THE VALUE AND IMPACT OF
DIGITAL ACCESS TO COLLECTIONS

GLAM PEAK
Creating true colour 3D images allows the CSIRO to better transmit information about physical specimens to a variety of stakeholders. In the critically important world of biosecurity, quarantine officers could have high resolution images of pests on handheld devices which would be fully rotatable and allow zooming to diagnostic features. This would increase efficiency through rapid and accurate identification and reduce certain economic consequences of a failure to identify an invasive specimen.

Cool things happen

Trove has an average of 55,000 unique users per day and more than 20 million unique users per year. Among the many stories about the positive impact digital access has had on the lives of individuals, few are more amazing than the breakthrough story of the development of a prosthetic hand, based on an 1845 design, which would not have happened without the digital access provided by the Trove portal.

The rediscovery of the prosthetic hand design has inspired the production of the world’s first 3D-printed body-powered partial hand prosthesis. US mechanical designer Ivan Owen came across the 19th-century design using Trove when he uncovered records of a prosthetic hand developed by Adelaide-based dental surgeon Dr Robert Norman.

Mr Owen is now working with a team of students at the University of Washington to further develop 3D-printed prosthetics. As a result of international collaboration and the digital collection, more than 1,600 people have received a 3D-printed hand at low cost.

Anyone can discover Australia’s amazing wildlife in this suite of eight apps, one for each state and territory in Australia. Together the Field Guide to Fauna apps feature over 2,100 animals, including mammals, birds, fishes, reptiles, frogs and invertebrates from terrestrial, freshwater and marine environments. They contain detailed descriptions of each species, as well as distribution maps, endangered status, audio calls and stunning imagery. The field guides, released by Museums Victoria, represent an ongoing collaboration between Australia’s major natural history museums and can be used at home, at school, in the bush or at favourite holiday destinations, making Australian fauna accessible to everyone.
Preserving the potential: safeguarding our nation’s knowledge and cultural heritage

Creating digital objects is the primary way in which cultural heritage and other collections are being preserved for future generations, ensuring cultural, social and scientific knowledge is available not only right now but that it remains accessible to allow the realisation of future potential.

Storylines, an initiative of the State Library of Western Australia, is a project that employs, trains and develops local people, building capacity and enabling cultural development in remote communities. At Mowanjum in the far north, it shares knowledge through digital collections within the community, supporting intergenerational knowledge transmission and helping maintain and develop culture.

The material held within Storylines has demonstrated its capacity to revive cultural practices and traditions within the community, deepening the connection to culture and country, and contributing to the emotional and social wellbeing of the community. An historic collection of rock art site photographs by German explorers in the 1920s and 30s has been imported into Storylines assisting current site identification and preservation and traditional dances and songs have been revived through reference to historic photos, recordings and videos.

Expanding our creative economy

‘Without Trove my research results would be like a handful of acorns: Trove is the whole oak tree.’ Kaz Cooke, October 2016

Kaz Cooke, best-selling Australian author now working on a new novel about the Australians who performed in vaudeville and music halls during the years 1888 to 1910, describes herself as an ‘untrained amateur’ when it comes to research. Trove, and its millions of pages of digital content, has enabled Ms Cooke to enrich her writing with details from sources published at the time her new novel is set.

She collected separate snippets of information from digitised newspapers over several years, and says that a whole picture has come together like a patchwork quilt. As new information has been digitised, she has been able to add more richness to her tapestry.

As Ms Cooke says, ‘All of this would have been lost without Trove. It’s satisfyingly miraculous, how much you can find in there. It’s still hard and there are maddening missing pieces, but without Trove I’d only have my imagination to go on.’

Meanwhile, on a broader scale, the Design & Art of Australia Online (DAAO) archive provides global exposure for Australian scholarship on art and design, along with tangible economic, social and cultural benefits toward the sustainability of cultural industries.

The next generation of the DAAO will enable cultural policy to be informed by an expanded and growing collection of scholarly research. Moreover the DAAO has potential as an enabling technology for Australia’s Indigenous visual arts and craft sector in meeting the challenges of unethical conduct, sustainability and further developing international markets.
Access nationally and internationally: Uncovering the unknown and the unseen

National Gallery of Australia (NGA) visitors can now get up close and personal with selected artworks usually kept well out of reach from the public. Six objects on display as part of the Myth + Magic: Art of the Sepik River exhibition were scanned and recreated as 3D digital sculptures in a unique collaboration between the NGA and the CSIRO. The exhibition showcases the unique cultures of the Sepik River region of Papua New Guinea. Visitors can view the work on touch screens from every angle and zoom in on details, such as intricate carving before seeing the items in person. The Gallery is working to make the objects as accessible as possible globally, of significant benefit to overseas researchers and the communities of origin. This is a way to virtually share material which they may never have seen.

The National Film and Sound Archive has produced a series of digital centenary “newsreels” which have reached more than one million viewers on national TV and have screened before top rating movies at over 100 cinemas across all States reaching both metropolitan and regional audiences. There were 9000 online sessions the first month the website launched and since then, usage has continued to grow.

Engaging local communities

Lilydale & District Historical society has more than 4000 images in its collection. They have sold licensed copies to media companies in Australia and overseas, and “locally, our images and research have helped secure the future of two of Lilydale’s oldest homes, both now being lovingly restored by their owners who also proudly hang our images of their homes in pride of place. Both the owners and our community benefit from the retention of the homes and their place in our local history.”

Digitisation of the image collection has created an important revenue stream to cover the Society’s basic costs, and also to enable more of the community to engage with its history. The Society’s original collection has now become part of the museum run by the Shire of Lilydale and is a vital community asset.

Enabling research on a hitherto unimagined scale

As part of the Global Plants Initiative (funded by the Andrew W. Mellon Foundation), the Australian National Herbarium is digitising its 9,000 type specimens, some of which were collected as far back as the late 18th century. Making these digital images available is allowing researchers worldwide, and especially those in developing countries, to readily access the wealth of data these images hold. This also minimises the risk of damage that handing these fragile and irreplaceable specimens can cause. Making these images available is contributing to Australia’s cultural heritage as well as to our biodiversity knowledge.
Digitised sources + computational methods = digital innovation

The State Library of South Australia has 23 data sets available through data.sa.gov.au. These data sets have been made available for GovHack, the SA nodes of GovHack – Unleashed Open Data competition and N3xGen Unleashed; as well as the national WW1 Hack. The exposure and use of these data sets, particularly in the youth competition have contributed to the development of young entrepreneurs, building a cohort of skills and partnership opportunities.

uladl.com

Scale matters

"I was able to do in minutes with Python code what I’d spent the last ten years trying to do by hand!" - Dr. Katrina Navickas, BL Labs Winner 2015

Dr Navickas experiments with mapping with GIS, and applying the theories and methods of cultural geography and space syntax to historical evidence. She was one of the two 2015 winners of the British Library Labs competition, for her digital history project, ‘Political Meetings Mapper’, which text-mined and mapped reports in 1840s newspapers.

This kind of project will lead to yet further new research not just in history and heritage but also in the sociology of social movements and urban planning.

britishlibrary.typepad.co.uk

Following curiosity and connecting us to family and the past

Every one of us is shaped by our backgrounds, culture, nationality and a sense of belonging, and knowing our family history can make a significant contribution to our sense of self.

Millions of digital records are now available online to family historians from national and state archives and collections, but many more fascinating pieces of information remain locked away in analogue formats in small historical societies and other local collections. Often researchers find the unexpected when they move beyond the dates and explore court and land records, newspaper clippings, journals, letters and other more personal records, now possible on a large scale as more and more material is added to digital collections.

Discovering this sense of self can be particularly important to Indigenous Australians who may have been displaced from family, community and country though a variety of government policy and social actions. Reconnecting to culture and country has significant wellbeing effects for Indigenous Australians and much of this work takes place through accessing digital collections.

The Dawn and new Dawn archive collection, for example, allows people to search from anywhere by the name of a person and specific dates. There are also details of births, deaths, marriages and baptisms, which is helpful for family history research. Those interested can also view photos from the magazines or read from the complete set magazines. The Dawn and New Dawn also contain articles about the conditions and activities on reserves, stations, homes and schools throughout New South Wales, as well as highlights from the work of the Aboriginal Welfare Board.

aiatsis.gov.au
Learning more about society

We know surprisingly little about the transitions from the world of the circuit court in a colonial town to our contemporary criminal justice system. The Prosecution Project seeks to provide us with the means to learn more about this transition, and to do so in a way that broadens understanding of the history of crime and punishment, and adds to the stock of knowledge of Australian social histories in a way previously unimaginable.

The Prosecution Project has accessed the enormous potential of volunteer communities engaged in genealogical and other historical research, ‘citizen historians’ we might call them. The experience of working on the Prosecution Project and on other projects such as the Digital Panopticon and Founders and Survivors, shows the huge unrealised potential of digital technologies for the publication and circulation of images, the development and utilisation of large datasets, the design of new ways of sharing research outcomes, including data visualisation.

Meanwhile, the Citizen Heritage Project is exploring how digital technologies enable citizens of local areas to document and share memories and records of their collective past. The main focus is on the development and study of PastPort (currently undergoing early testing), a mobile webapp for residents and visitors of Port Melbourne in inner Melbourne, an area of rich and disparate urban history.

This project is supported by the Australian Research Council (Discovery Project: DP140101188) and aims to advance heritage theory and practice, with new understanding of the production and application of innovative digital technologies.

Such an important project that so easily maps and reveals the history of inner Melbourne should also help develop tourism opportunities with associated flow on economic benefits.

citizenheritage.com

Helping scientists

Australian Moths Online is now available on the Atlas of Living Australia, providing reliably identified images of selected Australian moths. Australian Moths Online provides images of Australian moths that have been reliably identified by CSIRO.

Moths regarded as pests in Australia can be found by running a search on ‘pest’. A list of images, names and data for each pest species on the site will appear. Clicking on the image will provide an expanded image to accompany the data.

Such a digital resource has unquantifiable and often unknown benefits to scientists, researchers and citizen scientists. The one certain thing is that without digital access an enormous amount of activity would simply not be able to take place unless physical collections could be accessed.

csiro.au
Helping students

Dirk Hartog 1616–2016: 400 years of Australian connections is a digital resource from the National Library of Australia aligned to the Australian Curriculum: Humanities and Social Sciences for Year 4 students. It adopts an inquiry learning approach that develops students’ skills as historians. The resource engages students with a rich selection of historical sources and challenges them to draw their own conclusions about Dutch–Australian connections over the past 410 years, focusing on Dutch maritime explorations of Australia. Welcome to the digital classroom and improved learning outcomes for Australia’s students!

nla.gov.au

An open access online resource available to all teachers and students, the Living Archive of Aboriginal Languages contains thousands of authentic texts which can support the inclusion of Indigenous knowledges across the curriculum.

The archive allows teachers and students around Australia to easily access a vast range of literature, art and language, leading them to think about different ways to consider Indigenous knowledge in their own contexts.

This includes exploring opportunities for connection with local authorities, research into culture and language of the area, and even to investigate opportunities to support language revitalisation.

Schools and teachers with limited or no connection to Indigenous peoples can easily access materials that can be readily used in the classroom, and those who have connections can also use these resources to support or develop relationships and incorporate knowledge directly from Indigenous authorities.

cdu.edu.au

Digital participation

Undertaking family history research is one of the first ways in which many Australians start accessing digital collections and through this develop digital literacy skills, resulting in significantly greater social participation and engagement. Raising levels of digital inclusion has a range of measurable benefits and social impact. UK research shows that many without digital literacy skills suffer social exclusion and poverty.

The development of these skills, and consequent digital participation, can help to improve people’s employment prospects, levels of education and financial literacy. Using just one overseas example, organisations such as the UK’s Good Things Foundation can measure positive impacts from digital participation on health and well-being, small business development, learning and employment, money management, community cohesion and the reduction of isolation and loneliness.

goodthingsfoundation.org
Culture can be a catalyst for social and economic change. But that’s only possible if it’s readily usable and easily accessible for people to build with, build on, and share.

strategy2020.europeana.eu

www.glampeak.org.au