



# Twenty-twenty

A long view of the National Library of Wales



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## **Twenty-twenty: a long view of the National Library of Wales**

Section		Page
<b>1</b>	<b>Why a long view?</b>	<b>4</b>
<b>2</b>	<b>The world around us</b>	<b>5</b>
2.1	The public economy	5
2.2	Politics and policies	6
2.3	The law	7
2.4	Knowledge producers, sellers and workers	9
2.5	Users and uses	12
2.6	Technological developments	14
<b>3</b>	<b>The National Library of Wales in 2020</b>	<b>18</b>
3.1	Our users	18
3.2	The collections: caring for them and adding to them	20
3.3	The collections: finding them and keeping them	23
3.4	The collections: sharing them and servicing them	25
3.5	Co-working	28
3.6	Resourcing the collections and services	29
3.7	The National Library of Wales in 2020: a summary	31

## 1 Why a long view?

After a long period of evolutionary change the National Library of Wales now faces a new era of uncertainty and challenge. In the turbulent waters of a shrinking public economy, accelerating technological innovation and changing user expectations the Library will need to steer a new course – holding true to its lasting purpose and values while being unafraid to turn in new directions.

This document has two aims: to try to forecast and assess the main external influences likely to affect the National Library between now and 2020 (section 2), and to suggest how the Library may react to them or take advantage of them in order to continue fulfilling the aims of its Charter (section 3). Its conclusions will help to inform our next three-year Strategy, covering the years 2011-12 to 2013-14.

(The year 2020 has no particular significance beyond being a good round number: it is far enough away to encourage taking a long view while being near enough to avoid the charge of vacuous futurology.)

We are grateful to all those whose information and advice have helped in the making of this paper. Many staff and groups of staff have offered their thoughts, as have members of the Board and the Advisory Body. For practical reasons only a few people outside the Library have contributed views – a public consultation will be part of the next Strategy. Knowledge of the purposes, functions and activities of the Library is taken for granted. It is, though, worth quoting here its primary 'Object', as defined in the Royal Charter (revised in 2006), as a yardstick against which to measure the ideas put forward in section 3:

To collect, preserve and give access to all kinds and forms of recorded knowledge, especially relating to Wales and the Welsh and other Celtic peoples, for the benefit of the public, including those engaged in research and learning.

*Royal Charter (2006), paragraph 4*

## **2 The world around us**

A list of all the external influences affecting the National Library over the next ten years would be very long. Here we list those we think most likely to have the strongest influence. Some will limit what we can or choose to do; others will open up new possibilities.

### *2.1 The public economy*

Perhaps the most rapid change in the coming years will be a large reduction in the level of UK public expenditure – irrespective of which political party rules at Westminster – resulting from perceptions of the seriousness of public debt. This will be probably be felt first by the Library in 2011-12, with a substantial drop, of 5% or more, in capital and revenue funding from the Welsh Assembly Government. Further reductions are likely in succeeding years and any stable level of funding eventually reached will be set at a considerably lower baseline than the current year. There will be no swift return to current spending levels.

Reductions on this scale are far too large to be managed by 'efficiency measures' that do not affect core activities and public services. Since the Library does not indulge in activities that are irrelevant to its purpose it follows that it must react either by finding much cheaper ways of carrying out its core functions, or by abolishing some currently accepted activities – or, more likely, both. In any event reducing expenditure means losing staff posts, since over 80% of the Library's budget is devoted to staff. There may also be implications for staff pay, conditions and benefits (such as the pension scheme).

Reductions in public expenditure will have a disproportionate effect on the economy of Wales, which is more dependent on the public sector than other parts of the UK. It is unlikely that the private economy, dominated overwhelmingly by small enterprises, will fill the space vacated by public spending – or that it will make up for gaps in the funding of public bodies.

In recent years the Library has been successful in attracting external money and support, especially from public and charitable sources, and often in partnership with other organisations. Although these sources will themselves be under greater pressure in future they remain an obvious target for achieving some of the Library's development aims and avoiding stagnation. European Union structural funds are likely to become less relevant after the expiry of the Convergence Fund in 2015 (assuming no successor scheme). Diversifying sources of income, and choosing the right partnerships to belong to, will be even more important than now. With diminished funding available globally the take-up and use of some of new internet business models may be required.

## *2.2 Politics and policies*

Policies on public debt and public spending are largely determined by the UK government. So too, for the moment, is most legislation (specific legislation is treated in section 2.3 below). It is the Welsh Assembly Government, however, that exercises most direct influence on the National Library.

Assembly governments to date, whether single party or coalition, have tended to share common characteristics: a defence of the public realm and a collectivist rather than an individualist approach to service provision, a willingness to break from (or refrain from joining) Westminster models (NHS-sourced health care, school league tables, foundation year), a preference for reducing social inequality by universal measures (free swimming, bus travel, university fees) and, in our own area, support for culture, the arts and the Welsh language. In policy execution, except in the health service and the 'quango bonfire' of 2005, the accent has been on improving public services by encouraging cooperation ('Making the Connections').

It is hard to see this broad policy consensus changing radically in the next decade, at least in the absence of a radical political realignment, even if a new Westminster government adopts a different, 'small state' approach. Any major deviation from current philosophies will probably be forced by economic circumstance rather than willed by a change of ideological direction. If this is correct the National Library should be well-positioned: it is important to Wales's self-identity, it contributes strongly to educational, cultural and economic objectives, and its philosophy of access and relevance are

consistent with the government's social agenda. But these virtues and others, though necessary, are not sufficient. In future, as competition for government's attention and resources becomes ever more fierce, the Library will need to demonstrate not just that its activities are congruent with public policy but that they are an essential element of it. This will be a formidable challenge for those charged with making the Library's case in Cardiff Bay. It has been hard to gain political traction for the Library's role as a educational, 'knowledge' institution, as opposed to that of a traditional 'culture provider', not helped by our location in a 'heritage' portfolio: in future the Library might argue the case for a policy context better suited to the aims of its Charter.

Several specific issues may impinge on the Library. If direct lawmaking powers are granted to the Assembly in the wake of the All Wales Convention's report (November 2009) the volume and nature of relevant legislation may increase. If the government's appetite for structural change resumes, perhaps prompted by prospects of saving money, the Library may be affected, either directly through mergers or other combinations, or indirectly, through changes, for example, to which services are provided by local authorities. A combination of reduced funding and increased powers may tempt a future Assembly government to question for a second time the independent constitutional status of the National Library.

Of the specific policy directions that might be taken by future governments (at all levels) up to 2020 it is likely that environmental change will feature as strongly as any. Radical action to affect carbon emissions and reduce energy consumption in general will affect the National Library in several ways, including hastening the movement to online modes (obviating the need for travel), encouraging better public transport links, smarter and more flexible ways for staff to work (reducing the need to travel), and encouraging a low-maintenance building and 'green computing' to save energy costs ('encouraging' could mean reduced funding).

### 2.3 *The law*

The statute with the biggest potential to change how the National Library operates in the next ten years is the Legal Deposit Libraries Act 2003. There are now grounds for thinking that the long period of inaction and delay in implementing the electronic

publications part of the Act is coming to an end. If the current, more urgent momentum of the Westminster government is maintained it could be that the Library will need to be able to harvest sites on the 'surface of the web' within 1-2 years, with library deposits from the 'deep web' beginning soon afterwards. Both of these new functions will be pursued in partnership with the British Library and the National Library of Scotland, but the National Library of Wales will need to have the staff and systems capacity to act independently in order to capture Welsh material, and in any case will need extra resources to contribute to the tripartite network. The massive effects on the Library of a fully implemented Act are outlined in section 3.2.

The other legal field of critical importance is copyright. In the digital as opposed to the print world, libraries, as representatives of the public interest, have no privileges under copyright law. As a result a 20<sup>th</sup> century 'digital black hole' has developed as copyright restrictions have prevented libraries and others from giving new life to printed publications that may have little commercial, but considerable cultural or research value. The consistent trend, in the US and Europe, has been for the period of copyright protection to be extended, as commercial concerns have drowned out the public interest. More recently, the success of Google Books has led to an anxiety in the UK and Europe that copyright law is failing to keep up with digital developments. The current Digital Economy Bill includes a welcome proposal to liberalise copyright restrictions on 'orphan works' (in-copyright works with unknown copyright owners): if enacted in the right way this may benefit the Library's digitisation programme. (However, the Bill also includes potentially damaging clauses on copyright infringement under the 'three strikes and you're out' proposals, whereby the Library might be held responsible for copyright infringements made by errant users.)

A number of reviews of intellectual property rights by the UK Intellectual Property Office and the European Commission are likely to lead to a fresh approach to the legal framework in this area, with major consequences for the Library.

As noted in 2.2 it is possible that Assembly legislation will become more common if direct legislative powers are devolved from Westminster to Cardiff Bay, and in any case the Library will be affected by new laws, whether from Brussels, London or Cardiff, in areas of general applicability, like employment and finance. There may be an



opportunity through Welsh legislation to solve more particular problems, for example, the disincentive under the Freedom of Information Act to deposit personal archives, and the lack of a Public Record Office for Wales. Fundamental structural changes, such as that described in section 3.5, would also require legislative change at a Welsh level.

#### 2.4 *Knowledge producers, sellers and workers*

The ways in which recorded knowledge has been produced and exchanged over the last 10-15 years have changed fundamentally. It is certain that many of the current trends will persist.

Twenty years ago it was relatively simple to define a 'publisher': an organisation, normally commercial, that evaluated authors' manuscripts submitted to it and printed (by means of books, periodicals or newspapers) those worthy of publication. Today anyone, personal or corporate, can be a publisher, especially through the web; publication costs have shrunk dramatically, again through the web; the 'gatekeeper' role of the traditional publisher – guaranteeing the intrinsic value of what appears – has almost vanished, at least outside the academy. While the number of printed publications published annually continues to increase (over 133,000 new titles were published in the UK in 2009) parts of the industry are in serious trouble, notably newspapers, which have lost readers and advertising revenue to the web. The number of websites, however, is huge and still growing fast (8.2m in the UK in January 2010). To take politics as an example, the blogs of politicians, commentators and broadcasters have become at least, if not more, important than newspapers and other traditional means of political communication.

Similar trends are evident in broadcasting. Digital technology has allowed the number of television and radio channels to multiply, diluting advertising revenues. The very notion of a 'channel' is now in question, and television has to compete for viewers' attention with other media like YouTube that do not rely on a unilinear direction of communication. In a digital environment boundaries between textual, visual and audiovisual content will blur, and virtual or augmented reality, familiar from video games or sports broadcasts, will enter new areas. The sheer volume of material available will threaten to overwhelm the would-be user and will challenge the ability of national libraries to collect and give access to it.

Thus far the internet's default economic assumption has been 'free to the user'. Traditional publishers have found great difficulty in reacting to this model. Only those with highly valuable and specialist content, like academic publishers, have been able to continue with subscription charging on the web (though even these publishers are under strain). Newspapers have floundered: it remains to be seen whether Rupert Murdoch's recent attempts to charge for News International's general titles and seal them off from the rest of the web will prove successful. Government attempts to legislate against the file-sharing of music and commercial attempts to establish subscription-based music services are similarly unsure of success, though there are recent signs that 'freemium' models like 'Spotify', offering value added content at small cost, are making headway.

Social networking and other Web 2.0 manifestations have intensified the dominant economic, 'it's all free' model and have also begun to break down the barriers between the author/publisher and reader: texts and films are enriched, adapted or even sabotaged by their consumers. Wikipedia's readers *are* its authors. Citizen journalists have emerged, contributing in real time to breaking news stories, such as the recent Haiti earthquake, and citizen scientists, like those contributing to Galaxy Zoo's classification of galaxies.

Even traditional publishers with an apparently secure position are being challenged. Through the 'institutional repositories' movement universities are beginning to establish their own, alternative, 'open access' publication channels that in time may avoid the wasteful 'buying back' of knowledge freely given away by higher education to Elsevier, Springer and others. Only time will tell whether these will gain a secure footing, let alone supplant the traditional commercial model.

Republishing has become a live issue, as companies (notably Google) and others (especially national libraries) have sought to translate into online form (and in so doing, to transform) the print legacy of the past. Google Books is by far the most significant of these ventures on account of its size and scope. If a settlement is finally reached in the US on Google's plans for the digitisation of in-copyright, out-of-print books, the way will be open for the company to offer online access, for a price, to probably the majority of

English language books in this category: this would have a critical impact on the future use of the Library's legal deposit collections.

Will all these trends continue or intensify over the next ten years, or will 'publication' change its nature once again? Some argue that what may be termed the 'heroic democratic' era of the web since the late 1990s will give way to a more 'ordered' online world: new economic models will emerge and persist, relegating the 'it's all free' assumption to low or no value knowledge; the web itself may begin to be superseded by a higher performance but more restricted network. Others see a continued erosion of pre-internet models of publishing and the eclipse of publishers. The truth may lie between these two extremes: publishing will still flourish in high-value niches, while citizen-publishers will continue to share their experiences with the world freely.

If this is correct, the implications for the National Library will include the following:

- ❑ it will face the burden of collecting and preserving a much larger, and mainly digital corpus of publications ...
- ❑ ... and choices about how to sustain its programme to 'republish' digitally the print legacy of Wales ...
- ❑ ... and a challenge to its current assumption that access to information should be uncharged.

Archive-producers, institutional and personal, will continue to offer rich possibilities for national collectors like the National Library. Collecting archives in digital format, often associated closely with those on paper, will provide challenges, and it will be necessary for the Library to 'intervene' at an early stage in the depositor's career, to advise on formats and techniques, instead of expecting to 'inherit' a fully formed archive. Trends in use have been driven to a large extent by the policies of The National Archives, which in recent years has used commercial partnerships to digitise key archives series and charge the public for their use: this challenges the traditional archive philosophy of free use.

As broadcasting structures, finances and technologies change the collection of radio and television output will become more complex; it will also become harder to justify a

proliferation of broadcasting archives in one small country. As music and other sound publishing shifts further away from hand-held to online formats the National Library will need to follow suit.

Graphic material will continue to be produced in analogue form, although since many images, including most photographs, now originate digitally it will become a subject of debate whether the mode of collecting and archiving contemporary work should be analogue or digital.

National libraries employ those who understand and organise knowledge. They need a wide variety of skills and knowledge among their staff to fulfil their aims. Traditionally knowledge workers have been 'bought in', by recruiting those with existing library and archive qualifications. In recent years this pattern has been modified substantially: external educators cannot always be relied upon to supply the right mix of requirements; conversely, on-the-job training and development has become much more important in preparing staff for new posts (especially those requiring managerial skills); and 'competencies' have to some extent displaced qualifications in job requirements. In addition, what would once have been seen as 'core' occupations (librarians and archivists) have become a smaller proportion of the total skills complement. These trends will continue. As in the past it will be difficult to ensure the presence of highly specialist knowledge, especially in a time of retrenchment.

## 2.5 *Users and uses*

The massive changes in the origination and dissemination of knowledge have already had an impact on the behaviour of its consumers.

Though reading words on paper is still very common and will remain so, research evidence supports a common perception that in some contexts large numbers of people are beginning to desert print in favour of digital media as a source for information and knowledge. Although, at least in higher education, this is true of people of all ages, younger people, the so-called 'Google Generation', now turn instinctively to the internet for knowledge, resorting to libraries as a second best, if at all. In some disciplines, such as the hard sciences, print has been largely irrelevant for at least ten years. The

humanities, where paper has retained its hold longest, are also becoming heavily dependent on digital tools and content. The same trend is observable outside the academy: family history, for long a preoccupation of a few enthusiasts with the persistence to scour original archive records and microfilmed newspapers, has become a common pursuit, aided by the easy accessibility and searchability of digitised resources.

Where material exists in parallel form users will frequently opt for the digital. Increasingly, however, digital is and will be the only format available. The British Library predicts that 40% of all academic monographs will be digital only by 2020. At some point users will treat printed works in libraries as effectively 'invisible' – even if pointers to them remain, like ghostly shadows, as electronic metadata. If they cannot immediately locate books in digital form very few people will seek them out on library shelves (even if they have not been relegated to remote stores by lack of use). Digital user behaviour increasingly displays two important characteristics: impatience with any barriers that cause delay in receiving knowledge, and reluctance to travel far to reach it.

These factors all point to a major problem for a large and (for most) remote public collection of printed works. When the imperative to collect and give access to digital material grows ever stronger it becomes ever harder to justify devoting time, money and space to continue to collect books and periodicals that historically have received little use and that are likely to receive even less. What we should collect is what is likely to find use, and what is of relevance to Wales.

Evidence suggests that readers on screen differ from readers of print. They tend to read in a more promiscuous, less linear manner, skipping quickly from source to source rather than following a text from end to end. In fact online users do not typically consume and digest information in any simple way: reading and communication ('social networking') are intertwined. Also, the arrival of Web 2.0 has in part broken down the authority and stability of the published text: readers can 'answer back', even, as with Wikipedia, by amending or supplementing the text, and works are routinely 'mashed' with others to form new products or services. National libraries have begun to respond to this trend, but will need to do so more vigorously in future.

There is also some evidence, though it is not conclusive, that faced with a massively expanded ocean of digital knowledge, unaided by pilots guaranteeing quality, readers find it difficult to map a course: to differentiate between reliable and unreliable knowledge. In response it has been suggested that schools and other educational institutions need to place more emphasis on 'information literacy'; there may also be an important role for the National Library in part of this field (digital - and analogue - research skills). Guidance may also be needed to draw attention to increasingly 'invisible' resources that are not, and may never be, available digitally.

Demographic changes will influence the nature of national library use. Older people will constitute an ever larger proportion of the population. Often they have both time and inclination to explore and exploit the sorts of collections stored in research institutions, as is clear from the Library's experience of the University of the Third Age, which has seen an enormous growth over the last ten years. Other natural audiences may offer fewer opportunities: the recent increases in the number of students in higher education will probably stall or cease, as demographic and financial factors interplay.

The issue of privacy in the internet age should not be underestimated. As a trusted public organisation the Library must maintain its ethical, legal and moral obligations to its users.

## 2.6 *Technological developments*

Over the last twenty years the development of information and communication technologies and their uses have been characterised by periods of evolution and consolidation (for example in digital storage technologies, or the spread of internet access across world populations), interrupted by sudden, disruptive and far-reaching changes (like the advent of the world wide web in the late 1990s, the rapid dominance of the advertising-fuelled search engine, or the growth of social networking in the late 2000s).

Sudden, explosive innovation is very difficult to predict. It is possible, even very likely, that innovations wholly unseen in 2010 will have altered substantially the context and

behaviour of national libraries by 2020. It is, however, possible to discern what may be the predominant trends in more gradual ICT developments.

It would be safe to assume that current trends in core technologies will continue. For example, storage capacities will increase to accommodate ever larger quantities of digital data, with the cost of storage falling in real terms. Similarly, communication networks will be faster and more capacious. There are worrying signs that the UK is rapidly falling behind other developed countries in introducing the fibre-based networks needed for high-volume transmission of, for example, sound and moving image, although ideas in 'Digital Britain' (2009) offer some hope of improvement.

Access to the internet will continue to spread, within Wales and the UK and abroad. In 2008 67% of households in Wales enjoyed access; by 2020 it is likely to be almost as pervasive as television (indeed, it may by then be delivered routinely via television). In rural Wales and certainly in the developing world pervasiveness will be achievable through the increasing use of mobile devices (these are still, incorrectly, termed 'mobile phones', whereas in fact they are increasingly minicomputers with always-on internet connections). As a consequence the current serious social and geographic 'digital divides' will reduce, though they are unlikely to disappear, especially in Wales, where they are more acute than in other parts of the UK. Technological divides will remain: for example, the fibre connections needed in future to transmit massive quantities of data at high speed are unlikely to be universally available.

Other physical means of using ICT will undoubtedly change: for input, touch, gesture and voice may increasingly supplement or even supplant mouse-and-keyboard. E-book readers will improve in quality and become common devices: they may simply become part of a multi-purpose mobile device (like the iPhone or iPad) or alternatively may evolve, continuing as a separate device, perhaps using e-ink on e-paper. This will hasten the eclipse of print in some areas - or relegate print to 'printing on request', for those who choose it, from a digital file (a file that might itself have originated from the digitisation of an analogue original!).

Software developments are much harder to forecast: competition is keen, and the barriers to innovation and rapid exploitation are low. Open source software will gain

ground over proprietary software (with possible implications for data management in the National Library when the current VTLS system has reached the end of its life). 'Cloud computing', the reliance on external remote services for the supply of commonly used hardware, software and associated data, may or may not become widely accepted: it will offer cost savings at the price of an increased risk. Web 2.0, by which is normally meant a combination of user-generated content, social networking and the combining of different data and technology sets to create new services, will evolve into new and more sophisticated ways of sharing and generating information. For example, one's mobile device will become ever more 'environment aware', sensing information available locally about one's home, historic buildings or displayed objects, and offering the opportunity to personalise it. The 'real time personalised web', perhaps best illustrated at present by Twitter, will evolve strongly. The emergent open and linked data as illustrated by Tim Berners-Lee's work with the UK Government for public sector information, should not be underestimated. 'Web 3.0' or the 'semantic Web' may also come to fruition. This is normally taken to refer to the future ability of programs to understand not just signifiers such as words but the underlying meaning behind signifiers, and so to talk to other computers without human intervention. It may have large consequences for the way in which collections are searched and analysed. As data sets, many of them containing complex, unstructured, 'dirty' data, become larger and more numerous, newer and more complex ways will be found of interrogating them and retrieving information of relevance to the user: 'semantic' searching will help researchers frustrated by the relatively crude relevance ranking of current search engines; searching of difficult-to-retrieve material such as sound and moving images will improve. Metadata will be extracted automatically from digital objects as they are added to collections, according to rethought data standards.

What of the data itself? Existing digital data (and metadata) of the kind held by national libraries are typically part of the 'deep web', invisible to the superficial searcher. The next ten years will see a determined effort to shift much of this material from deep to surface web status and thus increase its visibility and use. Another trend is likely to be the virtual 'pooling' of data from cognate sources (other memory institutions, in Wales or beyond): in the case of Wales, moving beyond the limited 'showcasing' of digital surrogates in programmes like 'Gathering the Jewels' and 'The People's Collection' to the collective virtualisation of whole collections.



The next ten years should see a rapidly increasing interest in the preservation of digital data, as more and more data-holders realise the complexities of ensuring sustained access to material of lasting value. The currently fairly crude approaches to preservation may be overtaken by more systematic and collaborative solutions. Centres of excellence will emerge for the preservation (not simply storage) of data from many organisations.

Among the many implications for the National Library of these and other likely technological developments are the following:

- ❑ the Library's online audience will continue to grow quickly and massively, widening still further the existing large gap between physical and virtual users. More people will access our services 'on the move'. More will reach our collection items online directly through a search engine or through aggregated collections covering many institutions and individuals.
- ❑ much work will be necessary to ensure that the Library's digital resources, created for altogether other purposes, are easily usable by future ubiquitous services (the successors of Google, Facebook, YouTube and others). Human intervention in the services we offer must be reduced to a minimum, but paradoxically achieving successful automation will require considerable initial human investment.
- ❑ the Library's vision of 'Wales as the first online nation' (interpreted as the historic published output of Wales available to all online) will remain an entirely relevant ambition; indeed, it should expand from its current emphasis on print to encompass other media, notably sound and the moving image.
- ❑ preservation of digital material will need to receive much more attention in future.

### **3 The National Library of Wales in 2020**

#### *3.1 Our users*

In 2020 we shall still have three main groups of user: researchers, learners and corporate customers.

Researchers, for 100 years the Library's staple client group, will still require our services and above all our collections. Academic research in the humanities and to some extent the social sciences, will still be attracted to the legal deposit and archive collections; for scholars studying Wales and the Celtic countries collections in all media will also retain their appeal (it is unlikely that researchers in science, technology and medicine will find the Library relevant to them, except in historical areas). Informal researchers are currently dominated by family and community historians. The genealogical boom may subside but interest in history at a local level is unlikely to decline. It is particularly popular among older people, who will become a much higher proportion of the population by 2020: increased leisure time and interest will make them a natural audience for library and archive services.

Learners, for the National Library, once meant university students, studying in the reading rooms. Now learners of all ages, formal and informal, find (or are led to) all kinds of resource, in and out of the building, that they will not easily find elsewhere. But the potential of the collections to inspire and enrich learners is still under-exploited. In the next ten years this will be one of the Library's chief challenges: to bring learners and collections together in new ways. In the case of schools this may mean many more visits by children to the building, especially if the right could be established (and funding secured) to guarantee one visit for every pupil during their school career. In the case of digital material success will rely on partnerships with educational bodies to present collections so that they can be used simply and conveniently by teachers, students and other learners without elaborate research or contextualisation; 'virtual visits', including a children's 'space', will be devised. Stronger links will be built between the Library and its

collections on the one hand and the school curriculum and developments within it on the other.

The building and its presentation of 'real objects' will also attract all kinds of visitors, including tourists, curious about or interested in the Welsh experience. The authenticity of the object will be supplemented by imaginative, digitally-aided contextual interpretation.

Finally, corporate users, particularly media companies, with whom the Library has a long and fruitful history of cooperation, will pay for material over which the Library has intellectual ownership, as such rights become better documented, better known and better exploited. And the Library may become a trusted space for other organisations to deposit and curate their digital information, again for a fee.

There will be increases in the numbers of users in all these groups. Their needs, and the ways they will wish to communicate with the Library, will, however, change. What the Library can offer to them will also change, not least if the coming age of austerity forces hard choices to be made between services currently regarded as 'essential'.

Unique, undigitised material (such as archives or pictures) will attract physical readers. They will wish to see 'real objects', especially those of iconic significance and those that rely on a face-to-face encounter to achieve their full impact; they will also wish to experience the building, or take advantage of it as a venue for conferences and meetings. But the number of online users will increase at a much faster rate than the number of physical users.

The Library will have more data available about the actual use and the preferences of its users. There will be more sophisticated means of discerning the nature of online use, at present very poorly understood.

At present the Library has no more than 26,000 registered readers, even though anyone aged 16 or over may register. By 2020 this number will have increased substantially, as automatic or semi-automatic membership becomes common; for example, as people join local libraries or come into contact with the Library through schools (thus beginning,

one hopes, a life-long association). To what extent such new readers, especially those at a distance from Aberystwyth, will be able to take full advantage of their membership will depend on the nature of the services provided (see 3.2).

The annual survey of public awareness of the Library shows a positive trend, but also points to the continuing need for more effective (and better targeted) publicity and marketing of collections and services.

As suggested in 2.5 above there may be scope for the Library to develop programmes to help users navigate the online world of information in their research and to ensure that they do not ignore non- or pre-digital research resources.

Basic Library services, both physical and digital, will continue to be offered free at the point of use, in accordance with principles and values to which it has remained true for over a hundred years.

### *3.2 The collections: caring for them and adding to them*

The accumulated collections of the Library are its great strength. They define its nature, its activities and its uses, and they affect its collecting policies of the future. The collections will be hybrid, in two senses. First, as always, they will encompass material that in most countries one would expect to discover in more than one institution: publications, manuscripts and archives, and graphic and audiovisual works. Secondly, material in analogue (mainly paper) and digital material will co-exist, both available to our users in different ways. The vast majority of objects in the collections are currently paper-based and will continue to be used in that format; on other hand the number of digital objects is expanding, and the rate of expansion will accelerate dramatically over the next ten years.

Two challenges will continue: how to preserve the collections for future use (see 3.3), and how to encourage their use, by as many people as possible, and for a wide variety of ends.

At present the largest collection in terms of bulk is the *printed legal deposit collection*. Only a very small fraction of this relates specifically to Wales. The 'natural use' of the majority of this collection will probably decline (from what is already a low level), for the reasons outlined in sections 2.4 and 2.5: a substantial part of this collection will be available digitally, through publishers and Google Books, and in any case the incidence of reading print will have declined. The exceptions to this trend will be works relating to Wales and the other Celtic countries (although again digitisation will have made inroads into parts of this sub-collection), and more recently published works unlikely to be available easily elsewhere. All of the legal deposit collection will be available to users in 2020, although very low use material may have been moved to an off-site store.

By 2020, however, our collecting policy on print will have seen several revisions. The Library will by then collect a lower proportion of the total of printed items being published in the UK and Ireland: the percentage will have dropped from over 90% to perhaps 60%. In part this change will have been enforced by the lack of resources to continue collecting print legal deposit at the same rate as now while also collecting electronic legal deposit material. But it will also recognise the low level of use of much material, and the scope for sharing collecting responsibilities between legal deposit libraries in order to continue preserving, between us, the UK's print heritage. Thus, print publications of most concern to the Library's core mission (those dealing with Wales and the Celtic countries) and to its readership (works of actual research interest) will continue to be collected; other works will be acquired selectively, in conjunction with the other legal deposit libraries, in such a way that the complete 'UK imprint' is captured between them.

The collecting and (permanent) storage of some categories of print material will have been replaced by the purchase of (often temporary) access via the Library's electronic resources ('Athens/Shibboleth') service. This will represent a partial shift from a collecting model to an access or content model: instead of permanent acquisition in 'hope of use' the Library will purchase or subscribe to electronic services tailored to the needs and actual use of its current readers. The Athens/Shibboleth service itself, available to registered National Library readers, will have expanded and become merged with the service currently administered by the Library (on behalf of CyMAL) and available

to the members of local libraries throughout Wales. In effect this will create a free National Electronic Library Service for the whole of Wales (see 3.5 below).

The major change in collecting practice by 2020 will be the addition of *full electronic legal deposit*, following the passage of legislation implementing in full the Legal Deposit Libraries Act 2003. At last the legal deposit libraries will be equipped to resume fully their historic role as curators of the complete intellectual product of the UK as expressed in its documentary output. This will rapidly add very significantly to the collections: digital items could outnumber accumulated print legal deposit items *within a single year*. Electronic publications will be collected in conjunction with the British Library and the National Library of Scotland, and a single shared system, developed mainly by the British Library, will be used for storing and managing the combined UK collection. While the British Library will be responsible for most of the collecting, the National Library of Wales will supplement the harvesting of 'surface web', probably by taking more frequent or more 'penetrating' snapshots of Welsh sites, and by ensuring the deposit of 'deep web' publications from Wales. This major addition to the Library's statutory duties will mean considerable extra recurrent costs. These costs will include those of gathering Welsh material and of contributing to the management of the joint UK system, for example through servers and network communications. It is difficult to underestimate the effort that will be required by all the libraries to build and maintain a complete working system.

Once it is in practical operation the Act will almost immediately seem unsatisfactory to the public. Its ban on networking freely available publications will be seen as irrational (see 3.4 below), and the restriction to text will also seem strange in an age when text is regularly intermixed digitally with sound and moving image media.

*Archival material* will continue to be collected, in all formats. Some - for example, published blogs that would previously have been manuscript diaries - will arrive with electronic legal deposit. Other archives will be deposited increasingly in digital form. Current experience shows the importance of the Library (or a surrogate) intervening with the originator or depositor long before the time of deposit: by 2020 systems and protocols will be more advanced, so that deposit is effective and simple. In this area

there is scope for the National Library to offer its services to other archival institutions in Wales that may lack expertise in this area.

The devolution of powers from Westminster to Cardiff makes possible the transfer of responsibility for Welsh government archives from The National Archives in London to a suitable repository in Wales. The National Library would be an obvious location, and within the next ten years it could be asked to take on this function, along with the duty of receiving and storing the permanent digital archive of the Assembly and the Assembly Government.

*Sound and moving image* material will also be collected as now, although almost all will be acquired and preserved in digital form. However, the collection and care of sound, film and broadcast archives, whether in an analogue or a digital context, are notoriously expensive, and in an age of declining resources there will be a strong case for attempting to integrate or even centralise the National Screen and Sound Archive of Wales with other similar archives in Wales, despite the different functions they serve. The role of the Archive in a UK context may also be relevant.

It is unclear whether the Library will have developed other collecting functions by 2020: for example, as a *trusted repository* for electronic information on behalf of other organisation on the basis of its national expertise in organising and preserving digital data. (If so, this will be on a fully funded basis.)

### 3.3 *The collections: finding them and keeping them*

Traditionally the Library has dedicated a large part of its resources to *discovery services*: the description and signposting of items in its collections so that they can be effectively found and then used by readers. In recent years a huge effort has been put into creating a single discovery (and management) system, based on VTLS's Virtua and Vital software, for all collections and all items, analogue and digital, throughout the Library. (Much more needs to be done, however, to ensure a public interface that is at once simpler and more sophisticated.) Current experiments in exposing metadata (and digital objects) to popular external services, like photographs on Flickr, will be extended assuming that the processes can be automated.

It is clear that although metadata will continue to be critically important the era of resource-intensive 'hand-crafted' resource discovery is at an end. Already the description of printed items has been partially automated. By 2020 most books and many other items will arrive in the building with all metadata already present and will be shelved immediately, without processing. Digital items will also arrive, in some cases, with metadata attached; more often, metadata will be automatically abstracted from the body of the digital content using data mining techniques, if the law is clarified to allow it. To arrive at this desirable situation, however, will require rapid development work within the Library and in partnership with the Legal Deposit Libraries Agency (in the case of print) and with the other national libraries (in the case of electronic material).

Although in general there will be less emphasis placed on the 'richness' of descriptive metadata, there will be an additional need in some cases (for example unique material) to include in the metadata package information about intellectual property rights in individual works and in their digital surrogates.

The VTLS system will have reached the end of its maintained life by 2020. Whether the 'library management system' will survive as a species is uncertain. Possibly what will survive will be the data, produced and maintained by the Library, but the discovery of it will be managed not by the Library but by a third party.

Resource discovery for archival material will be a special challenge in an era when archivists may be fewer in number. Archives are by their nature more resistant to economies of workflow than publications. However, in time metadata will increasingly be derived automatically from digitally deposited material, with much less human intervention.

*Preserving* collections will become even more complex as numerous varieties of digital object clamour for treatment in addition to paper and film-based materials. Format standardisation would help, but the likelihood is that unceasing innovation and competition in the production of electronic media will result in a continuing multiplicity of digital types, making the task of ensuring continued access over time a difficult - but necessary - one. The National Library must take a lead in Wales in the principles and



practice of digital preservation, and should be in a position to give help and guidance to other institutions, not necessarily only memory institutions, concerned about being able to offer continuing access to digital information. Preservation conditions for storing analogue materials will have been reviewed and possibly modified.

#### 3.4 *The collections: sharing them and servicing them*

The collections exist to be used. (This needs saying, since it is sometimes asserted, in error, that collecting is a good in itself, whether or not collected material has been or ever will be used.)

Today there is a greater chance than ever that our collections will be used. *Metadata* are better organised and presented, in a single online place. In future they will be more accessible still once they are part of the surface web (see 3.3). The importance of metadata should not be underestimated: it is the findability and usability of their detailed contents that distinguishes libraries and archives from museums, most of whose contents are not usually accessible to individual users.

A more open and more realistic view will be taken of uncatalogued backlogs, for too long an unacknowledged problem, as in many libraries, archives and museums, and of collections whose metadata are unavailable online (and which are therefore effectively invisible). There will a more open attitude taken to the transfer to other institutions of material no longer consistent with the Library's collecting policies.

Developments in the last five years, including the modernisation of the two main *reading rooms* and improved catalogue facilities, have made reading in the Library building a more attractive experience, and there is evidence that reading room use is increasing. Further developments will affect the reading rooms: more group work spaces will be introduced; there will be improved public visibility for sound and moving image media; microforms will disappear and be replaced by electronic reading areas with advanced e-book readers and large screens, or even an advanced media lab or digital research centre exploiting the capacity of new ICT applications. Better promotion, in particular by making membership of the Library an automatic or semi-automatic outcome of joining a

local (public or academic) library, will be needed to extend actual use of the collections by readers.

We will need to recognise, however, that there are natural, mainly geographical, limitations to increasing the number of physical readers, and that, as noted in 2.5, the extended reading of print may be in long-term decline. Future effort will therefore need to concentrate more on digital use and users, who already outnumber physical readers (although it must be admitted that much less is known about how exactly they use the Library). In practice this will mean extending digitisation, the networking of born-digital material and the provision of other networked services.

*Enquiries*, most now electronic, are increasing in number. This rise, together with the public expectation of an immediate or near-immediate reply, will place increasing pressure on the Library's ability to provide a satisfying response. By 2020 that response will be derived from a database of stored intelligence, or at least will rely on automated procedures. A layered service may emerge, in-depth responses that take longer to prepare being charged to the enquirer.

By 2020 many more items will be immediately available in their entirety, mostly free and across the internet, thanks to *digitisation*. Maps and sound and moving image material will become more prominent among collections to be treated. The emphasis will remain on unique and rare collections and items, as well as the opening up through optical character recognition of text collections relating to Wales; in short, on collections that will be used, and where the Library can make a special contribution. According to the current model, sustaining large-scale programmes relies on a continuing flow of external funds, from government and elsewhere. The alternative economic model, working with an industrial partner, either 'philanthropic' (Google) or purely commercial (eg a publisher, or an aggregator such as Cengage), carries several difficulties, including restricted access and the loss of control of the digital product, but may become unavoidable in the case of in-copyright material and in particular sound and moving image items, which will finally begin to be added to the Library's portfolio of digitised content in substantial numbers – at least within the fierce confines of copyright (see section 2.3). In the case of 'in copyright not commercially available' Welsh material it might be possible for the

Library to offer a 'Spotify-type' subscription online service. Digitisation on demand (for payment) may also be developed.

The statutory limiting of access to *legal deposit material*, both print and digital, to in-building consultation will continue to be a barrier to use. Such a limitation in the case of 'free web' material (the bulk of online legal deposit) is both illogical and incomprehensible to researchers, and it may be that an amendment to the Legal Deposit Libraries Act will be passed to exempt this class of material and open it up to network access. Another possibility could be the opening of branches (small offices) of the National Library in north and south Wales to improve in-building access.

The striking success of the education service in attracting *school teachers and students (and older learners)* to study the collections and base their work upon it suggests that every effort should be made to extend this activity in future. In practice this will mean a much closer relationship than has been possible so far with the education department of the Welsh Assembly Government and with educationalists themselves. (The Assembly split in portfolio responsibilities between education and culture has hampered progress in recent years, and may do so in future.) Visits to the building will continue to be an effective way of engaging learners, especially younger learners, but there will also be better educational facilities available online, to ensure, for example, that teachers are able to take immediate advantage of digitised resources without needing to invest substantial effort themselves in searching, editing and presenting material. Working with community groups in an online context, a staple of Culturenet Cymru activity in recent years, will also feature strongly. It should be possible for many more staff and activities in the Library, not simply the education service, to be redirected, in part at least, to serving the needs of learners of all kinds.

A well-established means of promoting the collections is the staging of *exhibitions*. A long-standing problem of doing so has been the paucity of resources dedicated to curation and organisation – a problem exacerbated by the need to fill the extended exhibition spaces of the visitor centre. Well before 2020 we shall need to decide whether it is sensible to continue with a substantial exhibition programme, in the form it exists today, in the absence of the resources necessary to support it (and in particular, to tour shows outside Aberystwyth). Exhibitions originated in the Library, arguably those

most pertinent to our mission, are also the most expensive to mount. The Library's role as a venue for contemporary figurative artists is of long standing and is well appreciated, but it may need to be adapted as economic pressures force a retreat to core activities. An additional continuing challenge is that of finding engaging and attractive ways of presenting items from the collections – books, manuscripts and even graphic material – that may not hold immediate visual appeal: new technologies may come to our aid here. The use of existing physical spaces will be rethought. Virtual exhibitions – not simple parallels of physical exhibitions as in the past, but freshly conceived productions – will reach a wider audience than many traditional exhibitions and can give members of the public the chance to make creative online contributions (the People's Collection is exploring this area at present).

The Library's auditorium, the Drwm, has proved a highly successful means of showing, interpreting and publicising the collections. Programmes will continue to offer a wide range of events to suit a variety of audiences.

*Web 2.0 developments* (see 2.6) open up the possibility of much closer engagement with groups and individuals interacting with the Library's collections. Users may be able and willing to contribute their own supplementary material ('user-generated content'), for example to digitised material, or to edit institutionally-provided texts.

Effective use of the Library's collections assumes minimum levels of literacy, but in future will also require 'information literacy' and 'digital literacy'. The Library cannot reasonably be expected to guarantee these itself, but it should work with educational institutions for whom they are a core concern, and in any case should take care to make sure that ways of approaching and using its collections are as straightforward and simple as possible and suitable for multiple audiences.

### 3.5 *Co-working*

Working with other organisations opens the prospect of achieving more than can be achieved working alone. It also comes at a price: very often the price is precious staff time. In future, as resources diminish, it will be essential to be more critical and evaluative about the worth of relationships with external bodies, and to concentrate effort

on outcomes that contribute centrally and substantially to the Library's mission, core functions and strategy.

Partnerships are critically important to fulfilling core aims. For example, working with the other UK national libraries and legal deposit libraries will be critical to the successful implementation of electronic legal deposit, and to the effort to bring rationalisation to the intake of print legal deposit. Cooperating with higher education institutions will continue to be important in extending the range of funders for projects of relevance to the Library's research support role. Alliances with local and academic libraries and archives in Wales have a long history of fruitful cooperation. Other partnerships, especially those with bodies lacking a natural association with the Library's fields of action, are less successful. The kinds of function-based voluntary cooperation encouraged by the Assembly Government's Making the Connections programme have probably reached the limits of their potential; so too, possibly, has the commissioning, client-agent model operated by CyMAL in recent years. More structural and radical approaches will be needed to ensure a wider impact. For example, it may be that the only way of ensuring a successful future for public libraries will be to abandon or at least substantially modify the extent of local authority responsibility for them and to create a National Library Service: the National Library, which already provides a core national electronic information service, could have an important role in realising such a development. The same may be true of local authority archive services; at the least there is a case for better coordination.

### 3.6 *Resourcing the collections and services*

Resourcing, or the lack of it, will be the dominating concern of the next five years (at least). It will become increasingly difficult to secure *recurrent funding* for core services and capital funds for new developments. Advocacy and public promotion will be important means of securing funds. The search for non-Assembly sources of income will become even more intense, as will fundraising. The collections will become more important as a way of generating income, for example, through the sale of high-resolution digital images (and in the case of the Screen and Sound Archive, clips): to this end better tracking and awareness of intellectual property rights will need to be developed. Projects funded externally on an individual basis will continue, especially as

a means of advancing technologies and services, but a more critical eye will be kept on their full costs and operation.

As ever, the *staff* – their number and their knowledge and skills – will be central to how successful the Library is in delivering services. As numbers shrink it will be ever more difficult to retain rare but still relevant expertise, for example in medieval manuscripts or paper conservation, while at the same time reinforcing skills in new areas, especially advanced ICT. Three trends will evolve. First, it will become more crucial that both the Library and its staff become are flexible: that staff can move easily between cognate posts, that hours worked are more flexible (so enabling evening opening, for example, without large extra resourcing), and that staff are given time to innovate. Second, as remote users continue to increase staff will increasingly transfer from providing in-building services to online ones. Third, there will be an increasing role for '*volunteers*'; for example, ex-employees willing to continue to make specialist contributions as 'research associates', exhibition invigilators and interpreters, advocates for the Library, and online readers willing to add their information within their own expert fields to 'institutionally provided' services. Developing *staff skills and knowledge* will continue as a high priority, with coaching and mentoring much more common as means of preparing staff for new jobs and developing careers. The Library's new University of Wales Chair in Digital Collections will add a much-needed research capacity to the Library and may lead to a greater emphasis on practice-oriented research among other staff.

Large *building* projects will be harder to fund, and consolidation is likelier than development. It may be possible to postpone the day (until after 2020?) when a 'fourth Library building' is inescapable for collection storage, if the intake of paper acquisition slows thanks to a lower rate of production or modified collecting policies, or both. However, such a building, funded by the Welsh Assembly Government, will certainly be needed, although it may differ in nature from its predecessors: for example, it could be off-site and contain low-use material only. Permanent staffed presences outside Aberystwyth will be difficult to finance or justify, except in the case of satellite stations for the reading of legal deposit material. (On the other hand, by 2020 it might prove possible to locate a 'virtual National Library of Wales' of some kind in multiple locations throughout the country.)

The need for improved *storage and communication of digital collections*, however, will rapidly become apparent. The Library will continue to develop its expertise in digital storage (linked to digital preservation), and may be in a position to offer curated digital storage facilities to other public bodies in Wales. A digital store may not necessarily be located in Aberystwyth.

### 3.7 *The National Library of Wales in 2020: a summary*

Although the time-traveller from 2010 will be able to recognise the National Library of 2020 without difficulty, she will also notice several major differences:

- ❑ the level of recurrent resources will be substantially smaller than at present: the running costs budget will be lower, and fewer staff will be employed; more of them will be concerned with serving a remote audience and fewer will be engaged in processing collections and items within them
- ❑ some services will have ceased or will be provided in a different (more efficiently delivered) way
- ❑ although material will still arrive in analogue (principally, paper) form, the digital component of accessions to the collections will increase substantially, mainly thanks to full electronic legal deposit, but also as all kinds of acquisitions become electronic in form
- ❑ existing collections will be better known and better used, thanks mainly to better metadata management and more extensive digitisation
- ❑ the Library's utility to learners and teachers will be better exploited, an early relationship with the Library being continued throughout life
- ❑ the Library will be better integrated with other information and archive services within Wales, through, for example, the development of a national electronic library.