
- A private charity, focused on encouraging digitisation by funding academic institutions as well as supporting smaller digital projects
- A government funding body, with a mission to promote the growth of technological infrastructure and digital media for its country's academic and educational system
- A government department, which sees the funding of digital content as a potential stimulus for the economy
- A government-funded organisation seeking to solve large social problems, including access to information, which on occasion requires digital formats
- A private charity, funding the creation of openly available digital resources for use within the higher education community
- A private charity, seeking to support excellent, original research, which may include digital outputs

For some of these funders, the creation of digital resources is a primary goal of their grant-making; for others, digital resources are considered only a secondary product of the grants. This disparity in funders' expectations for funded digital resources became even more apparent when we sought relevant funding programmes to study *within* each grant-making body. In some cases, identifying the programmes that support the creation and development of digital content was easy: JISC, for example, explicitly devotes several different programmes to funding the creation of digital outputs – content, educational resources, infrastructure. Its e-Content programme squarely focuses on 'building a critical mass of content, thus providing for new methodologies, uncovering previously hidden evidence and opening up new areas of research'.<sup>15</sup> At The Andrew W. Mellon Foundation, the programme in Conservation and the Environment also has a very precise goal: 'to help a consortium of over 153 herbaria from more than 57 countries to develop a coordinated database of high-quality digital images (600dpi) of plant type specimens'.<sup>16</sup> Programmes like these are intended to result in clearly defined digital outputs, and their programme officers expect these outputs to be discoverable and used by others for a long time to come.

Other programmes define a broader mission within which the digital medium is a vital means to achieve ultimate ends, whether to 'support the efforts of libraries and archives to preserve and provide access to materials of broad cultural and scholarly significance' (The Andrew W. Mellon Foundation, Scholarly Communications and Information Technology Program), 'to achieve extraordinary improvements in human and animal health' (the Wellcome Trust), or to 'strengthen the impact of arts and humanities research by encouraging researchers to disseminate and transfer knowledge to other contexts' (Arts and Humanities Research Council).<sup>17</sup> While the primary focus of grant-making for many research funders is the information and knowledge created and transmitted, most funders in this space acknowledge the utility of digital media in attaining these goals, and they clearly have a strong interest in ensuring the long-term value of the digital assets produced.

*...the terrain of digital investment in the not-for-profit sector continues to expand, as even those funders who may not have considered themselves major sponsors of digital content are taking steps to understand the landscape of digital resources and their possible place in it.*

Where the funder has an even broader social remit, the place of digital resources can be vague: for example the Big Lottery Fund, a funder in the United Kingdom, aims to bring 'real improvements to communities and the lives of people most in need'.<sup>18</sup> Yet, as the offspring of an earlier lottery-funded grant-maker, the New Opportunities Fund, the Big Lottery Fund has a legacy of significant commitments to projects that resulted in digital outputs, in part as an effort to democratise information and provide better access to those who find themselves on the wrong side of the digital divide.

And the terrain of digital investment in the not-for-profit sector continues to expand, as even those funders who may not have considered themselves major sponsors of digital content are taking steps to understand the landscape of digital resources and their possible place in it. During the time of our research, two major cultural heritage organisations commissioned research on the role of digital outputs within their funding schemes, as they considered revising their programme offerings.

The government-funded Arts Council England launched a 'Digital Opportunities' track, a 'three-year programme of policy development to understand how digital media technologies are affecting the creation, distribution and consumption of the arts, and what this means for the

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<sup>15</sup> JISC, 'Digitisation and e-Content', [www.jisc.ac.uk/digitisation](http://www.jisc.ac.uk/digitisation). The page describes the development of the e-Content programme from 2004 through 2010.

<sup>16</sup> The Andrew W. Mellon Foundation, 'Annual Report 2009', pp. 20–21, [www.mellon.org/news\\_publications/annual-reports-essays/annual-reports/content2009.pdf](http://www.mellon.org/news_publications/annual-reports-essays/annual-reports/content2009.pdf).

<sup>17</sup> The Andrew W. Mellon Foundation, 'President's Report 2009', n.p., [www.mellon.org/news\\_publications/annual-reports-essays/presidents-reports/2009](http://www.mellon.org/news_publications/annual-reports-essays/presidents-reports/2009).

The Wellcome Trust, 'Annual Review 2010', p. 2, [www.wellcome.ac.uk/stellent/groups/corporatesite/@sf\\_cross\\_cutting\\_activities/documents/web\\_document/wtvm050678.pdf](http://www.wellcome.ac.uk/stellent/groups/corporatesite/@sf_cross_cutting_activities/documents/web_document/wtvm050678.pdf).

Arts and Humanities Research Council, 'About Us', [www.ahrc.ac.uk/About/Pages/default.aspx](http://www.ahrc.ac.uk/About/Pages/default.aspx).

<sup>18</sup> Big Lottery Fund UK, 'BIG Thinking', [www.biglotteryfund.org.uk/index/about-uk/bigthinking.htm](http://www.biglotteryfund.org.uk/index/about-uk/bigthinking.htm).



Arts Council and the artists and organisations we support'.<sup>19</sup> The Heritage Lottery Fund<sup>20</sup> in the United Kingdom has also recently taken steps to more deeply understand the role that digital outputs can play for their grantee institutions.<sup>21</sup>

As the above examples illustrate, whether digital resources are seen as central to achieving mission aims, as a useful means to an end, or as merely an interesting by-product, varies from funder to funder and from programme area to programme area, even within a single grant-making organisation. A programme officer may be extremely committed to sustainability planning for the digital initiatives that he or she has intentionally funded, but not have any concern for those resources that may have been developed spontaneously throughout the course of a grant. Even the strongest advocates for supporting the long-term health of digital resources acknowledge that not everything needs to last forever. When asked if a funder felt responsible for sustaining digital content created during a project, but not explicitly covered in the remit of the original grant, one programme director clearly stated, 'It's not our problem'.

Funders must strike a delicate balance between providing resources and support to an increasing array of digital resources, and concentrating their limited financial resources and time on the digital resources that most closely fit the funder's goals, internal mission and intentions in making these grants. Determining which digital resources must be sustained over the long term, how this should be done, and whose responsibility this should be are the questions funders and their grantees must work together to answer.

## 2.1.2 The desire for sustainable outcomes

If digital resources are a relatively new domain for many funders, the notion of sustainability is not. This term holds the promise of many things for many people, and rarely are any two definitions alike. These promises do not pertain solely to digital resources; the concept and vocabulary of sustainability have come into use by funders of all types as they seek ways to quantify and express the value of their work, whether it be supporting the creation of a community centre for seniors or of a digital resource. For the Heritage Lottery Fund, a sustainability plan may refer to the strategies that a heritage organisation will put into action to make sure that their newly refurbished building or museum, or their new educational programme, can continue into the future. Indeed, most of the funders we studied articulated a desire to see that their grants resulted in outcomes that outlasted the period of funding, to see 'impact beyond the grant', and several have recently revised their programmes and programme guidance to emphasise a commitment to the lasting influence of the work they support. Consider the following samples of guidance for applicants, drawn from the published materials of funders whose primary investments are not in digital resources, but in supporting non-profit institutions and individuals dedicated to creating lasting societal changes (emphases added):

- 'After your project ends, how will you make sure your project is financially secure in the long-term, including meeting maintenance costs?' (Heritage Lottery Fund; application for Heritage Grants over £50,000)
- 'We want to sustain positive effects and outcomes *beyond the life of our funding* and to help ensure that changes are built upon' (Big Lottery Fund)

<sup>19</sup> Arts Council England, 'Digital Opportunities', [www.artscouncil.org.uk/about-us/research/digital-opportunities/](http://www.artscouncil.org.uk/about-us/research/digital-opportunities/).

<sup>20</sup> The mission of the HLF is quite broad: 'Our view of heritage is broad, progressive and inclusive. We believe that understanding, valuing and sharing our diverse histories changes lives, brings people together and provides the foundation of a confident, modern society'. See HLF, 'About Us', [www.hlf.org.uk/aboutus/howwework/strategy/Pages/valuingourheritage.aspx](http://www.hlf.org.uk/aboutus/howwework/strategy/Pages/valuingourheritage.aspx).

<sup>21</sup> Flow Associate and Collections Trust, 'Mapping the Use of Digital Technologies in the Heritage Sector' (2010), [www.hlf.org.uk/aboutus/howwework/Documents/HLF\\_digital\\_review.pdf](http://www.hlf.org.uk/aboutus/howwework/Documents/HLF_digital_review.pdf).

- How will you 'continue to support the project or its results and/or the new model *beyond the grant period?*' (Institute of Museum and Library Services). [Our paraphrase of their guidance.]<sup>22</sup>

If this language of long-term sustainability has already made its way into the funding process, is it sufficient to cover digital resources as well? In theory, yes. And yet we have observed that many leaders of projects dedicated to 'dynamic digital resources' do not necessarily identify with the ongoing nature of their projects, too often aiming more for excellence in execution than for long-term operation,<sup>23</sup> and assuming that placing content on the web and making it freely available is enough to guarantee impact. But the long-term needs of dynamic digital resources may have more in common with those of an ongoing enterprise than with a static, closed-ended research project. It may be more fitting for those teams running digital projects that will require ongoing maintenance, enhancement and preservation to see their projects not just as digital outputs, but as ongoing operations requiring an entrepreneurial mindset.

In order for digital resources on the web to achieve long-term impact, technical issues concerning storage and digital preservation, content updating and sharing of data are not the only concerns that must be addressed; their success requires close attention to understanding audience, awareness of competition for that audience, and an entrepreneurial sense of how to build that audience. The digital format poses challenges and can throw up unforeseen costs associated with long-term maintenance, while at the same time offering enticing, but equally challenging, opportunities to imagine how the value of these resources could be maximised if aggregated at scale. Not confronting these challenges early on can lead to missed opportunities at best, and at worst, to a project that cannot continue to deliver ongoing value.

Several funders themselves have recently acknowledged that 'digital resources' may constitute a class of grant that has requirements different from those grants that fund simpler digital outputs such as closed-ended research papers. The Biotechnology and Biological Sciences Research Council (BBSRC), for example, initiated a Bioinformatics and Biological Resources Fund (BBRF) in 2006 (with a budget of £6.7 million every year),<sup>24</sup> which has funded about 35 projects in the first four years of the programme. The fund was created after the BBSRC found that 'the funding model [for our traditional research grants] didn't pick up a large portion of the infrastructure funding'. In 2008, the Samuel H. Kress Foundation, a private American funder, launched a Digital Resources track to help achieve its overall goals of supporting art history and conservation.<sup>25</sup> The Wellcome Trust, in a recent policy document, stated that one of its important goals was to 'make key contributions to the creation, development and maintenance of major research resources'.<sup>26</sup>

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22 Heritage Lottery Fund, 'Heritage Grants: Grants of more than £50,000. Application Form', November 2010, p. 21, [www.hlf.org.uk/HowToApply/programmes/Documents/HG\\_AP\\_ApplicationForm.pdf](http://www.hlf.org.uk/HowToApply/programmes/Documents/HG_AP_ApplicationForm.pdf).

Big Lottery Fund, 'Big Thinking: Our Strategic Framework to 2015', June 2009, p. 13, [www.biglotteryfund.org.uk/pub\\_sustainability.pdf](http://www.biglotteryfund.org.uk/pub_sustainability.pdf).

Institute of Museum and Library Services, 'National Leadership Grants – FY 2011 Guidelines', [www.imls.gov/applicants/guidelines/nlg\\_2.shtm](http://www.imls.gov/applicants/guidelines/nlg_2.shtm).

23 For a discussion of the mindsets needed to successfully run digital resource projects, see Guthrie, Griffiths, and Maron, *Sustainability and Online Revenue Models for Online Academic Resources*, section 2.

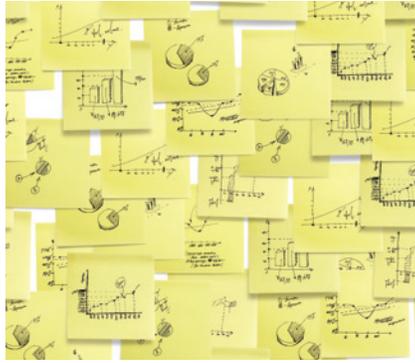
24 BBSRC, 'Bioinformatics and Biological Resources Fund', [www.bbsrc.ac.uk/funding/opportunities/2009/bioinformatics-biological-resources-fund.aspx](http://www.bbsrc.ac.uk/funding/opportunities/2009/bioinformatics-biological-resources-fund.aspx).

25 Kress Foundation, 'Digital Resources', [www.kressfoundation.org/grants/default.aspx?id=150](http://www.kressfoundation.org/grants/default.aspx?id=150).

26 Wellcome Trust, 'How We Are Making a Difference: Assessment Framework Report Summary' (2008–09)', [www.wellcome.ac.uk/stellent/groups/corporatesite/@policy\\_communications/documents/web\\_document/wtx059577.pdf](http://www.wellcome.ac.uk/stellent/groups/corporatesite/@policy_communications/documents/web_document/wtx059577.pdf).

## 2.2 Developing a Framework for Post-Grant Sustainability Planning

### 2.2.1 Revisiting the definition of sustainability



Whether referring to digital content or physical forms, ‘sustainability’ is a term crying out for more precise definition in order to be useful to funders trying to establish desirable outcomes for themselves and their grantees.

In *Sustaining Digital Resources: An On-the-Ground View of Projects Today*, Ithaka S+R offered this definition:

**Sustainability is the ability to generate or gain access to the resources – financial or otherwise – needed to protect and increase the value of the content or service for those who use it.<sup>27</sup>**

This definition, we think, is sufficiently broad to apply to most projects regardless of size, complexity, or ultimate objective in terms of longevity. It simply suggests that a project leader must become well aware of what his or her project requires to continue to be valuable to its audience.

Yet, through our examination of funder policies and practices, it became clear that not only were funders talking about different types of projects, or elements of projects they wanted to see sustained, but often they were really referring to very different types of desirable outcomes. So, how can project leaders and their funders bring greater rigor to their thinking about what particular sustainable outcomes look like and what activities will be needed to support them? No less important, once funders and project leaders have agreed on what sustainability looks like and requires, whose responsibility it is to attain this?

### What funders mean when they talk about sustainability

*Once funder and grantee have agreed that it is desirable to ensure the long-term value of a project, what will this entail?*

Once funder and grantee have agreed that it is desirable to ensure the long-term value of a project, what will this entail? Through our interviews with funders and our reading of their programme descriptions and guidance to applicants, we observed funders articulating a range of different desirable outcomes under the umbrella term of ‘sustainability’. Does the funder care most about preserving digital content for posterity? Making sure that the content is easily findable and usable by others?

Assuring that the organisation that created it is itself robust enough that it can continue its good work into the future? Making sure that the information or practices – perhaps conveyed via digital content at the outset – will be transmitted and adopted by others so that it will persist into the future, even if the original digital container itself does not? All of these are valid aspects of sustainability, but each requires a different set of activities to accomplish the desired outcome. How can we think about sustainability in a way that better articulates these expectations and the steps needed to achieve them?

Below is a summary of several aspects of sustainability that we heard funders identify as important to the overall, long-term value of digital resources.

**Technical requirements.** This tends to be the first thing that funders identify as key to the long-term sustainability of digital outputs. Data management plans, in particular, often address technical aspects of the content that will be created. Some issues that funders try to ascertain when considering new projects concern questions of technical preservation, standards and storage.

- What format will the outputs be in?
- Who will host the content?
- Will it be feasible to migrate the outputs to future platforms and formats?
- What hardware and software upgrades will be needed as the resource develops?

<sup>27</sup> Maron et al., *Sustaining Digital Resources*, p. 11.

**Content-based requirements.** Increasingly, the topic of maintaining the value of the content has come to the fore for many programme officers, and we have heard 'editorial sustainability' cited by some as a nod to the importance of keeping websites updated and fresh, both to appeal to more sophisticated users and to search engines. While there are certainly some finite collections that may not themselves require 'updating', many will require a plan to ensure that the content itself retains its value.

- What structures are in place to ensure that the content will continue to remain valuable, by being updated, enhanced and added to over time?
- How often will the resource require updating?
- What volume of content will be new each year?
- Have intellectual property rights been properly cleared, to ensure long-term ownership of or access to the content?
- What interpretive or contextual materials will the content require to be most valuable to users?

**Access and discovery requirements.** Many funders mandate that the outputs of publicly funded research and other activities must themselves be made freely available to the public. Some, like JISC, require that a grantee's home institution agree to host the content created for a minimum of five years. Others, like the Wellcome Trust, support 'unrestricted access to the published output of research as a fundamental part of its charitable mission and a public benefit'.<sup>28</sup> These requirements, which many funders see as directly related to the ultimate impact of the work, have implications for how a resource will be permitted to seek financial support from its users, so need to be addressed at the earliest stages of planning. In addition, there are other questions concerning ongoing access and delivery of content that suggest that 'open' is not necessarily the same as 'easily discoverable'. Elements to consider include:

- Will the content be freely available to users, whether the general public or other researchers? If so, for what period of time?
- How will users find the resource?
- Will the resource be easily discoverable by search engines?

**Audience impact requirements.** Another major theme for funders concerns cultivating and demonstrating use and impact. While providing content for free lowers barriers to access, that alone may not be enough to drive usage, and ultimately impact – depending on the definition of 'impact' suitable to the project.

- Does the project need to attract a very large audience, or just a specific type of user, to be considered successful?
- How will the audience use the content?
- How will the project measure and respond to the needs of its users, as these will surely change over time?
- What communications or outreach activities are necessary to ensure that the potential audience for the work is made aware that it exists?

**Leadership and staff expertise to support the ongoing enterprise post-grant.** Some funders, particularly those who support projects that may be intended for research and development purposes, define sustainability not by the durability of the digital outputs themselves (some of which are ephemeral), but by the lasting expertise gained by those who have worked on the projects or learned from them. And even for those projects that result in creation of a dynamic digital resource, maintaining staff and leadership who are well-versed in the skills needed to continue to develop the resource is an important factor in its ongoing success.

- How can the staff skills, capacity and infrastructure built up through a grant-funded project be sustained, either to continue to manage the resource itself, or to bring the expertise acquired to other projects or training activities?

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<sup>28</sup> For the Open Access Policy Statement of the Wellcome Trust, see [www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTD002766.htm](http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTD002766.htm).

## What funders often do not address when talking about sustainability

In our investigation of calls for proposals and application requirements for programmes that explicitly fund the creation of digital resources, we observed many funders addressing some of the above aspects of sustainability in the earliest stages of a grant application. What we did *not* see were requirements for an applicant to think deeply about the financial and other resources a project will require post-grant in order to accomplish these tasks and reach these sustainability goals. This point cannot be overstated: while grant applicants are often asked to identify post-grant plans or aspirations for long-term impact (e.g. 'We will continue to revise and update content, build traffic to the website and upgrade software'), they are rarely asked to outline a clear, plausible vision of the activities this will involve *after* the grant expires, or to gauge the likelihood of success in acquiring and maintaining the resources – financial or otherwise – needed to support this work over time.

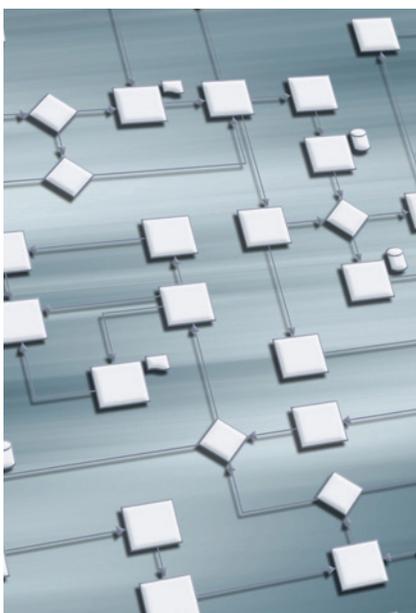
### 2.2.2 A planning framework

*Put simply, the intention to grow and update the digital resource – rather than the format itself – drives the need to deeply consider plans for its long-term sustainability*

Any project that creates something of lasting value – digital content, knowledge, infrastructure – will need some sort of sustainability plan, but it's not the content type or format that determines what sort of plan will be required. Rather, this will depend upon the scale and complexity of the digital outputs, and on the intentions of the project leader and funder. While several years ago it might have been obvious that a research article in the humanities would not require much more than safe deposit in a reliable repository, what about scholarly articles of the not-too-distant future – published first in digital format, perhaps with multimedia features embedded in them, and whose authors want to update them? Put simply, the intention to grow and update the digital resource – rather than the

format itself – drives the need to deeply consider plans for its long-term sustainability.<sup>29</sup>

Given the diverse goals, activities and financial considerations that help to define and lead to various sustainable options, we have attempted to construct a summary framework (table 1, on page 21) to identify and organise the various approaches we found funders taking during the course of our research.



The **Goals** row asks funders and project leaders to consider what a 'sustainable' project might look like, for each of the five categories of activity discussed above. The most complex digital resources may have to plan for ongoing support of the technical integrity of the content, and often, this is now being required as part of a data management plan. But does the content of the resource need to remain current? If so, the project leader will need to think about what mechanisms will encourage ongoing updating and/or acquisition of new or updated content. Is there a preference, or a mandate, that the content be provided freely? If so, this should be considered a sustainability goal. Will sustainability be measured in terms of number or type of users? If so, this will need to be quantified to the extent possible, too. Some digital resources, such as online educational resources, may define sustainability by the degree to which practices have been adopted by a community of users. This, too, could be considered a goal that will require certain activities and incur certain costs.

The **Activities** row describes the categories of activity that will need to take place in order to achieve the goals in each of the applicable categories above. It will be necessary for people to devote their time to these activities, whether they be paid staff members or volunteers who contribute content, software, or other forms of expertise. For example, the leaders of a crowd-sourced project may state that to be sustainable for the long term, they must find ways to build their content base using primarily community-contributed

<sup>29</sup> See Appendix D for descriptions of common types of digital outputs and the sustainability questions they may raise.

materials. This will surely require many steps: developing an understanding of the audience, making them aware of the resource, building a plan to provide incentives for their participation and perhaps even establishing a quality-control or vetting process to screen or normalise the content that comes in.

The **Costs** row asks project leaders to identify whose labour, time, and funds will have to be devoted to the activities specified above. So, if updating of software will be required, who will undertake this and how much will it cost? Will the host institution allocate staff to the task, or will the hiring of more staff or outside contractors be required? A project whose plan involves hosting crowd-sourced content may have relatively low staff costs, but it still needs to pay for the time of a project manager and/or programmers. A large-scale digital repository may have significant ongoing operational costs, including staff and ongoing software upgrades. Whether staff time or other expenses are provided at no charge by the hosting institution, or need to be covered in part or whole by other sources of support, is something each project will need to determine.

Finally, the **Revenues** row asks for thinking about how the revenues needed to cover projected costs might be generated, and the types of income streams that might produce those revenues post-grant.

By working through these steps (or something like them), project leaders and their funders can gain a firmer sense of what ongoing activities may be, and where the resources needed to conduct them may need to come from.

Table 1. Framework for Post-Grant Sustainability Planning for Digital Resources

**DEFINE DESIRED POST-GRANT IMPACT**



<b>Components of Post-Grant Sustainability</b>					
	Technical Requirements	Content	Access and Discovery	Audience and Impact	Staffing of Ongoing Enterprise
<b>SET GOALS</b> To achieve desired post-grant impact, what must be sustained? Consider all components, though each project's goals will influence its needs.	What will resource require for long-term conservation, storage, server space, migration to new formats?	Will resource require ongoing editorial updating, new content, new metadata, other enhancements?	Does project team have a desire or obligation to provide open access?	How does project define its goals in terms of reaching an audience? (Or: What size/kind of audience impacts, are desired?)	Who is needed to maintain resource: PI, full project team, expertise in a certain area?
<b>IDENTIFY ACTIVITIES</b> What ongoing activities will be needed to accomplish the goals above?	Regular maintenance plus labour devoted to updating of hardware and software	Labour (of staff or volunteers) in developing and updating content and metadata	Maintenance and upgrading of user interface and search and discovery tool; search engine optimisation	Development and execution of outreach or marketing plans	Succession planning for leadership; staff training, retention; recruiting new staff, experts, volunteers as needed
<b>DETERMINE COSTS</b> What resources will be required to support these activities?	Included here should be direct costs as well as needs for non-financial resources, including volunteer labor and in-kind services.				
<b>BUILD REVENUE PLAN</b> Where will project obtain resources needed to cover costs?	Included here should be a plan addressing all possible sources of revenue, including direct and indirect support from host institution, potential earned income, and additional grants, donations, or endowment payouts.				

## 2.3 Who Is Responsible for a Funded Project's Sustainability?

When funders mandate that a digital project be 'sustainable', to what extent are they invested in this outcome? Put more bluntly, for whom is it a problem when a project cannot attain this goal? From the start, most grant-funded digital resources have many stakeholders, including the principal investigator who leads the project, the funder who has invested in it, the host institution that is likely to be contributing resources in a variety of ways to its upkeep and the community that benefits from it. The question of whose responsibility it is to sustain a project is far from simple.

### The project leader

*...while shutdown represents an extreme outcome, there are also unfortunate consequences for projects that are neither entirely shuttered, nor truly sustained. Many creep along, under-valued, under-used and under-maintained. While perhaps such an outcome is not an outright 'failure', most would agree that it is far from desirable.*

For the project leader who has received a grant and devoted time and effort to creating the resource, figuring out how to ensure its long-term usefulness is no easy task. Scholar-entrepreneurs quickly learn that building something of high quality is not sufficient. They also need to develop and maintain a critical mass of users or a community of constituents that will not allow the project to die. Nourished by grants while in infancy, the projects they create continue to require funds to cover operational costs, and in many cases, project leaders simply do not take this fully into account. At the end of a grant, many project leaders face a tremendous challenge in securing the necessary funding and staff time to maintain, develop and update their initiatives.

In the most extreme case – where a project is simply shut down – project leaders who have made a serious investment of time in their projects and who continue to believe in their importance clearly have a lot to lose. Financial support ends, content must be dealt with in some way, staff may have to be let go, users are disappointed and the project leader may be left with a personal sense of failure, or perhaps even concern about his or her ability to win future awards from grant-makers. But while shutdown represents an extreme outcome, there are also unfortunate consequences for projects that are neither entirely shuttered, nor truly sustained. Many creep along, under-valued, under-used and under-maintained. While perhaps such an outcome is not an outright 'failure', most would agree that it is far from desirable.

### The funder

For funders, on the other hand, the sustainability question may be a similar melody, but in a different key. Funders are at a greater remove from the immediate concerns of maintaining a specific project, and the extent to which they care about 'sustaining' digital resources is deeply dependent on the extent to which they define their mission around creating these resources in the first place. A funder whose primary mission is to create digital content is likely to be more vested in its ongoing 'health' than is a funder for whom digital content may be not much more than an interesting by-product of grants intended to achieve other goals.

The mission of the funder or funding programme helps to determine the sort of grant programme that the organisation will offer. In some cases, a funder may be most concerned with obtaining a very specific outcome: the high-quality digitisation of a special corpus of content, for example. In other cases, a funder may want to use its money to support the actions of talented individuals or teams, where the exact outputs are less well defined. There is a big difference between funding in order to 'ensure that something happens'<sup>30</sup> and funding in order to build capacity, for example, and the way funders structure their grants may influence the likelihood of getting the outcomes they want. Consider the Canadian Heritage Information Network's (CHIN) funding of digital museum exhibitions. Intended to produce content in standardised formats that CHIN will host for five

<sup>30</sup> Julia Unwin, *The Grantmaking Tango: Issues for Funders* (London: The Baring Foundation, 2004), p.14, [www.baringfoundation.org.uk/GrantmakingTango.pdf](http://www.baringfoundation.org.uk/GrantmakingTango.pdf). Also see her discussion of the different styles of grantmaking, 'giving, shopping, investing', p. 57.



years, awards for creating such exhibitions take the form of contracts. A large research funder like the Wellcome Trust, on the other hand, in sponsoring leading scientific researchers under its Senior Investigator scheme, is supporting an individual's work; whether this individual's research results in a digital output is secondary (though the scientists are required to submit a data management plan, as well).<sup>31</sup>

There has recently been a marked shift from responsive-mode funding to more strategic funding on the part of UK funding councils, Wellcome and other funders, including those in the cultural heritage sector. In general, this marks an effort to marshal resources toward strategic concerns rather than letting the market of applicants decide how funds are used.<sup>32</sup> Some worry that this shift is not for the best and that at very least, funding only larger projects may not be the most efficient path.<sup>33</sup> Further study would be needed to determine whether larger, strategic grants to support digital resources necessarily result in more closely managed projects with stronger long-term outcomes.

While some academic and heritage funders in the past have been content to take a hands-off approach, particularly for their responsive funding programmes (sometimes caustically referred to as the method of 'fund and forget'), other methods of deeper engagement do exist, both among funders and in other, analogous enterprises. As a point of comparison, consider the case of venture capitalists, who are often deeply invested in the success of the projects in their portfolios. They are clear in their mission to seek profits for their investors, and so they set out to pick winners, to identify businesses that are positioned for rapid growth and profitability. In this sense, venture capital firms can be fairly ruthless in their decision-making: only one out of 100 business proposals may be flagged to undergo the process of due diligence, and ultimately for every cohort of businesses reviewed, a venture capital fund will choose to invest in one. Once an investment enters the portfolio, it is carefully managed. Depending on the firm and the size of the investment, managers may take a seat on the board of directors and become extensively involved in most strategic aspects of the businesses they are building, including approving of key staff hires.

Of course, funders are selective as well. Where their practices differ the most from those of venture capitalists is in their appetite for risk, and here, ironically, it is the traditional grant-maker who seems more willing to take on risk than the venture capitalist. Many funders offer grants as a 'gift' with few strings attached or expectations beyond the grant period, while venture capitalists tend to have a clearer and more pressing incentive to protect their investments, and are deeply vested in the outcome: 'My entire life savings is in here', one venture capital investor told us.<sup>34</sup>

But there are certainly examples of funders demonstrating a deeper engagement with the projects they sponsor, both during the grant period and beyond. And there are even examples of funders structuring their investments toward some sort of post-grant financial return. The government-run French 'Investment for the Future' programme structures loans and other financial instruments for small and medium businesses to invest in creation of digital content, with the expectation that loans will be repaid and profits shared with the French state.<sup>35</sup> Examples in the United Kingdom include knowledge transfer programmes, particularly those

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<sup>31</sup> Wellcome Trust, 'Guidance for Researchers', [www.wellcome.ac.uk/About-us/Policy/Spotlight-issues/Data-sharing/Guidance-for-researchers/index.htm](http://www.wellcome.ac.uk/About-us/Policy/Spotlight-issues/Data-sharing/Guidance-for-researchers/index.htm).

<sup>32</sup> The AHRC's 'Delivery Plan 2011–2015' highlights their intention to 'make longer and larger awards to fewer institutions: strategic awards will require leadership as well as excellence in relevant specialist areas', [www.ahrc.ac.uk/About/Policy/Documents/DeliveryPlan2011.pdf](http://www.ahrc.ac.uk/About/Policy/Documents/DeliveryPlan2011.pdf).

<sup>33</sup> See Phil Ward, 'RCUK to Concentrate on Large Grants', Research Fundermentals blog post, 25 November 2010, [www.fundermental.blogspot.com/2010/11/rcuk-to-concentrate-on-large-grants.html](http://www.fundermental.blogspot.com/2010/11/rcuk-to-concentrate-on-large-grants.html). Some private charities have gone a different way, giving more, not less, emphasis to the excellence of the investigator. The Wellcome Trust's recent shift to investigator awards seems similar: identifying people worthy of investment, but not putting too many constraints on their outputs.

<sup>34</sup> Since the late 1990s, there has been a growing interest in lessons that the not-for-profit world can learn from venture capitalists. For useful overviews, see Christine W. Letts and William Ryan, 'Virtuous Capital: What Foundations Can Learn from Venture Capitalists', *Harvard Business Review* 75, no. 2 (March/April 1997): 36–44, and Rob John, 'Beyond the Cheque: How Venture Philanthropists Add Value', *Skoll Centre for Social Entrepreneurship* (October 2007), [www.sbs.ox.ac.uk/centres/skoll/research/Pages/beyondthecheque.aspx](http://www.sbs.ox.ac.uk/centres/skoll/research/Pages/beyondthecheque.aspx).

<sup>35</sup> Ministère de la Culture et de la Communication, 'Investissements d'avenir: Numérisation des contenus culturels: Point d'étape' [Investments in the Future: Digitisation of Cultural Content: Progress Report] (22 September 2010), [www.culture.gouv.fr/mcc/Espace-Presse/Dossiers-de-presse/Investissements-d-avenir-Numerisation-des-contenus-culturels](http://www.culture.gouv.fr/mcc/Espace-Presse/Dossiers-de-presse/Investissements-d-avenir-Numerisation-des-contenus-culturels).

dealing with scientific research. The Royal Society created the Royal Society Enterprise Fund in 2008 as ‘an exciting new initiative . . . created to make equity investments in innovative early-stage businesses emerging from the science base in the UK and elsewhere’.<sup>36</sup> And the Technology Strategy Board, which launched a new research and development funding scheme in April 2011, ‘offers potentially significant rewards and that could stimulate UK economic growth’.<sup>37</sup>

Social investment firms may be another interesting model to examine. The Acumen Fund, for example, structures longer-term investments (8–15 years) with the clear intention of promoting break-even financial return, if not profit. The perceived ability of a business to blossom (eventually) into a self-sustaining entity is a major part of their decision-making process.<sup>38</sup>

Because government agencies and foundations rarely define success in terms of a simple financial return on investment, the challenge for these organisations to define and encourage impact goals and sustainable outcomes, both for themselves and their grantees, becomes more nuanced. What drives a funder to wish to demonstrate the long-term ‘impact’ of its grant-making? Some of the motivation stems from the desire of its stakeholders – the board of trustees of a private charity, or in the case of public funding bodies, the approbation of the government, which serves as proxy for taxpayers whose money is being spent – to see the funding body fulfil its mission goals in concrete, measureable ways. Recent acceleration of the open data movement has made it easier for the public to keep an eye on how charities spend money,<sup>39</sup> so funders of all types feel some level of pressure – beyond their own altruistic impulse – to produce measurable results. In the United Kingdom in recent years, this has led to a language of impact and ‘outcomes-based funding’ finding its way into nearly every grant-maker’s mission statement.

## The host institution

*For many funders that make grants supporting the development of digital resources in the academic, educational and cultural heritage sectors, the default assumption is that the project leader’s host university, library, or institution will bear the ongoing, post-grant costs of the project*

The host institution occupies an important, if ill-defined, terrain between the grant-maker and grantee, looming large in terms of the expectations both hold for its role in the long-term support of digital resources. For many funders that make grants supporting the development of digital resources in the academic, educational and cultural heritage sectors, the default assumption is that the project leader’s host university, library, or institution will bear the ongoing, post-grant costs of the project. Indeed, even funders that require applicants to create and share with them a ‘sustainability plan’ often expect to see a letter of commitment from an administrator.

- For one private foundation, the track record of the institution (rather than just of the project leader) is a key consideration.
- For another foundation, the host institution’s reputation and commitment to financial support for the project is important, and in any case, this foundation makes it clear that ‘we don’t fund overhead’, so the support of the host institution is an explicit expectation.

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<sup>36</sup> The Royal Society, ‘Royal Society Enterprise Fund’, [www.royalsociety.org/enterprisefund/index.htm](http://www.royalsociety.org/enterprisefund/index.htm). For the Royal Society’s criteria for investments, see [www.royalsociety.org/enterprisefund/funding/index.htm](http://www.royalsociety.org/enterprisefund/funding/index.htm). ‘The philanthropic structure of the Enterprise Fund will enable all financial gains to be returned to the Fund for reinvestment in future scientific innovations, making it a sustainable living endowment’ (‘The Royal Society Announces First Close of Its Enterprise Fund’, September 25, 2008, [www.royalsociety.org/enterprisefund/news/080925.htm](http://www.royalsociety.org/enterprisefund/news/080925.htm)).

<sup>37</sup> See Technology Strategy Board, ‘Grant for R & D’, [www.innovateuk.org/\\_assets/new%20assets%209th%20march/tsb\\_rd\\_grants\\_final\\_v2.pdf](http://www.innovateuk.org/_assets/new%20assets%209th%20march/tsb_rd_grants_final_v2.pdf). See also TSB, ‘Connect and Catalyse: A Strategy for Business Innovation 2008–2011’, [www.innovateuk.org/\\_assets/pdf/Corporate-Publications/Technology%20Strategy%20Board%20-%20Connect%20and%20Catalyse.pdf](http://www.innovateuk.org/_assets/pdf/Corporate-Publications/Technology%20Strategy%20Board%20-%20Connect%20and%20Catalyse.pdf).

<sup>38</sup> See The Acumen Fund, ‘Investment Discipline’, [www.acumenfund.org/investments/investment-discipline.html](http://www.acumenfund.org/investments/investment-discipline.html), for a description of their investment policy.

<sup>39</sup> See David Kane’s blog on the National Council for Voluntary Organisation (NCVO) website, [www.ncvo-vol.org.uk/networking-discussions/blogs/116](http://www.ncvo-vol.org.uk/networking-discussions/blogs/116). See also Countculture, ‘Introducing OpenCharities: Opening Up the Charities Register’ (September 6, 2010), [www.countculture.wordpress.com/2010/09/06/introducing-open-charities-opening-up-the-charities-register/](http://www.countculture.wordpress.com/2010/09/06/introducing-open-charities-opening-up-the-charities-register/).

- Another private foundation's experience with a major funding programme was 'very much [working from] an institutionalisation model. . . . [The institutions that received these grants] may figure out ways to generate revenue around [the funded projects]', but the funding organisation expected at least some of these grants to become sustainable by virtue of becoming university line-items.
- The French Ministry of Culture and Communication provides digitisation grants to major public institutions, including libraries and archives, with the understanding that the output of the grant will be embedded into the organisation. Other associations applying for the funds must demonstrate that they have been in existence for at least 30 years, or have made arrangements for a public institution to take on the care of the content, should they not be able to.<sup>40</sup>

With that said, funders have limited ability to ensure the longevity of the institution's financial commitment to a project. Even when there is a contract between the grant-maker and the host institution, representatives from one funding programme said that there is some hesitation to use any leverage more than a gentle nudge: 'Above all, we want to be seen as members of this community'. While we have heard a great deal about funder and grantee expectations, we know much less about just how library, university and museum administrators think about the cost and value of taking on a long-term commitment to digital projects. This is an area ripe for further investigation.

## The funder as host



In the last several years, as it has gradually become clear that not all host institutions and project leaders are in a position to support their projects for the long term, some funders have begun to invest in the infrastructure for long-term preservation and access solutions for the digital content they have helped to sponsor. The Canadian Heritage Information Network (CHIN), a Canadian governmental funder, created the Virtual Museum of Canada to serve as a central aggregation to showcase the digitisation projects of its grantee museums; the cost to operate the platform comes from CHIN's annual budget, and the grantee institutions are free to host their digitised projects simultaneously on their own local servers. The National Science Foundation's Division of Undergraduate Education funded the National Science Digital Library, a US\$100 million-plus, multi-year funding programme to produce and recommend high-quality online educational resources in the sciences for primary, secondary and tertiary audiences. NSF also sponsored the operation of a core infrastructure for aggregating and digitally preserving this content. This infrastructure was supported by a 'tax' levied on all NSF grants to NSDL projects (equaling 15% of each grant).

Other examples of funders sponsoring a repository include:

- **UK PubMed Central (UKPMC)**, a collaboration of eight medical sciences funders in the United Kingdom, including the Wellcome Trust. The funders require all research articles stemming from their grant programmes to be deposited into UKPMC within six months of delivery.
- **Jorum**, a JISC-funded repository for e-learning materials. Grantees of the JISC e-learning programme are required to deposit materials here. 'A History of Jorum' describes the original rationale for its founding in 2002: 'Over the previous 10 years, much of the output of JISC-funded learning and teaching projects had been lost or, at best, was unavailable, as projects ended, staff moved on and, eventually, project websites were not maintained. JISC wished to make project outputs available throughout the UK HE/FE [higher education and further education] community well beyond the project end dates'.<sup>41</sup>

<sup>40</sup> Interview with Sonia Zillhardt and Christophe Desseaux, Secretariat General, Mission de la recherche et de la technologie; Ministère de la Culture et de la Communication. July 15, 2010.

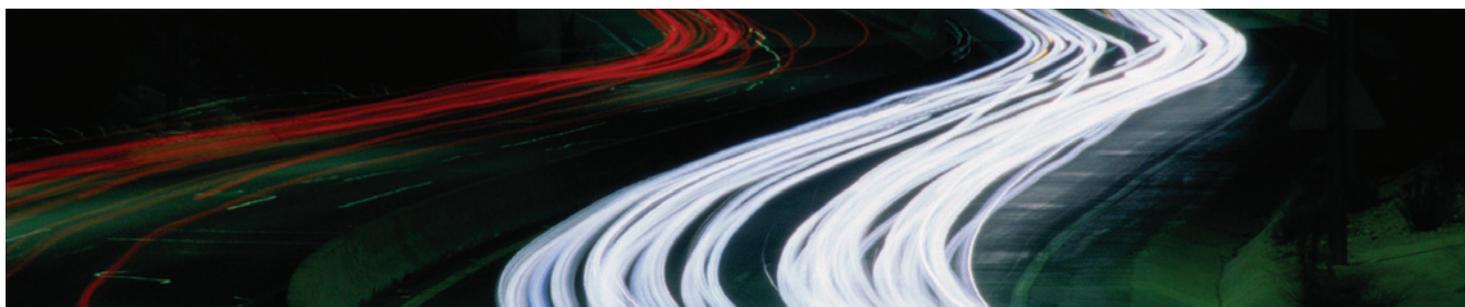
<sup>41</sup> Leah Halliday, 'A History of Jorum, the Learning Resource Repository for UK Higher and Further Education (2002–2008)' (2008), at 'Jorum History Document 2002–2008', [www.jorum.ac.uk/about-us/history](http://www.jorum.ac.uk/about-us/history).

*A funder's investment in infrastructure does not obviate the need for project leaders to develop contingency plans of their own.*

While these funder-supported preservation solutions and delivery platforms have helped to address the challenges that individual researchers face when thinking about long-term goals, they come with their own sustainability challenges. Deposit in a safe place that will take care of preservation and data migration and access needs may be a complete solution for such finite works as academic articles or datasets from completed research projects, but it may not adequately address the ongoing needs that larger, more complex projects will require. Creation of a large digital repository is a viable solution only if grantees comply with the policy and indeed deposit their work as intended. The Wellcome Trust, for example, has very detailed documentation on how an author needs to go about doing this, and provides funding for authors to pay open access fees to publishers, if needed. But even with the best intentions, reported compliance rates are low, in the range of 50 percent. Finally, what happens if a funder decides to stop supporting the repository it has created? Who are the other stakeholders, and will they be willing and able to keep things running? These are not just hypothetical questions, as recent years have shown. As mentioned earlier in this paper, in 2006 the Arts and Humanities Data Service, a repository for outputs from the Arts and Humanities Research Council (UK), lost funding from JISC and the AHRC, and in 2011 the National Science Foundation indicated that it is cutting off funding for the National Science Digital Library, including the infrastructure that supports the content already generated by the programme. A funder's investment in infrastructure does not obviate the need for project leaders to develop contingency plans of their own.

# 3. Current Funder Strategies For Sustainability

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The previous sections of this report have highlighted the types of sustainability goals we have heard funders asking their grantees to meet and mentioned some of the actions funders have taken to advance these goals. In this section, we attempt to drill down into the specific tactics funders are employing at different stages of the life cycle of a project to accomplish these goals and encourage post-grant sustainable outcomes for the digital resources they help to create. By interviewing programme officers, project leaders and other experts, and by reading the application forms and other sorts of guidance funders provide, we have tried to understand the practices funders are favouring today. Where possible, we point out areas in which funders seem to have the most influence (as well as where they may want greater influence), and areas in which a funder's requirements or policies may present challenging trade-offs between varying sustainability goals.

What follows are descriptions of the ways we have observed funders taking action to influence the long-term success of their grant projects. These methods, which follow a roughly chronological sequence through the life cycle of the grant-making process, range from defining the terms of the call for proposals – including invoking specific legal controls (e.g. prohibiting certain kinds of costs or requiring certain types of access) – to engaging in a range of formal and informal practices meant to encourage the growth and success of leaders and their projects (e.g. interaction with grantees and evaluation of mid-term grant reports). We have grouped these practices by the following broad methods:

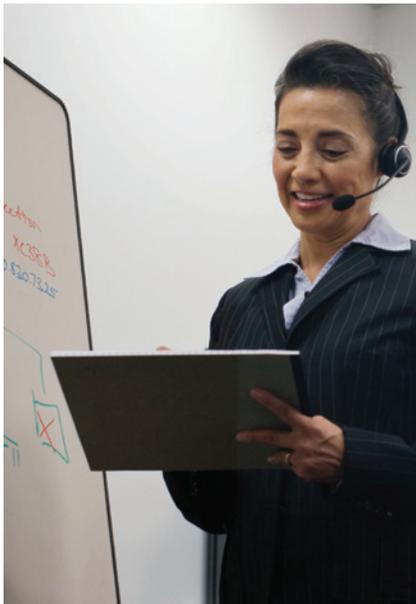
- **'Building in' sustainability**, including ways the funder shapes the grant programme, the terms of individual grants and the expectations of grantees in order to produce the desired outcomes
- **Selecting strong candidates**, including how the funder hopes to influence outcomes by selecting both projects and leaders who offer the best chance of delivering long-term impact
- **Nurturing sustainability**, including steps the funder takes to influence the direction of the project once the grant has been awarded, by providing either direct or indirect guidance to the project leader throughout the course of the grant

All of the funders we spoke with use each of these models to some degree or another. It is not easy to determine the best combination of incentives and requirements to encourage sustainable outcomes, but we hope that presenting this array of tactics and offering insights into ways that existing practices might be sharpened, will help funders to consider the range of options available to them when thinking about what might best suit the different funding programmes they support.

## 3.1 'Building In' Sustainability

### 3.1.1 Setting the stage

Most funders engage in some degree of background research in order to plan new areas of funding, develop new calls for proposals and help identify pressing needs they may want to address through targeted grants. For many funders, then, considerable time is spent canvassing the landscape to develop programme areas, determining whether there are gaps in the funding landscape that need filling and identifying new directions



that have the potential to be transformative. Work done in-house or commissioned for this purpose helps to define the issues that the programme will address and the overarching goals for the programme, as well as the types of projects that are most likely to achieve desired outcomes.

This research takes the form of interviews with scholars and experts in a given field, workshops and other forms of information-gathering to help programme officers identify the areas they choose to invest in. For example, the staff of Arcadia, a private funder in the United Kingdom, compiles detailed scoping documents assessing the competitive landscape for potential projects before offering funding. From a slightly different angle, public funders, including individual directorates of the National Science Foundation, may issue calls for white papers outlining problems or needs that their funding could usefully address, as in the case of a recent call for papers on ‘grand challenges’ in the social sciences.<sup>42</sup> All of this planning work is, in some sense, a form of market research that funders use to refine the goals and value propositions of the projects that will eventually be funded.

Programme officers enjoy a considerable degree of latitude to shape the grant opportunities and guide the process of grant-making. In both public and private grant-making bodies, it is often the programme officer’s job to assess the landscape and determine what the terms of the grant will be, and this is a significant means of influencing outcomes. While some specific terms and conditions may be set at the organisational level – such as a preference that grantees make the outputs of their projects freely available – quite often, the programme officer will decide on the terms based on the needs that a particular call for grants seems to carry. This flexibility to set terms is quite important for funders, as the terms that programme officers set affect their ability to influence or control the development of a project later in the grant period. As one experienced programme officer at a public funding agency stressed to us, many of the most important points of control are baked into the earliest stages of the process, from determining the language of the call for proposals, to the terms of the grant itself.

### 3.1.2 Shaping the call

The call for applications, the written proposal itself and the grant letter or contract that codifies the terms of the award are important stages in shaping the expectations for what the outcome of a grant will be. This section explores how funders today are prompting applicants to think about their project and its post-grant impact and growth and what this will require. Throughout our interviews, as well as throughout our review of published applications for funding and guidance materials, we found that funders discuss sustainability in a number of different ways. Most discuss sustainability as sustaining the long-term impact of a project, but what this entails varies quite a bit. Some funders think of sustainability as the need to ensure that digital content is preserved online, while others may stress the need to make the content openly available and still others emphasise the need to sustain the value of the intellectual property created by keeping it current and perhaps even adding to it. In this section we present the following topics:

- Impact statement
- Data management and preservation
- Access concerns and opportunities
- Protecting and enhancing content
- Audience and outreach
- Ongoing enterprise
- Costs and revenues

<sup>42</sup> National Science Foundation, ‘Dear Colleague Letter for SBE 2020: Future Research in the Social, Behavioral & Economic Sciences’, [www.nsf.gov/pubs/2010/nsf10069/nsf10069.jsp](http://www.nsf.gov/pubs/2010/nsf10069/nsf10069.jsp).

The list includes those elements funders explicitly identified as being important to the long-term health and impact of the work they support, as well as other elements that seem important for sustaining digital resources. We hope that thinking about the full range of activities that can contribute to building robust digital content resources will be useful for funders and applicants from the earliest stages of the grant-making process.

**Impact statement.** Funders and funding recipients alike talk about the difficulties inherent in defining and assessing the impact of a project. As one of our interviewees noted confidentially about a funding programme for digital resources, putting together a board report on the suite of funded resources from that year felt like ‘looking at apples and oranges’ in terms of the very different metrics needed to assess each. Questions about a project’s potential to provide long-term impact, or impact post-grant, are not uncommon, but are often kept quite loosely defined, with a range of funders asking general questions about how a project will continue delivering value for its users, while others drill down to asking about plans for a project’s long-term financial security.

To some who have served on review panels, required statements of potential impact are seen as a necessary evil, not always well-thought-out by applicants or taken seriously by reviewers. As Athene Donald, a Cambridge professor of biophysics and frequent participant in grant review panels, pointed out in a public blog post in early 2011: ‘Very few referees comment specifically on the mandatory (for UK research councils) “pathways to impact” statement but, given how little concrete detail of what is wanted and/or required is out there on their web pages . . . Whatever it is they are going to do, it will solve all the ills of mankind, revolutionise the production of something or other and allow us to fly to the moon. This is not really helpful’.<sup>43</sup>

The impact statement serves an important purpose if it asks the project leader to clearly define his or her aspirations for the project. This target, then, becomes the starting point from which the potential grantee can then identify just what aspects of the project will require long-term support in order to achieve the desired impact. The sections that follow detail the ways funders try to build in guidelines for their projects to specify how they will deliver those overarching impact goals.

**Data Management and Preservation.** For many funders, particularly those making grants to scholars or project leaders in the natural or social sciences, having a plan in place for the preservation of data produced during a project is often considered a key element of sustainability. In the past year, several funders have revised or instituted requirements that applicants supply a data management plan along with their applications. Funders’ requirements for these plans tend to focus on technical aspects of preservation and storage, and increasingly address issues of ongoing access and sharing.<sup>44</sup> For example, in February 2011, the National Science Foundation began requiring grantees to submit a data management plan, the specific contents of which will be determined by each individual NSF directorate, but which at a high level must include:

- the types of data, samples, physical collections, software, curriculum materials, and other materials to be produced in the course of the project
- the standards to be used for data and metadata format and content (where existing standards are absent or deemed inadequate, this should be documented along with any proposed solutions or remedies)
- policies for access and sharing, including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements
- policies and provisions for re-use, re-distribution, and the production of derivatives
- plans for archiving data, samples, and other research products, and for preservation of access to them<sup>45</sup>

The documentation is at most only a few pages long, but even those who feel their projects do not need data management plans are obliged by NSF guidelines to explain why they feel that such a plan is not needed.

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<sup>43</sup> Athene Donald’s Blog, ‘Indigestible Committee Paperwork’, 13 February, 2011, [www.occamstypewriter.org/athenedonald/2011/02/13/indigestible-committee-paperwork/](http://www.occamstypewriter.org/athenedonald/2011/02/13/indigestible-committee-paperwork/).

<sup>44</sup> The Digital Curation Centre provides a useful overview of the required elements each UK academic research funder requires. See DCC, ‘Overview of Funders’ Data Policies’, [www.dcc.ac.uk/resources/policy-and-legal/overview-funders-data-policies](http://www.dcc.ac.uk/resources/policy-and-legal/overview-funders-data-policies).

<sup>45</sup> NSF, ‘Chapter II – Proposal Preparation Instructions’, January 2011, [www.nsf.gov/pubs/policydocs/pappguide/nsf11001/gpgg\\_2.jsp#dmp](http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/gpgg_2.jsp#dmp).

In another example of a funder instituting changes to data management practices for grantees, the Wellcome Trust revised their Data Management and Sharing Plan requirements in summer 2010, after studying plans that applicants submitted and realising that they needed to further clarify their expectations for what should be included. The new guidelines outline these elements:

- What data outputs will your research generate and what data will have value to other researchers?
- When will you share the data?
- Where will you make the data available?
- How will other researchers be able to access the data?
- Are any limits to data sharing required – for example, to either safeguard research participants or to gain appropriate intellectual property protection?
- How will you ensure that key datasets are preserved to ensure their long-term value?
- What resources will you require to deliver your plan?<sup>46</sup>



Although these plans touch on an important aspect of sustainability – the continuing availability, for later use by other researchers and users, of the data produced – these plans seldom ask applicants to address the issue of updating the data in ways that will make it more useful to interested audiences in the future. The issue of enhancing the digital resource in order to maintain its value to users is another important aspect of sustainability, particularly for those projects that are intended to continue to develop and grow over time.

**Access Concerns and Opportunities.** Most funders ask potential grantees to explain their plans for ensuring that the digital resources they produce will be accessible. While there are a variety of ways to plan for long-term access to a digital resource, we heard from a number of programme officers that sustainability was often equated, in part, with open-access policies, and providing for ways to make the content openly accessible is often an obligatory condition for receiving funding. In the United States, United Kingdom, Canada, and continental Europe, well over half of the funders we studied either explicitly oblige their grantees to make digital content that is created as part of a grant freely available, or express a strong preference for free availability.

There are several reasons for this. Government funding agencies, particularly in the United States, often cite their use of public taxpayer funds as a reason for insisting that the outputs of grant-supported projects be freely available. For example, the National Endowment for the Humanities (US) includes the following language in its description of a grant programme that sometimes funds digital resources:

*As a taxpayer-supported federal agency, NEH endeavors to make the products of its grants available to the broadest possible audience. Our goal is for scholars, educators, students, and the American public to have ready and easy access to the wide range of NEH grant products. For the Preservation and Access Research and Development programme, such products may include digital tools, software, and Web sites. For projects that lead to the development of such products, all other considerations being equal, NEH gives preference to those that provide free access to the public.<sup>47</sup>*

<sup>46</sup> Wellcome Trust, 'Guidance for Researchers: Developing a Data Management and Sharing Plan', August 2010, [www.wellcome.ac.uk/About-us/Policy/Spotlight-issues/Data-sharing/Guidance-for-researchers/index.htm](http://www.wellcome.ac.uk/About-us/Policy/Spotlight-issues/Data-sharing/Guidance-for-researchers/index.htm).

<sup>47</sup> NEH, 'Preservation and Access Research and Development' February 2011, [www.neh.gov/grants/guidelines/PARD.html](http://www.neh.gov/grants/guidelines/PARD.html).

*However funders choose to shape their calls and programmes in terms of access options or mandates, it is important to bear in mind that projects with ambitions to enhance their open-access content over time, invest in new tools, or make new audiences aware of their digital resource will need to draw on sources of revenue for these activities.*

Of course, there is still some variation among funders on the issue of whether grant-funded projects should be made freely available: in the private sphere, we have seen funders who feel strongly that all outputs should be openly and freely available, and others who are more willing to let the needs of the project dictate this choice.

However, funders choose to shape their calls and programmes in terms of access options or mandates, it is important to bear in mind that projects with ambitions to enhance their open-access content over time, invest in new tools, or make new audiences aware of their digital resource will need to draw on sources of revenue for these activities. Grantees who need to make their outputs of their projects openly accessible will need to develop a viable plan for ensuring that the costs of offering the contents of these projects for free on an ongoing basis can be supported.<sup>48</sup>

**Protecting and Enhancing Content.** The value of the content or other intellectual property to be created is among the most important factors in the awarding of grants. Assuring that the digital resource is of excellent quality, and an important contribution to the field, is in many ways at the heart of any plan for long-term impact and sustainability.

But there are immediate and practical concerns that funders take care to address concerning the persistence of the content whose creation they fund. Among these concerns are intellectual property rights, content enhancement mechanisms and provisions for failure to complete a project. This is sufficiently important that funders will often require applicants to identify rights-holders and any rights or usage restrictions that could possibly arise. For example, this is one major criterion that the US Institute of Museum and Library Services considers when making grants:

*For projects that produce digitised collections, software, information systems, and other technology tools . . . the extent that project plans address activities to preserve and sustain the resulting digital products [is one evaluation criterion]. . . . Projects should identify who will own copyright on the digital products and describe any restrictions placed on collection or product use during and after the grant period. Plans for preservation and maintenance of collection or other products during and after the expiration of the grant period also should be described.<sup>49</sup>*

The issue of ensuring that rights are properly cleared and managed for digitised content has been recognised as a significant challenge among the community of funders and project leaders who work with digitised content. Accordingly, some grant-makers we interviewed were willing to dedicate funds toward helping their grantees clear rights, and, even after the launch of the project, conduct regular checks to be sure the digitised content is not being used on other sites without permission.

And most funders we studied had little interest in retaining intellectual property (IP) rights to the projects they fund. Even grant-makers that operate platforms to collect and steward the digital assets created by their grantees (for instance CHIN, which hosts the museum digitisation projects it funds on its Virtual Museum of Canada platform) do not generally ask for IP rights to their grant-funded content – perhaps because, as one of our interviewee programme officers pointed out, ‘We are not looking to compete with our grantees’.<sup>50</sup>

We did, however, encounter a few exceptions to this. One American foundation notes, for example, that they ‘[do] not expect to hold the intellectual property ownership rights to products it has funded, except in those instances when digital resources are created at the direction of the Foundation’,<sup>51</sup> and the UK Research

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<sup>48</sup> ‘Freemium’ models that make basic content openly accessible but charge users for premium content and services offer attractive possibilities for solving access and sustainability problems, but there are still not many examples of freemium models that work, especially in the non-profit sphere. Foundations as well as their grantees recognise the need for further research and experimentation in this space.

<sup>49</sup> IMLS, ‘National Leadership Grants 2011 Panelist Handbook’, p. 10, [www.imls.gov/pdf/2011\\_NLG\\_Panelist\\_Handbook.pdf](http://www.imls.gov/pdf/2011_NLG_Panelist_Handbook.pdf).

<sup>50</sup> The reality of IP arrangements may be slightly more complex; some funders insert clauses into award letters that reserve certain rights for exploiting grant-funded IP if the funding agency in question is not satisfied with the grantee’s management or exploitation of those IP rights.

<sup>51</sup> The Andrew W. Mellon Foundation, ‘Intellectual Property’ (16 March 2001), p. 2, [www.mellon.org/about\\_foundation/policies/IPPolicy.pdf](http://www.mellon.org/about_foundation/policies/IPPolicy.pdf).

Councils in individual cases ‘reserve the right to retain ownership of intellectual property (or assign it to a third party under an exploitation agreement) and to arrange for it to be exploited for the national benefit and that of the Research Organisation involved’.<sup>52</sup> The motivation for these provisions seem to be twofold: to ensure that the funder ‘will not, in effect, pay twice for the products, first for their creation, and then for access to those resources’,<sup>53</sup> and to protect the intellectual property – and find alternatives for its continued creation – should a grantee fail to complete a project.

Beyond these concerns for making sure the rights are cleared, and providing for ownership in the event of non-completion, we found few queries in funders’ guidelines about providing for ongoing enhancement of the content. Of course dynamic content is not important to many projects, but for those projects where updates and other content additions are necessary to retain the value of the resource to its users, prompts asking potential grantees to spell out how they expect the content to evolve, and how they will accomplish this evolution, can be an important way to strengthen the guidelines. (Indeed, one funder asks not at all about costs to update content in the post-grant period, but rather simply makes available a grant to update the content that it has funded, five years after launch.)

**Audience and Outreach.** The value of a digital resource is often defined by its specific value to a set of potential users. Identifying, quantifying and developing strategies to reach and attract these users, especially when competing alternatives are available, is an important element of any sustainability plan, whether audience engagement is measured by demonstrating usage, generating revenue, contributing content, or otherwise helping to run the project itself.

Grant applications from most of the funders we studied included prompts concerning potential audiences of the work being proposed. Often, these questions were framed as impact statements, asking such questions as ‘how will this project benefit its audiences?’ Some went further, asking just how this would happen, as in the case of the section on ‘Beneficiary and community involvement’ in the application for the Reaching Communities Programme of the UK-based Big Lottery Fund:

*We believe that projects that involve local users and project beneficiaries are more likely to meet a real need, stand a greater chance of success and are more likely to be sustainable in the long-term. Tell us how potential beneficiaries and the wider community will be involved in making your project happen.*<sup>54</sup>

Less often, applicants were asked to provide further detail about the nature of the potential audience: just how large it is, or what secondary audiences might exist, or what percentage of those targeted audiences a project was hoping to reach, or how the project intended to engage with users in the post-grant period. One funder, the National Science Foundation’s Division of Undergraduate Education, sometimes asks grant applicants to estimate the number of undergraduate students, pre-college students, college faculty, pre-college teachers and graduate students who will be ‘directly affected by the activities of the project during its operation’.<sup>55</sup> In another case, the Heritage Lottery Fund routinely asks applicants for cultural heritage projects to offer demographic information on the audiences they expect to reach (age, gender, religion, etc.), and prompts them to quantify their expected impact:

- . . . How many visits have you had in the last 12 months?
- How many visits do you expect you will have in the 12 months after your project finishes?
- How many volunteers do you expect will work on your project from start to finish?
- How many people will receive training through your project?<sup>56</sup>

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<sup>52</sup> Economic and Social Research Council, *ESRC Research Funding Guide* (March 2011), ‘Commercial Exploitation’, paragraph GC 21, p. 39, [www.esrc.ac.uk/\\_images/ESRC%20Research%20Funding%20Guide\\_May%202011\\_tcm8-2323.pdf](http://www.esrc.ac.uk/_images/ESRC%20Research%20Funding%20Guide_May%202011_tcm8-2323.pdf).

<sup>53</sup> Mellon Foundation, ‘Intellectual Property’, p. 3.

<sup>54</sup> Big Lottery Fund, ‘Card 1 – The Big Lottery Fund Reaching Communities Programme (Version RC-4)’, November 2009, [p. 1], [www.biglotteryfund.org.uk/rc\\_cards\\_09\\_\\_nov\\_.pdf](http://www.biglotteryfund.org.uk/rc_cards_09__nov_.pdf).

<sup>55</sup> National Science Foundation Division of Undergraduate Education grant application form (April 2010).

<sup>56</sup> Heritage Lottery Fund, ‘Heritage Grants Application Form: Grants of more than £50,000’ (November 2010), p. 12.

*Many funders we spoke with expressed deep concern about how to plan for what should happen at the end of a grant.*

Another example is the Arts Council England, which makes a small number of grants to support digital content and projects. This funder explicitly asks *all* grant applicants to consider and detail marketing and outreach costs in the proposal, in great part because many of their funded projects (including art exhibits and theatre performances) will be charging for admission and so will need to reach and understand that audience. This speaks to the influence of a grant-maker's history in their current grant-making practices for digital content and online projects.

What we rarely saw in our research were requests for grantees to detail the competitive environment for their projects, or comment on the comparative advantages their resource would provide to users. And it was unusual in the guidelines we examined to see calls for project leaders to undertake market research (as the Arts Council England asks), or request funding to cover marketing activities. This may be understandable for many funders who have traditionally funded research projects. But a digital resource may keep growing and changing in a way that a printed monograph or a by-gone academic conference does not; to sustain the ongoing costs associated with realising the potential of such resources, grantee institutions will likely need to fund some marketing and outreach functions. In contrast, public arts funders and some museum funders have long funded exhibits and performances for which tickets must be sold, so it comes as no surprise that those funders continue to allow marketing and outreach costs for digital projects.

**Staffing of the Ongoing Enterprise.** Many funders we spoke with expressed deep concern about how to plan for what should happen at the end of a grant. For some, the question is easy: they are explicit at the outset of the grant that project leaders should not expect additional funding. In one case, a programme officer told us, 'We don't have an issue with projects coming back for [additional] funding because we simply tell them it will not be granted'.

More often, though, for funders whose projects will continue in some form after the grant period – whether because this was intended from the start, or because the project has shown promise during the course of the grant – determining how to most effectively move a project away from dependence on the funder while helping the project leaders to create the infrastructure and leadership they will need to continue to reach their goals is an area of great concern.

*In one case, a programme officer told us, 'We don't have an issue with projects coming back for [additional] funding because we simply tell them it will not be granted'.*

The previous sections have highlighted the steps funders use to help ensure that a grant's outputs will have lasting value. But in order to realise this value, what began as a project team may need to think about themselves as an ongoing enterprise. Funder support to do this may take the form of financial support or guidance designed to help a project transition from a fixed-term funded project or development phase to long-term operation as a business, including support for the employment of project leadership and staff. Typically, funders that are willing to support digital resources in this way have already made significant investments in them – this type of funding is rarely offered via open call. And, perhaps as a result, this is the kind of funding about which there was less readily

available information to draw on for this report. With that said, there are several tactics that funders pointed out to us when we asked how they help grantees think about and plan for just how such a transition will take place:

- **Transition grants** to enable grantees to develop plans, sometimes with the support of external consultants to aid with business planning. Grant-funded projects that are expected to continue operation (and, often, that a funder has invested in substantially) are sometimes awarded grants to develop post-grant sustainability plans, often by contracting with a consultant.
- **Ramping down funding.** A funder may stage funding to gradually 'wean' a project from financial dependence. One programme officer who employs this approach frequently said that project leaders are told at the initial application stages that any subsequent grants will be in increasingly smaller amounts. By signaling early on that less support will be forthcoming, a funder hopes to give projects strong incentive to start developing alternative sources of support from the very start.

- **Making introductions and developing partnerships.** Some funders play the role of matchmaker, either by seeking out other funders interested in supporting the work's next stages, or by encouraging partnerships with other, complementary projects. To a great extent, the success of this tactic depends on the funder's relationships and knowledge of the community of similar projects underway.
- **Defined development from grant-funded project to ongoing service.** In some cases, funders may choose to play a very active role in supporting the further development of digital projects. In the case of JISC, projects that may have begun through grant funding are evaluated to determine which should be transitioned to a 'service' and supported with an annual budget allocation. This happens when the project is so valuable to the funder's core mission (in this case, supporting UK higher education and further education) that the funder chooses to shift to a more predictable funding method.<sup>57</sup>

Of course, these strategies all depend, to some degree, on communication between the grantee and the funder earlier in the process; these methods of funder intervention likely function best as a supplement to other forms of engagement throughout the grant, rather than as a last-minute attempt to disengage a project from the grant-maker's funding.



**Costs and Revenues.** Most, if not all, funders ask potential grantees to provide a roster of activities that will need to be undertaken during the grant period, and a detailed budget indicating what these activities will cost. Some funders require project leaders to obtain other sources of financial support beyond the grant itself, often including 'in-kind' contributions from a host institution that might include staff allocations, technical infrastructure, rent, office services, and so forth. But whether other sources of support are required or not, project budgets include carefully constructed prompts to be sure potential grantees and grant-makers understand the scale of investment and the resources needed to cover it during the grant period. When it comes to post-grant projections, however, there is much less guidance and fewer specific expectations from funders on what will be needed

to sustain the resource. Some funders, as mentioned earlier, ask good but general questions about financial sustainability; the Heritage Lottery Fund's application for Heritage Grants over £50,000 asks, 'After your project ends, how will you make sure your project is financially secure in the long-term, including meeting maintenance costs?'<sup>58</sup> Few funders require any sort of detailed projections of ongoing costs and possible sources of revenue to cover those costs post-grant.

Of course at early stages of a project, it may be very hard to know in advance what the eventual costs and best revenue sources for a project will be. Indeed, in interviews with leaders of digital projects, we heard several times that even the most well-meaning project leader may just not know the answers to some of the questions asked of them in the earliest stages of the grant-funding process. A chief executive of what is now a successful not-for-profit organisation shared the project's initial sustainability plan with us, describing the document as having been written with 'a lot of imagination'. The plan, which had helped the organisation to get grant funding over ten years ago, included eight different, well-researched ideas for generating revenue, none of which they have put into action yet, mainly due to the complicated rights surrounding the content. While the project has been successfully sustaining itself in other ways, mainly through multiple grants, how could this process be improved to be more fulfilling for project leaders and those who fund them?

If even the leaders of long-term, successful projects freely admit that any plans for 'sustainability' that they would have provided to someone at the earliest stages of their project would have been little more than educated guesswork, is this kind of planning really a worthwhile task? While goals will continue to change as the project matures, having a clear sense of what those goals are and what steps will be needed to achieve them is likely to be a worthy exercise even in the earliest days. Thinking through how to identify revenue to support the needed activities allows project leaders to further identify and refine the real value of the resource they are creating: to whom will this be most valuable, and in what ways might these stakeholders help to

<sup>57</sup> JISC Sustainability Handbook (March 2008), [www.jisc.ac.uk/media/documents/committees/jiie/26/jiie\\_08\\_12%20annex%20b%20jisc%20sustainability%20handbook.pdf](http://www.jisc.ac.uk/media/documents/committees/jiie/26/jiie_08_12%20annex%20b%20jisc%20sustainability%20handbook.pdf).

<sup>58</sup> Heritage Lottery Fund, 'Heritage Grants: Grants of more than £50,000', p. 29.

support us? Seeking a useful middle ground between what we have heard characterised as a ‘full business plan’ and ‘pure guesswork’ could yield a useful exercise in discussing long-term strategy in a way that allows both parties to build a common language around financial goals for the project.

## The host institution is still a key factor

Given the uncertainties inherent in a project leader’s ability to support a project indefinitely, we found many examples of funders depending – as an explicit policy – on the institutions that hosted the project during the grant phase to maintain their financial support for the digital resource once it has transitioned out of grant funding. Indeed, when many grant-makers talk about sustainability – particularly for digital projects and the sizable ongoing costs that they incur – they think of it as deeply intertwined with a long-term commitment from a host institution. Embedding or ‘institutionalising’ funded projects within a university or library is often considered the most favorable post-grant outcome for funders and project leaders alike. Universities and research institutes, in particular, offer robust resources for IT and research, and they provide online projects with a ready-made environment of skilled staff from which to draw. As one programme officer described his thinking about a complex project his organisation had funded: ‘It was more about getting a commitment from an institution than about a type of business plan’.

*As a programme officer at one large governmental funder put it: ‘There is the illusion that we [the organisation] fund projects, and bypass the institution, but in the end we are trying to get institutional buy-in and institutional change. . . .’*

During the course of the grant, this institutional support most often appears in the form of cost-sharing (necessitated when the funder declines to pay for institutional overhead), which is meant to provide the grant-maker with (what they see as) a reasonable expectation that the institution will cover a part of the project’s costs during the term of the grant and is more likely to support the work post-grant as well. As a programme officer at one large governmental funder put it: ‘There is the illusion that we [the organisation] fund projects, and bypass the institution, but in the end we are trying to get institutional buy-in and institutional change. . . . We need to think more about funding the institution that is supporting the project, so you may want to set more rules about how the institution can support the project’.

While the intention is to share the burden of support for the resource, economic reality sometimes intervenes. During the course of our research for this project, as the new UK government’s austerity agenda was enacted, a number of funders began to reexamine their practices: the Heritage Lottery Fund, for example, substantially reduced its requirements for partnership funding from grantees in late 2010.<sup>59</sup>

Yet the longer-term obligation of the host is not always clear or legally binding, first, because of the difficulty of assessing the true ongoing costs of digital resources – on the part of the funder, the host institution and the project leader; and second, because the methods used by foundations to try to encourage institutional support – often a letter of support signed by a senior administrator – in no way oblige the host institution to fund the project for the long term. Some commitments are more formal than others; administrators change; and ‘even if you get letters of support (from senior administrators)’, as one public funder noted, ‘this may not be enough if they are just signed off, if the institution doesn’t always realise what it is signing for’. Although maintaining strong ties with a host institution will obviously be an important part of the sustainability strategy for many projects, this support system feels fragile.

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<sup>59</sup> For recipients of Heritage Lottery Fund grants of less than £1 million, the partnership funding requirement was lowered from 10% to 5% of the project budget; for those receiving more than £1 million, the requirement was lowered from 25% to 10%. See: Andrew Holt, ‘HLF brings in measures to help applicants in tough times’, *Charity Times* (11 April 2010), [www.charitytimes.com/ct/HLF\\_brings\\_in\\_measures\\_to\\_help\\_applicants\\_in\\_tough\\_times.php](http://www.charitytimes.com/ct/HLF_brings_in_measures_to_help_applicants_in_tough_times.php).

### 3.1.3 Staging the grants and structuring the funding



There are many ways that programme design itself can help encourage the results the funder would like to see, both in terms of how broadly or narrowly desirable outcomes are defined, and even in the financial incentives or obligations built into the terms of the award.

Most of the programme officers we interviewed were primarily in the habit of making grants that were intended to cover a set of well-defined activities – a digitisation project, the creation of an online exhibition – and would be one-time only; where follow-on funding was possible, new applications would be evaluated on their own merits.<sup>60</sup> In other words, many of the digital projects and grants we studied are supported by set of sustainability challenges, as project leaders must continuously apply for the next grant, sometimes shaping projects to fit the available funding.<sup>61</sup>

In fact, there are good reasons that grant-makers tend to fund in well-defined stages. Digital resource projects have different needs as they develop from ideas, to start-ups, to fully operational services, and many funders are aware of this and make use of the stages to help guide the projects. There are benefits to carefully defining the grant by a set of clear deliverables over a fairly short timeframe, among them the ability of the funder to use the potential of a next grant as a way to leverage greater control over the funded project's progress and direction.

The funder may set an explicit expectation with the funding recipient that the first grant will cover only a certain amount of the development of the project, and that the recipient must demonstrate proof of concept and progress in order to be invited to apply for a next-stage grant. Funders use each of these methods in an attempt to ensure that their grantees' projections develop according to funder expectations and an acceptable timeline.

### Start-up grants versus grants for ongoing projects or services

Even funders that typically take a more responsive approach to grant-making – those funders that make most of their awards via open calls for proposals, for example – have found it to be beneficial to work in stages, by crafting calls for proposals that pinpoint projects at particular stages of their development. For example, the JISC Rapid Innovation programme (2009) supported the early-stage development of online tools for scholarship and teaching, with the goal of judging those first-stage efforts to see which among them would merit further investment.<sup>62</sup> Similarly, the Office of Digital Humanities at the National Endowment for the Humanities (NEH) has a programme for 'Digital Humanities Start-Up Grants' that is meant to fund new, innovative projects.<sup>63</sup> While NEH's application guidelines for the programme require an explanation of how 'provisions will be made for the long-term maintenance of the product', projects in this programme are not required to have an involved sustainability plan, since the main function is research and development. But in a new programme set to launch in mid-2011, the NEH will award Digital Humanities Advanced Implementation Grants 'to fund the next stage of the best of these cutting-edge research and education projects'. Unlike the experimental first-stage grants, these will explicitly 'target projects that have already demonstrated a successful beginning phase and that have a clear plan for moving towards full implementation', offering increased amounts for this new development phase.<sup>64</sup> By ensuring that the digital project is developing in a way that will be useful for its intended audience, the grant-maker hopes to maximize the long-term value to that audience – thus, the grant-maker hopes, better ensuring the project's sustainability.

<sup>60</sup> An exception to this is the Canadian Heritage Information Network, where funds are made available to grantee museums in order to update their exhibits after five years.

<sup>61</sup> See Unwin, 'The Grantmaking Tango', which debates such issues as the cost of application; mission creep to meet project RFP aims; and 'a ponzi scheme' of funding, where the grants must be brought in, but are often in part used to support the older, ongoing projects (see esp. p. 29ff). See also Paul Brest, 'Smart Money: Strategic General Operating Support', *Stanford Social Innovation Review* (Winter 2003), [www.ssireview.org/articles/entry/smart\\_money/](http://www.ssireview.org/articles/entry/smart_money/).

<sup>62</sup> See JISC, 'Rapid Innovation Definition and Context for JISC Projects & Programmes', [www.docs.google.com/View?id=ddpd4q4q\\_45hsqbs9dp](http://www.docs.google.com/View?id=ddpd4q4q_45hsqbs9dp).

<sup>63</sup> NEH, 'Digital Humanities Start-Up Grants' (6 August 2010), [www.neh.gov/grants/guidelines/digitalhumanitiesstartup.html](http://www.neh.gov/grants/guidelines/digitalhumanitiesstartup.html).

<sup>64</sup> NEH, *Appropriation Request for Fiscal Year 2012*, pp. 55–56, [www.neh.gov/whoweare/pdf/NEH\\_Request\\_FY2012.pdf](http://www.neh.gov/whoweare/pdf/NEH_Request_FY2012.pdf).

## Milestones during the grant

Where funders want very specific outcomes, executed to very specific standards, we have seen examples of identifying development milestones and tying them to payouts. This method is used by the Canadian Heritage Information Network. Part of the governmental Department of Canadian Heritage, CHIN makes awards (structured as contracts) to support digitisation projects at Canadian museums. Each of these projects must be developed according to CHIN's content and technical specifications so that they may be included on the organisation's central platform, the Virtual Museum of Canada. CHIN releases funds to museums according to these stages (in chronological order):

- 30% of the funding upon signing the funding letter
- 30% upon the grantee delivering a prototype of the project for audience evaluation
- 20% upon the grantee delivering a semi-final version of the project for technical review by the grant-maker
- 20% when the funder accepts the final version of the digitisation project into its Virtual Museum of Canada repository

While a programme like CHIN's might be well served by using contracts and structuring payments upon completion of predetermined milestones, most grants and awards are considerably more lenient, assuming that best-faith efforts will be made to complete the funded project, but that any repercussions to result from failure to complete the project would be reputational, not legal in nature. While some funders do make use of other instruments, including loans and programme-related investments, this is not something we observed in the funders we studied, perhaps in part because of our focus on digital projects in the academic and cultural spheres.

Which makes it all the more interesting to note that as our research was coming to a close in spring 2011 (and as mentioned briefly earlier in this paper), the French government had just launched an audacious approach: an economic stimulus package first defined in 2010 included an apportionment of approximately € 2.5 billion for the creation of innovative services and digitised content, and € 2 billion for related technological infrastructure development. In the first call for projects, 'Technologies for digitization and development of cultural research and educational content', content holders will be expected to form partnerships with companies in the private sector to generate revenue from these projects. The funding packages will be structured as 25 percent grants and 75 percent loans, and private partners will be expected to contribute to the total costs of the project, on a scale depending on their size. The terms make clear that economic benefits and 'the level of financial return offered to the State' will be among the selection criteria considered.<sup>65</sup> At the time of this writing, it remains to be seen whether this approach will bring about projects that generate significant revenue – or whether other government agencies will adopt a loan-based or public-private partnership system.

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<sup>65</sup> For information on the programme, see Ministère de la Culture et de la Communication, 'La numérisation des contenus culturels' (22 September 2010), [www.culture.gouv.fr/mcc/Actualites/A-la-une/La-numerisation-des-contenus-culturels](http://www.culture.gouv.fr/mcc/Actualites/A-la-une/La-numerisation-des-contenus-culturels). For the current call for projects, see Investissements d'Avenir. Développement de l'Economie Numérique, [www.investissement-avenir.gouvernement.fr/sites/default/files/user/AAP%20NUMERISATION%20%26%20VALORISATION%20CONTENUS.pdf](http://www.investissement-avenir.gouvernement.fr/sites/default/files/user/AAP%20NUMERISATION%20%26%20VALORISATION%20CONTENUS.pdf).

## 3.2 Selecting for Success: Choosing Project Leaders

While all funders with limited resources surely hope to devote them to the most worthy projects, how this is determined can vary widely. In addition to evaluating the excellence and significance of the work proposed, in some cases funders may choose to rely heavily on the ability of a strong project leader to develop a successful project. This is the stance taken by the Leverhulme Trust, which chooses to support ‘talented individuals as they realise their personal vision in research’,<sup>66</sup> and by the Wellcome Trust, whose recent creation of the Senior Investigator Awards scheme, is intended to support the ‘strategic goal of supporting the brightest researchers with the best ideas’.<sup>67</sup>

For both public funders and private foundations intending to make significant investments in digital projects, programme officers and directors will very often meet with potential grantees in the early stages. Those who do this feel it is a critical part of the evaluation process as they look for a balance between leadership, planning, and institutional investment that is important even if grantees cannot answer every question about sustainability.

Some funders described what they look for when meeting with a potential funding recipient:

- ‘Can the grantee under consideration prove some level of their concept relatively easily?’
- ‘It is partly, do we have enough confidence in the leaders, that they can roll with the punches and regroup if necessary. . . and do we need every point to be covered, or is some significant gesture in that area [business planning] enough?’
- Does the project leader have experience in ‘going through the cycle’ (with the logic that even if a particular project has failed, there is value in a leader who has learned from that failure)?
- ‘Do you see an energy that you can ride and grow?’ That is, will the grant or idea under consideration gain adoption or acceptance?

All the funding body representatives we interviewed for this project acknowledged the importance of strong leaders to the success of a grant-funded project. Managers of a digital resource must have project staff with many different skill sets – from editorial to technology to marketing – and must themselves perform constant outreach on behalf of the project. The costs associated with running a dynamic digital resource are significant and ongoing; for such a project to succeed in becoming sustainable, it must be led by someone with an entrepreneurial mindset.

Yet funders of digital resources in the higher education and cultural heritage sectors often make grants on the basis of their primary investigator’s research experience – not on the basis of their project management skills or ability to run an enterprise. Project leaders are nearly always asked to submit their academic CVs as part of the grant-making process, but they are much less likely to be asked about experience running a business.

*Managers of a digital resource must have project staff with many different skill sets – from editorial to technology to marketing – and must themselves perform constant outreach on behalf of the project.*

Funding organisations rarely seem to require an in-person interview, even when the grant proposal is for a substantial sum. One funding body representative whose organisation does not require in-person interviews wishes they would, so that the organisation could better gauge whether the ‘team is capable of delivering a project. You [want to be able to] look the guys in the eye and say, “Is this really a good idea?”

This question is particularly important because funders may have limited ability to influence leadership changes once a grant has been awarded – even if it becomes clear that a principal investigator from a research project is not well positioned to help the resource make a transition to a long-term operational business. When done at an early, pre-application

stage, meeting the project leaders gives funders a chance to gauge the soundness of the project and get a sense of the leaders’ ability to accomplish the goals they propose before inviting a formal proposal. This is a critical weeding stage that helps to both narrow and improve the quality of the pool of applications considered.

<sup>66</sup> The Leverhulme Trust, ‘About The Leverhulme Trust’, [www.leverhulme.ac.uk/about/about.cfm](http://www.leverhulme.ac.uk/about/about.cfm).

<sup>67</sup> Wellcome Trust, ‘Investigator Awards Q&A’, [www.wellcome.ac.uk/Funding/investigator-awards/Q-and-A/index.htm#Q1](http://www.wellcome.ac.uk/Funding/investigator-awards/Q-and-A/index.htm#Q1).

### 3.3 Nurturing Sustainability



Beyond the framework we have constructed to address the question of sustainable outcomes, once the terms of the grant or award are set and a project has been selected, what else can the funder do to further encourage long-term success? One higher-touch approach involves providing a great deal of foundation staff time and expertise to project leaders, in order to take a more active role in the project's development. This takes the form of advising, but also of putting the grantee in contact with other grantees for knowledge-sharing and in engaging rigorously with interim and final grant reports to offer feedback and assessment. But this approach is clearly a high time commitment, and will likely only be used by funders for a small subset of their most promising projects.

There are several ways that funders of digital resources provide non-financial support to grantees during the period of the grant, from informal advice, to networking opportunities, to more actively engaged guidance on projects. What a funder can offer depends a great deal on the portfolio of projects the grant officer is managing. And what does this engagement yield? It is not entirely clear. We have heard project leaders praise their programme officer for actively helping them to identify new ways to transition away from grant funding,<sup>68</sup> but we have also heard others suggest that their primary reason for maintaining close ties with their funding officer is to continue to promote their project, in the hope of getting the next one funded. It is difficult to quantify the success of support during the grant. In a study of post-grant non-financial support, the Center for Effective Philanthropy found that funders needed to provide a large array of services and advice to grantees in order to have any effect – and in this case, the impact measured was merely the perception of the grantee.<sup>69</sup>

Some of the types of non-financial support that funders give to projects throughout the grant include:

- **Informal contact and occasional guidance.** Most programme managers reported that they provide advice on an informal basis to grantees. The level of contact that this entails can vary widely, depending on the needs of the grantee; the programme staff at a large private funder said that they are in contact with recent grantees as often as every week. We have heard of programme officers whose deep domain expertise has been critical in suggesting guidance for project leaders. Yet grantees might not be willing to share unflattering information about the management of a project with a programme officer at their funding agency or foundation. And it is difficult to measure how much support programme officers are giving and how effective it is.<sup>70</sup>
- **Facilitating other mentoring relationships.** Sometimes, this informal advice can come from an informed third party, facilitated by the funder. Several European public funders give their grantees opportunities to get feedback from a third party during the grant period. One large public funder assigns 'critical friends' to the grantees in some of its programmes. These advisors are outside experts who do not work for the funding agency, but have agreed to work in support of its projects. During the course of the grant, the grantees can call on them for advice, and these advisors can also offer constructive criticism on the management of the project without adversely impacting the grant-maker–grantee relationship. Another public funder asks the peer reviewers who initially evaluated the project proposal to provide feedback on the interim report. The programme officer can then funnel any of these comments to the grantee that he or she thinks might help support the project leader.

<sup>68</sup> In a separate research project, Ithaka S+R created a case study about the online Stanford Encyclopedia of Philosophy, whose project leaders were encouraged by funders to develop non-grant-dependent revenue streams. (The Hewlett Foundation at one point made a grant to the project leaders to hire a business consultant.) See Ithaka S+R, 'Stanford Encyclopedia of Philosophy: Building an Endowment with Community Support', [www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/case-studies/SCA\\_BMS\\_CaseStudy\\_SEP.pdf](http://www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/case-studies/SCA_BMS_CaseStudy_SEP.pdf).

<sup>69</sup> Ellie Buteau et al., 'More than Money: Making a Difference with Assistance Beyond the Grant' (Center for Effective Philanthropy, December 2008), [www.effectivephilanthropy.org/assets/pdfs/CEP\\_MoreThanMoney.pdf](http://www.effectivephilanthropy.org/assets/pdfs/CEP_MoreThanMoney.pdf).

<sup>70</sup> Kevin Bolduc, Phil Buchanan, and Ellie Buteau, 'Luck of the Draw', *Stanford Social Innovation Review* 5:2 (Spring 2007): 40-45, [www.ssireview.org/articles/entry/luck\\_of\\_the\\_draw/](http://www.ssireview.org/articles/entry/luck_of_the_draw/)

- **Helping projects form partnerships.** Funders may have a role to play in fostering vendor relationships and other kinds of partnerships. In the former case, funders can play a valuable role in helping their grantee projects to assess which functions are so mission-critical that the grantee must carry them out internally, and which can be more effectively and cheaply outsourced. CHIN, the funder for Canadian museums, also includes grant funding for their museums to hire web development contractors; this gives their grantees access to these skills without the long-term obligation of staffing up. In the latter case, of partnerships, some funders told us confidentially that they have encouraged grantees who were moving in similar directions to join forces. As one programme officer at a different funder told us: ‘Sometimes, you have so many entrants in a space – or a set of tangential spaces – that no one can succeed. . . . Part of the solution is consolidation’, a solution that this interviewee has discreetly asked some of the organisation’s funding recipients to consider, ‘much to the chagrin of my grantees’.
- **Sharing best practices among project leaders.** Annual meetings are a common way that funders encourage their grantees to share best practices. Public and private funders often hold grantee meetings or workshops where grantees can share their experiences and exchange best practices. In the United Kingdom, the Biotechnology and Biological Sciences Research Council regularly convenes all of the project leaders from its digital projects so that they can share specific information about the challenges they have faced and how they have overcome them. One public funder took a slightly different approach toward encouraging exchanges between grantees. The digital programme assigned projects to clusters that were not only encouraged to discuss their common problems and successes, but were also given funds to create joint events or projects that focused on the overlap between their work. However, one grantee commented that this approach was not so helpful because there were too few similarities between their project and the others in their cluster, and they had difficulty thinking of ways of spending the funds that would be of value to all the grantees.

*Yet while many funders told us that they have some contractual ability to stop paying a grant if a project has strayed too far from its course, most if not all stated that they had very rarely exercised this option, and when they did it was only in the case of gross mismanagement or a complete failure to adhere to the terms of the proposal.*

- **Interim reporting.** Interim reports from the project provide a valuable window into progress for grant-makers, and the terms and conditions of a grant often allow grant-makers to terminate funding for a project if certain conditions come to pass – for example, if a project leader leaves. Yet while many funders told us that they have some contractual ability to stop paying a grant if a project has strayed too far from its course, most if not all stated that they had very rarely exercised this option, and when they did it was only in the case of gross mismanagement or a complete failure to adhere to the terms of the proposal. The programme staff at one private foundation said that they reserve the right to terminate the grant if the project leader leaves. They think of this as a sort of ‘last resort’ clause in case the project takes a drastic turn in direction. These built-in checkpoints during the course of the grant give funders leverage to re-engage with the project leaders and potentially refine the project’s goals. With that said, engaging deeply with reports from project leaders is a time-consuming task, and several of our interviewees told us candidly that they worried that a more intensive report-reviewing process would unduly strain the grant-maker’s staff capacity.
- **Funders will sometimes take the more unusual step of placing staff members on the advisory boards** of the major projects that they fund. Four of the largest funders that we studied have used this strategy on projects that are especially important or complex. While this puts them in the position to be more closely involved in the high-level management of the project and places them in a position to influence the project even after the grant has ended, the degree of intervention can vary considerably.

But some funders find it impractical to provide extensive support to grantees. As mentioned above, time is one issue. Programme officers we spoke with were in some cases managing dozens of active grants at a time, making a deeper level of commitment to any one of them difficult. (Compare this with the one venture capital

firm we spoke with, where each partner holds a maximum of six board seats – six being deemed the maximum number of businesses with which a partner could be deeply enough involved to warrant a seat on the board.)

One programme manager cited another reason why extensive support may not be offered: some funders prefer to keep a separation between projects and programme officers who are area specialists – who therefore help to evaluate the projects – in order to maintain independence. The area specialists are called on only in cases of emergency – when something has already gone wrong – while the ongoing contact with the project is maintained by a monitoring officer, who is not an expert in the field, but serves in more of an administrative role.

*Indeed, several of these project leaders pointed out that they first made serious plans to generate earned revenue at the guidance of a foundation programme officer. The feedback they received from programme officers forced them to set revenue goals for their projects – goals that may have seemed ambitious, but that they did achieve.*

Those caveats from funders are tempered by the comments from the leaders of grant-funded projects we interviewed for this report, who spoke about the importance and value of staying in touch with their funders. Indeed, several of these project leaders pointed out that they first made serious plans to generate earned revenue at the guidance of a foundation programme officer. The feedback they received from programme officers forced them to set revenue goals for their projects – goals that may have seemed ambitious, but that they did achieve. These projects had already demonstrated impact over several years, leading their programme officers to feel that these digital resources were sufficiently valued by their users that long-term operation was possible, and that a durable sustainability plan was therefore needed. Although time constraints preclude funders from engaging with all of their grantees on an ongoing basis, those projects that have demonstrated impact, usage, or other early successes to funders may be candidates for more ongoing assessment and communication with a programme officer. Like the project leaders we have observed in our research, other project leaders would likely benefit greatly from the non-financial support that a programme officer can offer, in shaping goals, offering continual and deep feedback, and helping the project leaders plan how best to assess the digital resource.

## 4. Concluding Thoughts

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In the difficult economic environment of mid-2011, it seems certain that sustainability will be an ongoing challenge for grant-funded digital resources. A smaller pool of available funding and staff at funding agencies and at organisations that depend on grant funding (such as universities) is already forcing project leaders to adapt, re-think their long-term planning and take on new responsibilities. Sustainability planning may not be able to rely so heavily on follow-on funding schemes from grant-makers and indefinite support from host institutions. With this reality in mind, we offer some practical steps that funders and project leaders should consider as part of the earliest stages of project development. These suggestions are not intended to create new reporting obligations or to tie up funders and applicants in red tape. Rather, if these are taken at the earliest stages of the process, we believe that they will help to clarify the murky questions and expectations that, if left unaddressed, result in costly projects without the support they require to thrive.

- 1. Funders and funding recipients need to establish a clear definition of what sustainability means for the specific project.** What do funders want to see in terms of preservation, content enhancement, discovery and access, and/or audience impact post-grant? Based on a project's long-term goals for impact, what elements will need to be sustained? And will this require a simple solution, such as depositing digital files in a repository, or will it require a more complex plan for sustaining and developing the entire enterprise?
- 2. Project leaders should work with their funders to identify the steps needed to attain these outcomes . . . and the resource likely to be needed to accomplish them.** Every set of goals will require its own set of activities, and carrying out these activities will require resources, whether those resources be labour provided 'free of charge' by volunteers, in-kind donations from a host institution, or financial contributions from paying customers. Even if developing a detailed business plan is not possible at this early stage, project leaders should be required to express the primary objectives they intend to accomplish over a multi-year time period and consider where the resources might come from to support the activities necessary to reach those objectives. If nothing else, this gives the funder (or reviewers) a chance to push back on some assumptions, and to develop more realistic plans. Describing how the grant funds are to be spent is just not enough. It is the activities outside and beyond the framework of the grant that represent the challenge.
- 3. Greater outreach to institutional administrators may be needed, both from project leaders and from funders.** In practice, we believe that funders and project leaders are well aware of the importance of gaining support from the host institution, and are increasingly finding ways to reach out to strengthen these ties. Yet often the statement of support from a host institution may be as simple as a form letter of support. Funded projects will need to have provosts, vice chancellors, and other administrators invested in their future if commitments to them are to remain solid during difficult budget cycles, and if funders have the will and capacity to help build personal relationships with administrators, such relationships could be quite helpful in assuring the future sustainability of these projects. Because host institutional support is so important to so many digital projects in the higher education and cultural heritage sectors, we suspect that further research would be fruitful in surfacing the assumptions, expectations and value perceived on all sides.

- 4. There are many points throughout the grant life cycle where funders can offer valuable guidance, by encouraging or assisting grantees to plan for ongoing sources of support throughout the funding process.** Programme officers and others at funding bodies possess a wealth of knowledge about the fields and institutions to which they make awards, from helping to secure 'buy-in' and ongoing financial support from a host institution, to advice on staffing, governance and partnerships, to assistance in implementing earned-revenue models. Currently, interim and final reports are unevenly used, and they could be more valuable to grantees if they were used to tease out issues as they develop and identify potential problems well in advance of the end of the grant.
- 5. Developmental stages can help funders – as well as the project leaders themselves – evaluate progress or potential along the way.** Staging of grants was cited by our interviewees as a powerful measure to better focus resources and non-financial support for projects in ways that best suit each project's phase of development. This can be done in several ways, depending on the funding philosophy of the grant-maker. Some choose to build firm milestones into a grant, with progress towards a specific, well-defined goal as a requirement for receiving the next release of funds. Others use staged grants as part of a broader strategy of first seeding the terrain with a wide field of experimental projects, and then selecting those best positioned for further growth. Both methods, in different ways, allow funders to provide incentives for projects to develop in ways that may strengthen their long-term sustainability.
- 6. For any project that could consider transitioning to a longer-term enterprise, it is never too early to start thinking about the potential audience, market and competitive landscape, as well as the business planning skills of the project team and leadership.** Whether or not the project in question ever generates revenue, clearer understanding of its value proposition and the possible opportunities ahead can help shape the project and also help funders to avoid making grants to similar or duplicative efforts. Has the principal investigator or project leader had experience working with a business, or a grant-funded project that became a long-term operational programme? Are there staff members within the host institution who have business planning experience, and who could be called upon to contribute to this project? The project leader who is perfect for early-stage development of a digital resource may not be the right person to lead the project as it grows past development into full-scale operation.

Beyond these steps, we suspect that there is significant value in an ongoing conversation among funders about how to structure the funding process in ways that nudge more complex digital resources toward sustainable outcomes. Some of these questions would benefit from further research – for example, how can project leaders and their host organisations build more concrete expectations around the organisation's ability to provide resources or support over the long term, and how should the project, in turn, be creating and demonstrating value for the host organisation? Other issues, though, may benefit from a neutral ground where programme officers with varying levels of experience in funding digital resources can talk openly and compare concerns as well as strategies they have tried and find to be successful. We hope that this report provides a solid foundation, and perhaps even the beginning of a shared vocabulary, for continuing these discussions.

# Acknowledgements

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This project has benefitted greatly from the insight and guidance of many readers throughout the research and writing process.

First, in order to guide us in understanding the complexities of the British funding system for higher education and cultural heritage institutions, a group of funders, project leaders, and other experts from the United Kingdom volunteered to serve on the Advisory Council for this project. We thank the council members for their invaluable advice. The members were Dr. Fay Bound Alberti of Arcadia, Dr. William H. Dutton of the Oxford Internet Institute, Caroline Kimbell of the National Archives, Dr. Rufus Pollock of the University of Cambridge, Nick Poole of Collections Trust, Sarah Porter of JISC, and Simon Tanner of the King's Digital Consultancy Service at King's College London.

In the United States, Brett Bobley at the National Endowment for the Humanities and Herbert Richtol and Lee Zia of the National Science Foundation organised workshops in fall 2010 for staff at each agency to learn about Ithaka S+R's previous research on sustainability. The informal discussions at each of these presentations provided us with valuable context and feedback as we shaped the research process for this project. We thank the attendees of these sessions for their thoughtful comments.

Interim drafts of the paper were reviewed and critiqued at two workshops hosted by JISC in London in January and March 2011. Participants included Dr. Fay Bound Alberti; Simon Tanner; Bill Thompson of the BBC; Adrian Friedli of Arts Council England; David Robey of the Oxford e-Research Centre; Professor David de Roure of the University of Oxford; Karen Brookfield and Fiona Talbott of the Heritage Lottery Fund; and Helen Rana, Neil Jacobs, Norman Wiseman, Rachel Bruce, Sarah Fahmy, Sarah Porter and Stuart Dempster of JISC. We thank them for their helpful comments on the drafts.

We thank John Bernstein of the Leon Levy Foundation, Karen Brookfield of the Heritage Lottery Fund, Donald Waters of the Andrew W. Mellon Foundation, our colleagues at Ithaka S+R, and especially Kevin Guthrie, for reviewing the final draft and offering written comments. Sarah Fahmy of the Strategic Content Alliance has been invaluable in organising peer review sessions and finalising the paper for publication. Special thanks are reserved for Laura Brown, who has helped guide the work from its earliest stages through final draft and for Stuart Dempster, Director of the JISC-led Strategic Content Alliance, whose support, wisdom and humour have made what was already an exciting project into a truly enjoyable one.

Finally, we gratefully acknowledge the participation of more than 80 individuals, including representatives from more than 25 funding organisations, who generously offered their time to share with us the challenges that they, their colleagues, and their grantees have faced in developing sustainability plans for the post-grant period. Their willingness to speak about this very sensitive topic was crucial to our research process, and we thank them for their participation. That said, responsibility for the opinions expressed and recommendations made in the report rests with the authors alone.

# Appendix A.

## Interviewees

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**Fay Bound Alberti**, Head of Philanthropy and Grants Management, Arcadia

**Peter Bailey**, Evaluation and Research Analyst, Big Lottery Fund

**John Bernstein**, President and Chief Financial Officer, Leon Levy Foundation

**Gabrielle Blais**, Director General, Canadian Heritage Information Network, Department of Canadian Heritage

**William G. Bowen**, President Emeritus, The Andrew W. Mellon Foundation

**Paul Brest**, President, The William and Flora Hewlett Foundation

**Sir Richard Brook**, Director, The Leverhulme Trust

**Karen Brookfield**, Deputy Director, Heritage Lottery Fund

**Mark Brown**, Director, Hartley Library, University of Southampton

**Rachel Bruce**, Innovation Director, Digital Infrastructure, Joint Information Systems Committee (JISC)

**David Carr**, Policy Officer, The Wellcome Trust

**Jean Carrier**, Program Policy and Management, Broadcasting and Digital Communications, Canada Interactive Fund, Department of Canadian Heritage

**Vicki Chandler**, Chief Program Officer for Science, Gordon and Betty Moore Foundation

**Simon Chaplin**, Head of Library, The Wellcome Library

**Peter Chatterton**, Managing Director, Daedalus e-World, and Visiting Professor, Centre for the Enhancement of Learning and Teaching, University of Hertfordshire

**Vicki Crossley**, Head of Evaluation and Impact Team, Economic and Social Research Council

**Stuart Dempster**, Project Director, Strategic Content Alliance, Joint Information Systems Committee (JISC)

**David de Roure**, Professor of e-Research, University of Oxford, and National Strategic Director for Digital Social Research

**Christophe Desseaux**, Head of the Department of Research, Higher Education and Technology, French Ministry of Culture and Communication

**Kevin Dolby**, Evaluation Officer, The Wellcome Trust

**Kristine Doronenkova**, Principal Policy Manager, Economic and Social Research Council

**Alastair Dunning**, Programme Manager, e-Content Programme, Joint Information Systems Committee (JISC)

**William Dutton**, Professor and Director, Oxford Internet Institute, University of Oxford

**Sigrun Eckelmann**, Program Director, Digital Libraries and Information Systems, Deutsche Forschungsgemeinschaft (DFG) / German Research Foundation

**Lorraine Estelle**, Chief Executive Officer, JISC Collections

**Sarah Fahmy**, Programme Manager, Strategic Content Alliance, Joint Information Systems Committee (JISC)

**Louise Filiatrault**, Associate Director General and Director of Programs, Canadian Heritage Information Network, Department of Canadian Heritage

**Adrian Friedli**, Director, Digital Projects, Arts Council England

**William Frezza**, General Partner, Adams Capital Management

**Murielle Gagnon**, Director of Strategic Programs and Joint Initiatives, Social Sciences and Humanities Research Council, Canada

**Ross Gardler**, Service Manager, OSS Watch Open Source Software Advisory

**Lisa Gray**, Programme Manager, e-Learning, Joint Information Systems Committee (JISC)

**Joshua Greenberg**, Program Officer for Digital Information Technology and Dissemination of Knowledge, Alfred P. Sloan Foundation

**Neil Grindley**, Programme Manager, Digital Infrastructure, Joint Information Systems Committee (JISC)

**Catherine Grout**, Programme Director, e-Content, Joint Information Systems Committee (JISC)

**Melissa Hagemann**, Senior Program Director for Information, Soros Open Society Institute

**Jacob Harold**, Program Officer, Philanthropy Program, The William and Flora Hewlett Foundation

**David Hendricks**, Audience and Programs Analyst, Canadian Heritage Information Network, Department of Canadian Heritage

**Katharine Hollinshead**, Education, Training and Grants Policy Development Manager, Science and Technology Facilities Council

**Margaret Hurley**, Grants Management, The Wellcome Trust

**Neil Jacobs**, Acting Programme Director, Digital Infrastructure (Information Environment), Joint Information Systems Committee (JISC)

**Peter Kaufman**, President, Intelligent Television

**Steve Kelling**, Director of Information Science, Cornell Lab of Ornithology, Cornell University

**David Kernohan**, Programme Manager, e-Learning, Joint Information Systems Committee (JISC)

**Robert Kiley**, Head of Digital Services, The Wellcome Library

**Guy Lambert**, Director, JISC Advance

**Max Marmor**, President, Samuel H. Kress Foundation

**Merrilea J. Mayo**, Mayo Enterprises LLC

**David McAllister**, Strategy and Policy Manager, Engineering, Data and Technologies Sector, Biotechnology and Biological Sciences Research Council

**Chris Mentzel**, Program Officer for Science, Gordon and Betty Moore Foundation

**David Moorman**, Senior Programs Planning Officer, Canada Foundation for Innovation

**Harriet Nimmo**, Executive Director, ARKive (Wildscreen)

**Uri Nodelman**, Senior Editor, Stanford Encyclopedia of Philosophy, and Engineering Research Associate, Center for the Study of Language and Information, Stanford University

**Bo Öhrström**, Deputy Director, Danish Agency for Libraries and Media

**Jim Omura**, Program Officer for Science, Gordon and Betty Moore Foundation

**Maria Pantelia**, Director of the Thesaurus Linguae Graecae and Professor of Classics, University of California, Irvine

**Katie Pekacar**, Policy Adviser for Excellence, Improvement and Innovation, Museums, Libraries and Archives Council

**Alison Pollard**, Evaluation and Research Analyst, Big Lottery Fund

**Sarah Porter**, Head of Innovation, Joint Information Systems Committee (JISC)

**Heather Price**, Programme Manager, e-Learning, Joint Information Systems Committee (JISC)

**Joyce Ray**, Acting Director, Deputy Director for Museums and Director for Strategic Partnerships, Institute of Museum and Library Services

**William Robertson IV**, Program Officer, Conservation and the Environment, The Andrew W. Mellon Foundation

**David Robey**, Arts and Humanities Consultant, Oxford e-Research Centre, and ICT Adviser, Arts and Humanities Research Council

**Esther Rosenberg**, Virtual Museum of Canada Investments Program Manager, Canadian Heritage Information Network, Department of Canadian Heritage

**Steve Ryan**, Director, Centre for Learning Technology, London School of Economics

**Liz Shaw**, Grants Manager, The Wellcome Library

**Jeremy Silver**, Technology Strategy Board

**David H. Stam**, Trustee, Gladys Krieble Delmas Foundation

**Fiona Talbott**, Head of Museums, Libraries and Archives, Heritage Lottery Fund

**Simon Tanner**, Director, King's Digital Consultancy Service, King's College London

**Victor Vuchic**, Program Officer, Open Educational Resources, The William and Flora Hewlett Foundation

**Craig Wacker**, Program Officer, Digital Media and Learning, John D. and Catherine T. MacArthur Foundation

**John Wallace**, Industry Liaison Manager, Joint Information Systems Committee (JISC)

**Michele S. Warman**, General Counsel and Secretary, The Andrew W. Mellon Foundation

**Donald J. Waters**, Program Officer, Scholarly Communications and Information Technology, The Andrew W. Mellon Foundation

**Barbara Winter**, Professor of Archaeology, Simon Fraser University

**Susan Wolf Ditkoff**, Partner, Bridgespan Group

**James Wu**, Senior Associate, Business Development, Acumen Fund

**Anne Young**, Head of Strategic Business Development, Heritage Lottery Fund

**Edward N. Zalta**, Principal Editor, Stanford Encyclopedia of Philosophy, and Senior Research Scholar, Center for the Study of Language and Information, Stanford University

**Sonia Zillhardt**, Head of Digitisation, French Ministry of Culture and Communication

# Appendix B.

## Government funding agencies and private foundations interviewed

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### Canada

Canada Foundation for Innovation  
Department of Canadian Heritage  
Social Sciences and Humanities Research Council

### Denmark

Danish Agency for Libraries and Media

### France

French Ministry of Culture and Communication

### Germany

Deutsche Forschungsgemeinschaft / German Research Foundation

### United Kingdom

Arcadia  
Arts Council England  
Big Lottery Fund  
Biotechnology and Biological Sciences Research Council  
Economic and Social Research Council  
Heritage Lottery Fund  
Joint Information Systems Committee (JISC)  
The Leverhulme Trust  
Science and Technology Facilities Council  
Strategic Content Alliance  
Technology Strategy Board  
Wellcome Trust

### United States

Alfred P. Sloan Foundation  
Gladys Krieble Delmas Foundation  
Gordon and Betty Moore Foundation  
Institute of Museum and Library Services  
John D. and Catherine T. MacArthur Foundation  
Leon Levy Foundation  
Samuel H. Kress Foundation  
Soros Open Society Institute  
The Andrew W. Mellon Foundation  
The William and Flora Hewlett Foundation

# Appendix C.

## Advisory Council

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The following individuals participated on an Advisory Council for this project, in order to help us better understand the landscape for funding of digital resources in the United Kingdom. We gratefully acknowledge their advice and guidance.

**Dr Fay Bound Alberti**, Head of Philanthropy and Grants Management, Arcadia

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**Sarah Porter**, Head of Innovation, Joint Information Systems Committee (JISC)

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# Appendix D.

## Typology of digital outputs and the kinds of ongoing support they may require

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### Scholarly articles and book manuscripts

For scholarly articles and books that will be published in digital form, funders often seek to ensure sustainability, but in the sense of sustained access to the work. Funders often point to two basic paths for this. The first, more obvious, path is for the author to formally publish the work: the author seeks publication in a scholarly journal or by a press, which is capable of marshalling the resources needed to make the content available and to preserve it digitally.

The second and increasingly common path among funders is to mandate that their funded researchers deposit journal articles or books into a repository, where they are often freely available and open to the public. Clearly, these repositories have their own sustainability needs, given that they have their own complex technological infrastructure and project management, technical and outreach staff to support. With that said, funders in recent years have taken steps to provide support for these repositories by providing funds to support the development and ongoing operation of such projects. (The Wellcome Trust funds one such repository for scholarship on medicine, UK PubMed Central, on the logic that their share of its operating costs is just a time fraction of the Trust's overall annual expenditure on medical research – and so, presumably, is a small relative price to pay.)

Unlike other content formats in this typology, discrete digital journal articles and books may not need editorial updating to stay current (whereas the cost of updating content is one kind of sustainability cost for more complex digital resources). This type of content is generally not intended to be updated as part of the terms of the original research grant; funding for further research would be treated as funding of new projects, generating new articles.

### Datasets

Like scholarly articles and books, sustainability plans for data sets often require deposit in a funder-run or subject-based repository or data center, where the integrity of the content will be maintained, and access provided for current and future researchers. While others may have the ability to re-use the data, there is no presumption, either on the part of either the funder or the principal investigator, that the dataset itself needs to be actively developed further.

Larger scale projects, that intend to continue collecting data over a long period of time and will require ongoing staffing and management, are another story. Large-scale and ongoing efforts, like the RCSB Protein Data Bank and the TwinsUK database, are enterprises and require longer-range planning. The Interuniversity Consortium for Political and Social Research (ICPSR) in the United States, a data repository based at the University of Michigan, has its own revenue model, charging subscription fees for access to their holdings in order to cover such costs. But for most smaller data collections, submission of a data management plan, indicating where and how the data will be held, may be all that is needed.

### Digital resources

Unlike a journal article or a scholarly monograph, a digital resource is often built to grow. Databases of content – whether journal articles, still images, or video; whether centrally curated or crowd-sourced; whether vetted by a system of peer review, or not; whether built from digital copies of analog originals or born digital – share the goal of providing valuable, easily accessible, discoverable, useable and updatable content to the communities they serve. Funders and project leaders need to consider what it will take in terms of financial and non-financial resources to keep the content valuable to its users. This is true for projects with open-access mandates as well as projects that are able to tap user-based revenue streams. Consider, for example, the digitised content from library, archival and museum collections. Over the past two decades, foundations and corporations have invested millions of dollars, pounds and euros in the digitisation of historical collections. In the research library world in particular, mass digitisation projects undertaken by Google and Microsoft have left universities with a tremendous amount of digitised content and difficult questions about how best to sustain these collections. For collections like these, the sustainability needs are much more expansive than for the smaller-scale content types discussed above. Because most research libraries have a strong preservation component to their mission, even when the scans were performed with the funds of a corporation, government agency, or philanthropy, the library or archive must still contend with the ongoing costs of digital storage and preservation. Beyond that,

institutions also must face questions about how best to sustain access to these materials, whether through a locally built interface, a third-party aggregator, or some other means. And to make these collections richly valuable to users, the library or archive will also likely need to fund ongoing development work to add new features and functionality, digitise new content, or provide for outreach and user support. The costs cascade outward for these institutions from the moment of digitisation, and a detailed sustainability plan will likely be needed.

### **Educational resources**

Online educational resources have burgeoned over the past decade, partly as a result of increased funding from philanthropies like the Hewlett Foundation in the United States. These resources may be as simple as a collection of lesson plans on a web page, or as complex as a platform of materials collected from hundreds of courses at a single university (as in the case of a project like MIT OpenCourseWare, [www.ocw.mit.edu](http://www.ocw.mit.edu)). For resources like these, all of the sustainability challenges faced by library and museum digitisation projects still apply – there will likely be needs to provide for the costs of digital preservation, ongoing access, technology and keeping the content current. But the costs around providing outreach may be even more important: project leaders for educational resources might be doing outreach to an audience of the general public, including teachers, who will want to use the educational resources, but they must also canvass a pool of professors or instructors and give them incentives to contribute high-quality educational materials to the resource. Methods of evaluation to ensure learning outcomes and other mission-driven goals will also require significant ongoing investment.<sup>71</sup>

### **Tools and infrastructure**

Although these were not the focus of our research, software and infrastructure have their own complex sustainability needs. For example, many local institutions are now investing in digital repositories to hold content generated by scholars, researchers, students, and other users; although much or all of this content is freely contributed and made freely available to users, the costs associated with maintaining the repository (storage, bandwidth, routine code fixes, user support, and so on) and with updating the repository's functionality may be substantial. Other funders are committing significant sums to open-source software projects to benefit the library and museum community. For projects like these, there are clear ongoing sustainability needs around the ability of the project leaders to provide incentives for a community of programmers to program code updates, and to provide some kind of user support.

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<sup>71</sup> For a discussion of the sustainability of open courseware projects through six case studies, see Taylor Walsh, *Unlocking the Gates: How and Why Leading Universities Are Opening Up Access to Their Courses* (Princeton, N. J.: Princeton University Press, 2011), [www.ithaka.org/ithaka-s-r/research/unlockingthegates/UNLOCKING the GATES - text-only.pdf](http://www.ithaka.org/ithaka-s-r/research/unlockingthegates/UNLOCKING%20the%20GATES%20-%20text-only.pdf).

# Appendix E.

## Interview guides

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This guide is intended as a framework for the interviews and conversations we will have with key stakeholders of funding organisations, including programme officers, evaluators and grantees. While many funding bodies post general guidelines for applicants on their public websites, not many appear to have explicit organisational policies concerning 'sustainability'. The purpose of these interviews is to probe the funding practices in place at these organisations by asking about the entire process of grant-making, from first solicitation to proposal evaluation to award and beyond. We seek to learn about the role that digital content plays in the context of the organisation's funding activities, and how funders think about the need for sustaining the digital content created as a result of their grants.

### Definitions

These are our working definitions, which we hope will help us narrow the universe of programmes and projects to explore, and serve as a starting point for conversations with those we interview. We anticipate that one result of the research will be a finer understanding of the range of activities sustainability implies, and how different types of projects may dictate the type of sustainability planning that is required.

#### *Digital resource*

Any online, content-based creation that is intended to be used by others beyond the term of its initial creation. (e.g. digital encyclopedias and other dynamic resources, theses, datasets)

#### *Sustainability:*

The ability of a project to identify and procure the resources – financial or otherwise – it will need to continue to provide value for users over the long term.

The forms of support required to sustain a digital resource vary depending on the goals of the resource itself. A research paper, once completed, may require very little, perhaps just a platform that offers access. A digital encyclopedia, however, may need to have complex plans in place to assure ongoing sources of support to fund its updating and upgrading.

Determining what 'sustainability' means for both funders and project leaders, as well as what different forms of sustainability entail, will be a central aspect of this work.

### Background questions about organization

Characterise the type and number of grants that involve digital content requiring a sustainability strategy.

- Quantify the amount the organisation invests (in new and ongoing grant-making) in this area
- Determine which programmes have made or are making significant investments
- Determine which individuals representing these other programme areas need to be interviewed (in addition to main contact)
- Does the funder have an organisation-wide perspective on sustainability as part of its mission?

## Questions for programme officers and senior administrators

- What is the foundation's definition of 'sustainability'?
  - Does that definition differ from programme to programme within the foundation?
  - Does the foundation have policies that aren't explicitly about 'sustainability' but instead relate to 'impact', 'financial impact', 'budget', etc.?
  - Does the foundation articulate policies around sustainability-related/sustainability-intertwined issues such as intellectual property?
  
- What constitutes a 'successful' outcome for a grant your organisation makes?
  - And how do you want to see that success continue (past the grant period)?
  
- What guidelines does the foundation have in place today to identify those grantees whose projects are likely to develop into ongoing services?
  - Is there a written document outlining this?
  - Are these guidelines common to all programmes, or applicable to just some?
  
- To what extent are sustainability plans required as part of the application process?
  - What exactly is required?
  - Of which kinds of projects is it required?
  - How is this requirement communicated to applicants?
    - How is sustainability defined for applicants?
    - In the application process, is there language showing applicants what to include in a sustainability plan?
    - Is there communication with applicants (by email or phone) prior to application?
  - Ask for a copy of any relevant materials that are not openly available on the website.

## Questions about the evaluation process

- Could you please describe the evaluation process?
- Who evaluates the proposals?
- What process is used/are there specific guidelines or scales?
- What are the most important selection criteria (in general)?
- What elements in a proposal can be 'deal breakers'?
  
- With respect to the sustainability plan (or plan for long-term impact):
  - Are evaluators experienced as project leaders?
  - Are researchers in the relevant academic field?
  - Are teaching faculty members in the relevant field?
  - Have they worked in the not-for-profit sector? Government? Commercial sector?
  - Do they have professional business degrees?
  - Do they have legal experience, particularly in evaluating IP rights?
  
- How heavily do you weigh the strength of an applicant's sustainability plan during the evaluation process?
  - What are the 'warning' signs that a grant application's sustainability plan may not serve the project leader well over the course of the project?
  - Is a poor sustainability plan ever the reason to not fund an otherwise strong project?

- How important is the project leadership in evaluating the grant?
  - Why?
  - What things do you look for in leadership?
  - How important is institutional home? (Why . . . and what do you look for?)

### Questions about IP rights

- Does the funder have a clearly stated (or otherwise) preference for open access, or for particular revenue models?
  - If so, how is this communicated to project leaders, either at the application stage, or after?
  - Has the funder seen an open-access mandate affect sustainability expectations and practices?
  - If the funder requires open access, how do they define this? (Will they entertain applications that propose to use freemium, that limit open access to a set timeframe or a certain geographical location, etc.?)

### Questions concerning what happens during the grant period

- Once a grant is awarded, what processes of evaluation or guidance are in place throughout the duration of the grant period?
  - What measures do funders use to determine whether a project should receive next-round funding? How does a project's ability to become financially independent play into this?
  - How do funders think about the developmental stages and exit strategies for the projects they fund?
    - Do they have a defined process for this? How do they communicate it to project leaders?
    - What level of engagement does the programme officer have with the project, throughout the duration of the grant?

### Questions about what happens post-grant

- How does the organisation track and measure:
  - Project impact?
  - Project outcomes, post-grant?
- What (controls, agreements) are in place to guarantee the ongoing impact of the project?
- What arrangements are in place, in case a funded project can no longer keep going (due to lack of funds, a Principal Investigator leaving, shift in organisational priorities)?

### Specific types of documents to seek out or request from each organisation include:

- Annual report
- Statement of guidelines for grant applicants
- Examples of funded proposals that include sustainability plans
- Stage 2 proposals
- Final grantee reports
- Examples of proposals with exemplary sustainability plans
- Examples of proposals with model outcomes

## Questions for grantees

### Working through the process of applying for grants:

- Background to request in advance of interview
  - Basic information on project type, funding, etc.
  - Copy of the grantee's proposal (at least sections addressing sustainability)
  
- Questions related to the outset of the project:
  - What did the funder expect you to articulate in terms of a sustainability plan?
  - How did you learn about the funders' sustainability requirement?
  - How comfortable were you in preparing this part of the application?
  - What was the most difficult part?
  - Did this seem important to you?
  - Did you interact with (or have questions for) the funder, and if so, can you describe those exchanges?
  - Did you work with an outside advisor on this part of the application?
  
- Questions related to the project during the grant period:
  - How often did you need to follow up with your programme officer during the course of the grant, particularly about sustainability?
  - Did you adjust your sustainability plan during the course of the grant? If so, did you share that information with your programme officer?
  
- After the conclusion of the grant period:
  - To what extent did you receive guidance on post-grant sustainability planning from your granting foundation?
  - Reflecting back on the lifespan of the grant, how helpful did you find the sustainability planning portion of the grant application process?
  - In what ways could foundations and granting agencies improve the sustainability planning portion of the grant application process?

### Comparative data, grantee perspective (if applicable):

- Planning and application process (comparing process to that of other funders):
  - By how many different funders have you been asked to prepare a sustainability plan for a grant application?
  - What does the sustainability portion of the grant application look like from foundation to foundation? What pieces of existing information are you asked to gather (e.g. staff salaries, organisational overhead, etc.)?
  - Have you noticed significant differences among the foundations you have applied to?
  - Has a foundation set parameters around any part of your project's sustainability plan? If so, what form did it take:
    - Selling permitted but subject to additional review by the foundation?
    - Price limits?
    - Open access mandate?
    - Other parameters?
  - To what extent have you received advising from programme officers (or other foundation officials) on your sustainability plan?
  - If you work within a large university or research institution and have to compete against other projects for the right to apply to an extramural foundation, did your campus grant coordinator require a sustainability plan? If so, what components of a plan did they ask you to submit?

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