Business Planning for Digital Libraries

International Approaches

Mel Collier (ed.)

LEUVEN UNIVERSITY PRESS

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1

BUSINESS PLANNING FOR DIGITAL LIBRARIES

Mel Collier

Introduction: the aim of this book

It has become almost conventional to trace the history of the digital library back to Vannevar Bush, or even to notables in the origins of computing such as Charles Babbage or Ada Lovelace. That is not our intention, nor indeed is it our intention to record the history of digital libraries in any detail, but it is appropriate to explain why we present this book on business planning for digital libraries and why at this time. Librarians of a certain age, like the present editor, now nearing the end of their careers, and some already retired, have spent their entire professional lives working on the application of computers to libraries, from the early days of indexing and the creation of inventories through the development of library automation applications, then integrated library management systems, networking, mini-computer, micro-computer and PC applications, and in due time the digital library. From those origins until now is a period of fifty years at most, which in the history of libraries is perhaps a mere minute. It is a minute, however in which libraries have changed more than during any other period in library history, and within that minute digital libraries as strictly defined have occupied maybe the last fifteen seconds. Those fifteen seconds however represent *fundamental* change: so much so that even the continuance of the library as we know it is called into question. Libraries have changed forever during that time, or are in the process, yet only now are we getting to grips with planning that change.

Those fifteen seconds have been a time of frantic development and great professional excitement, but mostly occupied with applying the white heat of technology. The literature of digital libraries is already vast, but the overwhelming majority concerns technical development, followed perhaps by issues concerned with property rights or metadata. Business planning for digital libraries is not prominent in the literature, certainly not as treated in an integrated way in which the various elements are brought together so that sustainability for the future is assured, or, put another way, so as to move from experiment or fixed term project to dependable service. This book tries to fill that gap by integrating the many issues that are required for successful business planning for digital libraries, but which are usually treated separately in the literature, and we do so by drawing on the management experience of people active in the field. On the other hand we are not starting from scratch because some important integrating works have gone before. We refer for example to Lesk (2005) whose comprehensive work approaches digital libraries primarily from a technical point of view, but also includes substantial chapters on economics and property rights. Andrews and Law (2004) provided a very useful early focus on policy and practice from a mostly, but not entirely, Anglo-American

perspective. Most recently Baker and Evans (2009) made an important contribution by expanding and integrating the previously scattered literature on digital library economics, primarily in the field of higher education and national libraries.

This book looks at the whole process of planning the digital library from the point of view of *business planning*: that is planning it as if it were an enterprise that is meant to fulfil specific goals and from the outset designed to be sustainable and to provide value to those who invest in it and those who use it. Furthermore this book addresses the current trends which see digital libraries as belonging not only to the library world, but also to the broader cultural sector, and to do so from an international perspective as possible, as exemplified by the European flagship project: Europeana.¹

Business planning for digital libraries: definitions

When the present writer started working on the business planning workpackage for The European Library² in 2001 there were only a few published works relating to business planning for digital libraries. The term *business planning* itself was indeed only just coming into use in this context. Perhaps the first published usage occurred in Barton and Walker (2003), followed by Bishoff, L. and Allen, N. (2004). The first literature review from this project appeared in Collier (2004) followed by a more comprehensive one in Collier (2005). By then it was possible to produce a definition of the term, which we continue to use as the basic framework for this book:

Business planning for digital libraries is here defined as the process by which the business aims, products and services of the eventual system are identified, together with how the digital library service will contribute to the overall business and mission of the host organizations. These provide the context and rationale, which is then combined with normal business plan elements such as technical solution, investment, income expenditure, projected benefits or returns, marketing, risk analysis, management and governance (Collier 2005).

It may be considered necessary also to define what we mean by digital libraries, as there are already very many definitions in the literature. This is not a matter of just academic interest as the definition of the digital library has important implications for business planning. For instance a fundamental policy decision of Europeana is that all the participating content providers must provide access to the digital object itself, albeit in many cases a digital surrogate (a digital representation of an original analogue or physical object). The reasoning behind the policy is that Europeana does not want the user to be frustrated by finding metadata which do not lead directly to the object. Providing access to the object itself in business planning terms is a very different thing from just providing a finding tool. A digital library provides access to the object itself; it cannot be just a catalogue.

¹ The aim of Europeana is to provide access to Europe's cultural and scientific heritage through a cross-domain portal, see <http://www.europeana.eu/portal/> (viewed 6 December 2009)

² The European Library is a precursor to and in many ways the inspiration for Europeana. It provides access to the heritage of Europe's national libraries, see <http://search.theeuropeanlibrary.org/portal/en/index.html> (viewed 6 December 2009)

Our definition of the digital library implies that there is a rationale behind the assembly of the objects that it contains, what librarians call collection development and museum people call curation. It makes a clear distinction, for instance, between searching on the Internet and searching in a collection that has a design rationale behind it. It also implies that certain quality controls regarding reliability and authority of information provided have been put in place by those responsible for building the digital library. These requirements apply equally to digital libraries whether they are in the library or museum, archive or audio-visual domain: domain boundaries which by the way are in the process of breaking down anyway in the digital world. The author first formulated these elements into a definition in Collier (1997) which was adopted among others by the National Science Digital Library,³ as mentioned by Mischo (2004). We propose this definition now in a slightly modified form as the other pillar of the framework for this book:

A managed environment of multimedia materials in digital form, designed for the benefit of its user population, structured to facilitate access to its contents, and equipped with aids to navigate the global network. Its users and holdings may be totally distributed, but it is managed as a coherent whole.

Nowadays many digital library applications also include social networking and other Web 2.0 services which this definition did not specifically provide for but which can be encompassed in the phrases *benefit of its user population* or *aids to navigate*.

The elements of business planning for digital libraries

Business planning for digital libraries is about sustainability. Gone are the days when a digital library could be started up as a project without a realistic plan for its continuance into the future or could be allowed to disappear. Even fixed-term projects which are essentially researching a new technical solution need to show how the results will be exploited or made more widely available. Fixed-term projects aimed at collecting digital material or digitizing analogue material need to demonstrate how the new collection will be entrusted to a digital library organization with an assured future. The basic questions are therefore:

- What is the value proposition?
- Does the proposed digital library have a unique selling point?
- Who are the target customers and what is the (scale of) the target market?
- What are the key enabling technologies?
- What are the risks?
- Who pays?

Sustainability is in great measure about financing and resources, but not solely, as we shall see. Digital library content can be divided into two fundamental categories: *born digital content* (material created digitally which never existed in analogue form) and *digitized content* (a digital version or surrogate of original analogue material). The sustainability issues surrounding these two fundamental categories are rather different. Coping with

³ See a contemporary presentation at <http://fox.cs.vt.edu/UKJWDL/present/zia.ppt> Viewed 6 December 2009

born digital content is effectively an endless and immeasurable task, raising major issues of what to select, how to select it and how to allocate responsibility for preservation and future access. Because of the sheer scale of output and its often ephemeral nature it is inevitable that more information will be lost in the digital era than in the print era, with consequences for future socio-historical perspectives. Digitization of analogue material on the other hand is a more scalable challenge: the limits of a digitization project can be defined within available resources. This is not to say that digitization of existing analogue material is not a huge task, which it evidently is, but the task can be segmented, prioritized and approached gradually without usually (with the exception of material on vulnerable media) great risk of loss of the original. Selection of material (whether born digital or digitized) can be roughly divided into the processes involved in preserving and giving access to the intellectual record on the one hand and to cultural heritage on the other. Here we use *cultural* in its broadest possible sense. Whereas the intellectual record has well-established processes for quality control such as peer-review, selection of cultural heritage is a looser more subjective process. It can however be validated by collaborative decision making at the appropriate level, for example institutional, regional, national or along thematic lines.

In this book we will find the terms *business model* and *business plan*. In the real world they are often used rather interchangeably and the reader may find that reflected in the various contributions. Broadly speaking, however, the *business model* addresses the first half of the questions above which relate to the sustainability concepts behind the enterprise, those being:

- Vision/mission – clear statement of the aims and nature of the business – and why
- Definition of the service/products offered
- Target market – user/customer/client profile
- Nature of the business (profit, not-for-profit, public service, self-sustaining etc., combination of these)
- Nature and sources of income

The business plan turns these concepts into concrete, convincing and defensible arguments and actions that will attract resourcing and realize the concept and will contain the following elements:

- Expected income streams
- Investment required
- Recurrent costs (personnel, materials, services)
- Marketing plan
- Branding
- Risk analysis
- Milestones
 - Pilot phase?
 - Go – no go decision?
 - Live launch
 - Break-even point?
- Evaluation

Financing

Not surprisingly the nature and sources of income figure prominently in the business model. As digital libraries move out of the experimental into the operational phase financing becomes a major challenge, for two main reasons. Firstly the digital library rarely completely replaces the physical library (and certainly not the museum or archive) so it is often (partly) a question of additional cost which the executive boards of institutions are reluctant to hear. Secondly the digital library makes new demands on infrastructure and personnel, and raises ever higher expectations among the users regarding new functionality, design, accessibility and scope. Unless the institution or its governing authority can find extra resources (not obvious in this day and age) this leads to difficult strategic decisions. Institutions and indeed governments often react by requiring proposers to find external funding and effectively shift the responsibility.

This had led to a current preoccupation with public-private partnerships. Within the European Community this idea has been promoted by the High Level Expert Group in its report on public-private partnerships (PPPs). (2010 2008). In general the European Commission operates a subsidiarity principle which makes member states responsible for digitization. The report encourages PPPs, gives advice on good practice and governance and makes welcome recommendations on copyright and the protection of public domain content. The only problem is that the advice seems to be indeed directed at very high level institutions (which may have the profile to attract major sponsors), as borne out by the case studies, but it is not at all clear how the private sector can come to the aid of the myriad institutions wanting to realize a digital library project. To be fair to the European Commission the subsidiarity principle has been slightly softened in the current funding programme, meaning that digitization can in certain circumstances be funded centrally. A similar theme is followed by a report carried out for the Strategic Content Alliance and Ithaka (Guthrie 2008) which provides advice on how the results of academic work in the form of websites can be sustained. It points out that academics are generally not natural entrepreneurs, but emphasizes the need for an entrepreneurial approach and gives practical tips. This is a principle which we wholeheartedly support, but as far as private investment is concerned we have the same reservation: how much potential is out there? As stated by Greenstein and Thorin in their review of major American academic digital libraries we believe there is no alternative for the great majority of institutions to making structural provision in the institutional budget. We can summarize possible income streams as follows:

- Direct financing by the owner institution or by institutional partners (could also be called a subscription or co-financing model)
- Subsidy by interested parties –government, associations, trusts, charitable bodies
- Pay to publish (one of the Open Access models)
- Sponsorship
- Advertising
- Subscription by the client institution (the institutional licence model)
- Subscription by end-users
- Pay-as-you-go by the article, chapter or object

It is not the intention in the following chapters to provide actual costings of the respective digital library projects. Given the wide variety of projects covered here, different costing

aspects in various countries and the rapidly changing costs themselves, this is hardly feasible or sensible. Rather the authors were asked to indicate where possible what the financing issues were and how they were addressed. It is evident, moreover, that the economics of digital libraries is still very much work in progress and we refer the reader to Baker and Evans (2009) mentioned above.

The management elements of the business plan

As we mentioned above, sustainability is not only about financing, but also about effective management. The business plan needs to show therefore how competent technical, management and content personnel will be attracted and retained. Such people are very much in demand. Several of the following chapters go into this issue. Regarding content the plan will need to justify, in relation to the vision and mission, the focus of the content and how it will be discovered, selected and acquired, whether by digitization or as born digital. Regarding users the plan will need to be clear about which users are targeted for the product. A digital library developed for academic research is likely to be rather different from one developed for secondary schoolchildren, or again for the general public, especially as digital libraries are increasingly expected to provide social networking, Web 2.0 or 3.0 functionalities or facilities for user generated content. These decisions will in turn inform the marketing and publicity plan, which is crucial if there is to be an income generation element in the business plan and, even if not, will be required to ensure maximization of usage and justification of the original investment. Closely related to these points is the need to indicate beforehand what the approach to evaluation will be and the criteria for success. All stakeholders, whether they are the host institution, public sector subsidizing agencies, trusts or foundations, or commercial sponsors will require this. The stakeholders will also require a serious risk analysis, which, depending on the nature of the funding and the enterprise, can comprise technical, management, commercial, political risks or any combination of these. Regarding technical issues, the planning will cover the necessary hardware and software infrastructure and, very importantly, the format and metadata standards that will be employed for import, storage and exchange of content. Given the substantial investment often required for building a digital library the plan will need to describe policies and approaches to long term preservation and digital archiving in order to ensure the investment is not lost. Finally the business plan will provide a description, sufficient for the stakeholders, of the development schedule from original conception through design, development, test and implementation to launch, in which all the technical and management elements come together. After launch the schedule will typically provide a forecast of the usage, market uptake and income streams together with break-even points (if applicable) and timing of evaluations.

Examples of business planning

As stated at the beginning published examples of business planning for digital libraries are not easy to find. This is probably because institutions treat it as a confidential matter either for internal reasons or for commercial or competitive reasons. Even projects funded under European programme rules may elect to keep their plans confidential,

especially if there are private sector partners. Greenstein (2002), whilst not publishing the business plans, provides much information on the planning processes and rationales behind arguably the most important university digital libraries in the USA: the California Digital Library (see also our chapter by Lawrence), Harvard, Indiana, New York University, Michigan and Virginia. An excellent example of a business plan available on the web (perhaps under public information rules) is the Ontario Digital Library,⁴ a collaboration between public, university, school and college libraries. All the elements are there:

- Governance and management
- Staffing
- Technology and infrastructure
- Marketing, communication, branding
- Bi-linguality
- User and staff training
- PEST (Political, economic, social, technological) and SWOT analysis
- Review of other jurisdictions
- Funding requirements

The author's own work on the European Library (Collier 2004, Collier 2005) provides a full description of the process of developing the business plan and the issues that were examined: partners' own aims, mission, added value/USP, types of media content, target groups by type and by geographic area, categories of subject content, advantages to the partners (national libraries), branding, funding models, scale of finance needed, and risk analysis. Perhaps the best set of published case studies on sustainability (as of late 2009) can be found in a further Ithaka study (Maron 2009). Whilst these studies do not constitute business plans as such and relate to initiatives of widely varying nature and scale they do provide much useful detail and experience.

The approach of this book

This book is an edited compilation of contributions organized into three sections. In the first section we have the framework chapters in which business planning for digital libraries is approached from the perspective of the environment in which planning occurs. Harry Verwayen (KnowledgeLand, Netherlands) follows up this introductory chapter by focusing on business model innovation for the digital cultural heritage sector, expanding in particular on the concept of the *long tail* as envisaged in the business model for Europeana. Derek Law (Strathclyde University, Scotland) examines digital library business planning in the context of higher education, the sector with the longest history in the field and which has been the most innovative and enterprising hitherto in digital library development. In the arts and social sciences, where the printed work still plays a crucial role, the last few years have nevertheless seen enormous developments not only in the provision of digital information (and digitization is crucial here) but also in scholarly methods, as analysed authoritatively by Ian Anderson (HATII, Humanities Advanced Technology And Information Institute, University of Glasgow, Scotland).

⁴ http://www.accessola2.com/odl/pdf/ODL_BusinessPlan_Full.pdf This was first viewed by the author about five years ago and has so far remained accessible! Viewed 3 January 2010

Wouter Schallier (LIBER, Netherlands) on the other hand tackles the very real issue that in scientific, technical and medical (STM) libraries research information is now almost entirely electronic, with the result that researchers have no need of the physical library. However, usage of library space by students, paradoxically enough, is absolutely not on the decline as learning and study methods change and the library evolves into the learning centre.

In the second section we present the practice chapters. Here we examine the various practical issues and challenges of planning the digital library, whether of a technical, organizational or publishing-related nature. The most remarkable strategic change of the last decade or so has been the rise to dominance of e-journals over the previous print journals. The important issues and their implications for business planning are discussed by the present writer and Hilde Van Kiel (Leuven University, Belgium). Slower to gain acceptance but now set to take off are e-books (Amazon reported that on Christmas day 2009 they sold more e-books than conventional books due to the success of the Kindle⁵). Hazel Woodward (Cranfield University, UK) provides a comprehensive examination of how e-books fit into business planning for digital libraries with reference (among others) to platforms, consortia, usage monitoring, acquisition and delivery. There follows a group of chapters concerned with the wide range of issues involving archiving and preservation. Kinnaes, Nelissen, Schokkaert and Collier of Leuven University discuss the issues of digital archiving from the point of view of the professional archivist, which are in some ways distinct from the concerns of the librarian or museum curator. Paul Koerbin (National Library of Australia) discusses the problems of how to record the often transient information that appears on the Web – a challenge for preservation of born digital information on a grand scale. A slightly different challenge but nonetheless immense is addressed by Barbara Sierman (National Library of the Netherlands), namely how to preserve published and nationally important digitized information – one of the core business activities of national libraries. Both authors approach these topics from their experience in their own national libraries. Relevant to the theme of preservation but in an academic context and with prime focus on research dissemination and exploitation, Alma Swan (Key Perspectives Ltd, UK) examines business planning aspects of repositories. To complete the practice section we have three chapters which deal with important overarching issues. Genevieve Clavel (National Library of Switzerland) discusses issues of multi-linguality: crucially important of course in the international context and with the many efforts that are ongoing in European framework projects. Like all digital library topics, this is very much work in progress. David Prosser (SPARC Europe, UK) takes us through the key political and economic issue of how Open Access can further the cause of scholarly publishing and possibly alleviate some of the financial pressures that threaten access to scientific research results. Finally Stefan Gradmann (University of Hamburg) provides us with a handy guide to digital library metadata, which every general manager or professional needs to know but perhaps does not dare to ask.

The third section provides a group of case studies which focus on how these business planning issues were or are addressed in particular projects or services. Kristiina Hormia-Poutanen and Paula Mikkonen (Helsinki University Library/National Library of Finland) describe the development of FinELib, which has long been recognized as one of the most successful consortia and effectively operates as a national digital library for

⁵ Widely reported on the Web including among others: <http://news.softpedia.com/news/Amazon-Sells-More-E-Books-than-Physical-Ones-on-Christmas-Day-130699.shtml> viewed 4 January 2010

scientific information. Continuing the consortium theme Lluís Anglada, Núria Comellas (Consortium of Academic Libraries of Catalonia) and Àngel Borrego (University of Barcelona) describe the formation of the Digital Library of Catalonia which, like FinELib, has brought immense increase in access to and range of scientific information available for their members. Regarding the public library sector it might also be thought that the digital library has not had such a fundamental impact as in the academic sector, owing to the continuing and natural predilection for the book for leisure reading, but as Rolf Hapel (Aarhus, Denmark) shows, public libraries are indeed a fertile ground for innovation, particularly when supported by dynamic national agencies. The approach here is from a national strategic perspective, as indeed in the next chapter from Chern Li Liew (Victoria University of Wellington, New Zealand) who fulfils one of the aims of this book by addressing the broader issues of business planning of digital libraries for cultural heritage and possibly introducing the reader to the particular issues concerned with preservation of, exploitation of and access to the digital cultural heritage of indigenous peoples, a rather different matter from the European cultural tradition.

Angelika Menne-Haritz (Stiftung Archiv der Parteien und Massenorganisationen der DDR im Bundesarchiv, Berlin) provides insight into how business planning principles are being applied to create a model for Internet access to archives with reference to the APENet project, itself related to Europeana. The book is completed by accounts of two of the most important university digital libraries. The California Digital Library, one of the earliest to be formally set up with significant funding and governance structure and with the status of a fully fledged library within the University of California system, is described by Gary Lawrence; while Michael Popham provides important and frank insights into the business issues of the Oxford University Digital Library, including of course those involved in its being one of the libraries of the Google digitization programme.

Each chapter follows a broadly similar pattern. After the introductory material the authors take us through the business planning elements as laid out above as and when they apply in their particular field or case. Each chapter has a summary in the form of bullet points and a bibliography for further reference. We hope that the reader will find this structure helpful and instructive.

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