

Response to the Tune ‘Functional and Efficiency Review’ of the National Archives of Australia (NAA).

To: David Tune, Independent Reviewer OAM PSM.

Date: 28 June 2019

From: Response written by Rose Holley in consultation with Dr Warwick Cathro, and Eric Wainwright.

Together Warwick, Eric and I hold a great professional interest in the effective operation of the National Archives of Australia. Over the last ten years we have each successively committed more than two years of our time working collaboratively with staff from NAA on high priority strategic matters, ICT issues and projects. Together we have an in-depth strategic understanding and working knowledge of the NAA physical and digital challenges and some ideas for potential solutions to the issues. We met last week to pool our knowledge and brainstorm the issues, in the spirit of helping and for the ‘common good’. We outline our professional opinions of the key factors that need to be addressed, and how this can be done in terms of the purpose, functions and role of the NAA. We thank you for this opportunity to share our expertise. We acknowledge the difficult and stressful circumstances that many of the NAA staff are now under and offer our support to them. We know many of them to be truly dedicated and passionate about their roles. It is with good intent and hopes for positive change that we respond to the call for help from the NAA Advisory Council and offer our constructive recommendations on this critical situation.

Relationships with the NAA

Rose Holley

- Currently working in a formal partnership with the NAA. As Special Collections Curator at UNSW manages custody and access to the NAA John Howard Collection.
- An active member of the Australian Society of Archivists networking with previous and current NAA archivists.
- Previously NAA Director of Software Implementation and Senior Project Manager 2012-2014. Managed a multi-million dollar project to implement an audio-visual digital preservation and asset management system at the NAA.
- Is a ‘wannabe’ self-serve digital user of the NAA collection with particular interest in finding and accessing the already digitised ABC radio and TV Archives back to 1934. Would like to do this remotely and digitally, but at present this is not possible.

Warwick Cathro

- Assistant Director General at NLA 1989-2011. Worked closely with senior executives at NAA in 2009 and 2010 to develop a \$147 million joint bid with NAA and NFSA to tackle the challenges of digital collecting, preservation and access.

Eric Wainwright

- Deputy Director General at NLA 1988-1997. During 2011-2012 was an external consultant for NAA with his partner Dagmar Parer (NAA Director 1989-2000, NAA consultant 2005-2014). Advised on strategies for addressing key digital challenges of digital archiving and access.

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“One of the great ironies of the information age is that, while the late twentieth century will undoubtedly have recorded more data than any other period in history, it will also almost certainly have lost more information than any previous era.” Alexander Stille, Professor of Journalism at Columbia University.

1. Summary of Key Issues (Wainwright, Cathro, Holley perspective)

After thoughtful and serious discussion Eric, Warwick and I are unified in thinking that the major issues for the review team to consider are:

- Will the Review itself be able to address the complexity of issues currently faced by the NAA, given the shortness of the Review timeframe, its limited promotion, the lack of input from other collecting institutions and interested parties, lack of international comparisons, limited records/archives expertise on the Review support team and no leading edge technology expertise within the NAA itself? Why is there no apparent involvement of the Government’s Digital Transformation Office?
- The reduction in NAA funding over many years, the associated decline in records experience/expertise in middle to senior staff, and an inability of the NAA to provide adequate searchable records for a high proportion of its collections.
- The inability of the NAA to secure adequate capital funds for digital developments to address the issues of the move of all agencies to digital record creation, web sites and database approaches, technological obsolescence, and higher expectations regarding local and network access amongst potential records users.
- Limited influence and risk-aversion of the NAA (and weakness of the present Archives Act) in overcoming the unwillingness of Agencies/Departments to allocate adequate resources to enable the NAA to collect records of long-term national significance (particularly those in digital formats), and to provide user access within a reasonable timeframe. This problem has been further exacerbated by recent amendments to the Archives Act (which were not subject to public advice and show no understanding of serious research access requirements), increased user charges re digitised copies, and a general move in Government away from a presumption of open public access to records.
- Lack of effective collaboration between the NAA and other collecting institutions, which would allow sharing of technologies, storage, expertise and more effective online user services.
- Pressures (in part Government/political) on the NAA to devote ever-increasing resources to family history tracing, particularly related to military involvement, to the detriment of its general support for Australian historical research and services to Commonwealth government agencies.

2. The Tune Review Process and Communication

It has been alarming and discouraging that such a significant and overdue review has gone ‘under the radar’ of many of the NAA key stakeholders and clients. The Open Letter of appeal from the NAA Advisory Council to give feedback for the review was placed on the NAA Facebook page on 14 June 2019, which is where we noticed it, and 2 weeks were then given for people to provide feedback. The letter cannot be found on the NAA website and does not appear to have been sent to all key stakeholders. There has been a brief article in the Canberra Times about the review, which downplays it, but no other media notice as far as we are aware. The very formal method of response has perhaps alienated many average clients from being able to easily give a viewpoint. It has not taken into account varying communication styles and formats.

Recommendations:

- Before making any decisions pro-actively seek input from the two major client groups: public users of records, and donor agencies. This could be done by structured focus groups, workshops, and interviews. Have an emphasis on questions that elicit responses about both the current and 20-30 year future expectations of clients. Consider that future requestors of records may not be existing users now, either because they are currently unable to find and get the records they want digitally, or their needs have not yet emerged. In the future there may be a greater number of requests for born digital records e.g. people requesting access to information held on themselves under Freedom of Information laws. The recent legal changes that allow government collection of individual’s metadata from phone, email, and social media accounts, including personal messages, GIS locations etc. should be considered in this broader picture. Every Australian is potentially a client of the NAA, from all walks of life and their viewpoints matter. How would a 20 year old expect to be accessing information about themselves in the year 2060 from NAA, and how much information about them would be held by then?
- Pro-actively identify the NAA’s key stakeholders and clients. If any of them have not provided feedback in this review, invite them to. Have reasonable timelines and appropriate methods e.g. focus groups, interviews. Include the 26 National Collecting Institutions (NLA, NFSA, AWM, AIATSIS, etc.), State and Territory Libraries (NSLA), State and Territory Archives, Australian Society of Archivists, Australian Library and Information Association, the Council of Australian University Libraries (CAUL), the ABC, Defence, and ASIO.
- As the review progresses keep the process transparent. Include names of the review team, the stakeholders consulted, and timelines and progress on a website.
- Provide key collecting institutions and major clients with a draft of the final review for consideration and comment before public release, including NLA, NFSA, AIATSIS, AWM, ABC and Defence.

3. Core Purpose of a National Archive

The core purpose of the National Archives of Australia is to collect, preserve and make accessible the significant government records of our nation (Records of National Significance). This is achieved by having an ongoing relationship with government agencies during their active use of internal records (records management), which then flows into eventual deposit of some records of national significance (archives). Records encompass ‘information’, ‘data’ and ‘metadata’, and can be physical, digitised or ‘born digital’. Traditionally many were paper, but there is also a large amount of audio-visual e.g. film and radio and old data formats e.g. floppy discs. Much of the ‘born digital’ will be emails, or social media formats. The NAA are mandated to collect and preserve our nation’s records with a far larger scope than that of any other institution, and at a time in history when more records are being created than ever before. However are the NAA actually collecting the significant records/databases/datasets, and how can the public tell? Does the Archives Act adequately set out the core purposes for a modern archive? Should there be an external advisory committee dealing

with collecting policies/matters that is accountable or representative of the two client user groups: government agencies (200+); and public users for example university researchers and family historians?

When budget is tight there is not an option to reduce the scope of collecting, or prevent access to the collections, without breaking the mandate. There will be significant gaps and loss of irreplaceable government information if this happens. The NAA should hold a vast historical corpus of data, which if mined could be of great economic, scientific, creative and political value to the country. This includes the ABC Archives back to 1934, war and service records of all Australians, weather and climate records, Prime Minister's and cabinet records. The power of information cannot be underestimated. For example records recently used for matters of national importance include: cyber-security, sexual abuse, rights of aboriginals, and climate change. Our constitution and the Archives Act supports and enforces citizens' rights of access to information and data about ourselves, our society, our culture, our politics and our social history.

Recommendations:

- Do not compromise, lessen or reduce in scope the core principles and powers that enable unfettered independent collection of government records of national significance; long term preservation; and citizens' rights of free access to records because of the challenges faced. Archives are the backbone of a democratic and open society. The Government must take whatever action necessary to restore public confidence and resource these functions.
- Clarify if the NAA is actually collecting the nationally significant records/databases/datasets and how the public would know this.
- Review if the 1983 Archives Act sets out the core purposes for a modern archive.
- Consider if there should be an independent external advisory body which separately advises the relevant Minister(s) on all matters relating to records and archives, including FOI/public interest issues, collecting policies and matters? For example like the UK Advisory Council on National Records and Archives.

4. Vision, Strategy, Leadership, Policy

The NAA has a [Corporate Plan 2018/19-2021/22](#), an [Archives 2020 Strategic Plan](#), a [Digital Continuity 2020 Policy](#), and is the lead agency for the Government's [Digital Transition Policy](#). Recently it has just released an [IT Strategic Direction 2019-2022](#). However, these are very short term plans and seem often devoid of detail for accountability, and for enabling an assessment of current collecting and access strategies and their achievement. The contrast with the UK National Archives current Digital Strategy is noteworthy. While the NAA has produced many useful guides for Agency records policies and practices, the results of the most recent [Check-up Plus survey](#) suggests a very limited success in implementation across agencies as a whole. There appears to be a lack of forward visioning for where the NAA needs to be in the medium to long-term (5-30 years' time, i.e. 2050) and what it needs to get there. Clearly effort has been focused on successive 'annual checkup surveys' of recordkeeping activities of 160 agencies for the last few years, and producing the digital transition, digital continuity and '[digitise and disposal](#)' policies. Beyond offering general advice that information should be valued and managed digitally, these policies seem largely ineffectual. There is a lack of public visibility about planned programs of digitisation and how these are selected and prioritised.

Warwick, Eric, myself, other collecting agencies, professional peers and consultants have given significant time, ideas and advice to the NAA over the last ten years as they transitioned into a critical state. It seems there were long running internal systemic issues which still have not been addressed, for reasons not known to us, despite our close connections with the NAA. Since about 2005 there has been a concerning lack of benchmarking or attempt to lead or follow international best archiving

practice or services (with the exception of [the Hive](#) project). The NAA is no longer on a par with the UK or US national archives.

Recommendations:

- Find out how other International Archives are addressing the digital challenges of collecting, preserving and access, and what are their budgets, legislative and operational frameworks? Consult with exemplar International Archives e.g. Norway, Finland, Sweden, the Netherlands, UK and the USA.
- Review the role, makeup and operation of the NAA Advisory Council and executive leaders.
- Devote resources to developing a 30 year vision and strategy, building on previous work done, so that realistic resources and cost for achieving the vision can be budgeted for.
- Undertake an audit of all NAA Policies and Procedures (similar to that carried out in 2011 Wainwright Report Appendix 2). Review their effectiveness, relevance, overlap, public and agency visibility, and consistency of style and writing.
- Pro-actively seek feedback from ex and current staff, in a confidential, no blame environment to help the review team discover why things have happened in the way they have, so this can be prevented from re-occurring in the future.
- Review the strategy for digitisation, and public visibility of the selection and prioritisation of records being planned for digitisation.
- Members of the review panel or any taskforce subsequently appointed must read relevant internal and external documents previously written about developing strategies to overcome the NAA digital challenges and improve services. Some example reports are listed below where most of the recommendations were never actioned and would still be relevant today.
 - [ICT Business Case: Dealing with the Digital Deluge. Exposure Draft 2009](#) led by Warwick Cathro, NLA. Joint proposal to Government by NAA, NFSA and NLA for \$147 million over 5 years to address shared critical issues of digital collecting, preservation, and access. If granted aim to complete by 2020. (Not approved). [Executive Summary](#). [Precis](#) at Appendix 1.
 - [Strategic Directions for Digital Archiving at the NAA](#). 2011. Eric Wainwright. Options for a 20 year strategy to 2031.
 - External Review of RecordSearch (NAA online users experience and expectations vs actual experience) by APIS Group? 2011? Recommendations for major improvements. (not actioned).
 - External Review of RecordSearch Usability. By Usability One. 2012?
 - [Access to Digital Records Scoping Study for NAA](#). Eric Wainwright and Dagmar Parer. 2012. Recommendations for addressing issues, including RecordSearch and developing forward strategy.
 - Access Clearance Taskforce 2013 to tackle issues and backlog. *(Not publicly available)*.
 - External Review of NAA Access Clearance Issues, with recommendations. 2016 by Paul O'Sullivan OA CNZM *(Not publicly available)*.
 - [Dealing with the Digital Deluge- Ten Challenges for GLAM's 2012](#), Holley, R.
 - [The proposed Australian National Cultural Policy 2012- an overview for GLAM's 2012](#), Holley,R.(Includes summarised responses from 200 agencies on what a National Cultural Policy should enable and resource).
 - [The Australian National Cultural Policy released 2013: an overview of 'Creative Australia' for GLAM's](#), 2013, Holley,R.

- [An Innovation Study: Challenges and Opportunities for Australia's Galleries, Libraries, Archives and Museums](#). CSIRO and Australian Centre for Broadband Innovation: 2014. Mansfield, T., Winter, C., Griffith, C., Dockerty, A., Brown, T. Sets out a vision to 2035.

5. Physical Buildings

The NAA has physical locations in every state, with two locations in Canberra. The NAA does not own any buildings but rents them. There are specialised requirements for reading rooms, repositories, conservation labs, server rooms, digital archives, exhibition spaces and community rooms which are not easily achieved in standard rented office space. Ideally locations should be easily accessible to the public with parking. Currently there are 350 linear kilometres of physical records to be stored, with between 100 -1000 km waiting to be deposited. For more than ten years considerable staff time and budget has been spent planning for office moves, hiring new and often unsuitable premises, re-fitting rented premises, and re-locating archives and premises. This is not efficient or effective use of public money. It diverts energies from core archival business, into worrying about where and when the next move will be, with little control of this. There have been unexpected notices to vacate rented premises which have caused considerable stress to archives staff and extreme inconvenience to clients. For example most recently the move of the Canberra reading room from the building in Parkes to MOAD. The reading room in MOAD is too small for demand and does not have enough space to store records for client repeat visits. The new archives building at Mitchell which opened two years ago, is not owned by the archives and does not have a reading room, exhibition space, or public venue facility. It is smaller than the previous 3 rented premises which meant all the records could not be re-located into it, and there is no space for future expansion. Despite this the NAA have spent more than \$50 million fitting it out to their specific requirements. Logic dictates that the NAA should own suitable premises, that meet current and future needs. This would give stability and assurance in the future. This is now a great opportunity for Australia to set an international example of creating an iconic Archives buildings fit for the 21st century that meet the needs and expectations of clients as well as staff. Regardless of how many records are available online there is a need for ambient spaces that inspire research and reflection, and are digitally connected and equipped. There is lots of existing research into expectations of clients for library/archives buildings and spaces and fantastic international examples of wonderful architecturally designed buildings to inspire.

Recommendations:

- Enable government ownership of NAA buildings in each state.
- Ensure that NAA buildings are fit for purpose, big enough, and designed to meet the current and future expectations of clients.
- Consider the opportunity to build a state of the art, architecturally designed archives that will be internationally recognised.

6. IT Infrastructure

The NAA has an inefficient network infrastructure, barely fit for purpose. The digital expectations of staff and clients cannot be met, for example the network is chronically slow with varying connectivity between offices for basic tasks such as email. With no high speed network and limited server and storage capacity, workflows in the state of the art enterprise audio-visual digital preservation system are not fully used. Even though the software has the functionality, it is not currently possible for the ABC to digitally deposit online their born digital archives, or for the public to digitally stream from home the retrospectively digitised ABC Archives. For example a client will have to make contact with a member of staff, ask them to search for items, if digitised staff download them from a server, copy to a DVD, then ask the client to physically visit the Sydney office to listen/watch from a DVD in the

reading room. There is limited resource and inadequate IT infrastructure to address the audio-visual obsolescence challenges and migration pathways of digital media. No government department is actively and regularly depositing born digital files to NAA as far as we can tell. In the ideal future the NAA would be operating like a vast computer super data centre, with high speed networks, to ingest, store, reformat and deliver giant amounts of data to potentially millions of people. Data analysis and mining will be key. It is questionable whether the NAA has the IT expertise to develop or run an advanced IT infrastructure. It is noteworthy that the NAA first set up a detailed examination of its future IT infrastructure/digital requirements in relation to its Digital Preservation Strategy at least as early as 2000 and so was a forerunner in this and in establishing a Digital Archive prototype. But not much seems to have advanced since then.

The view that IT are just a regular service section, who support the email system and desktops needs to be changed. In order for the NAA to go forward into the world of born digital archives, great technical knowledge and high level digital dexterity must be spread throughout all sections of the organisation, with a significant amount of IT experts who also understand the core business of digital archiving, big data centres, and data analytics. Current efforts of existing staff to scope digital system requirements both for digital archiving solutions and client find and get interfaces may not lead to the best outcomes. Attempts to buy an 'off the shelf' 'best in breed' system are somewhat unrealistic, when they are not known to exist. Significant internal development resource is likely needed. RecordSearch, the public catalogue has not met client expectations for many years and multiple internal and external reviews have suggested an overhaul, upgrade and replacement. Its metadata is not discoverable by Google or Trove, and no records can be bookmarked or persistently linked to by clients. It is unclear what software is used by other national archives. Equivalent relevant data businesses like Google, FindMyPast, Ancestry.com, the Church of Latter Day Saints and Facebook can be learnt from in how they run their large scale IT operations, data ingest and analytics, digitisation facilities, and search interfaces.

Recommendations:

- Learn from exemplars that have efficient and effective large scale digitisation centres, IT infrastructures, data centres, service delivery models and search portals e.g. Google, Ancestry.Com, FindmyPast, Church of Latter Day Saints. Evaluate and consider applying similar IT solutions to the NAA IT issues.
- Develop plans and resourcing for how to address the inadequacies of the NAA IT infrastructure, network, servers and storage, and what expertise and staffing is needed to build and maintain an advanced IT infrastructure. Ideally a super high speed data centre style infrastructure is needed now and into the future.
- Develop a strategy to address the audio-visual obsolescence challenge and digital preservation data migration requirements.
- Research what software is used for an online public client search portal at leading international archives, Ancestry.Com and FindmyPast. Make recommendations for how to replace or upgrade RecordSearch with a state of the art online public search portal that meets client expectations:
 - able to find and get records online regardless of the records format or physical location
 - be intuitive, fast, free, easy to use
- Take a 'user-centric' approach to online discovery of records. Directly and pro-actively involve public clients and government agencies in the development, implementation and testing of an online public search portal.

7. Organisational Structure, Staffing and Project Management

The NAA has a diffused organisational structure, with some responsibilities being managed locally in offices, and some centralised nationally or a combination of both. Due to network and staff deficiencies often what happens in practice does not match the organisational structure. Digitisation is a good example. This is being done locally and nationally, and also managed in two different divisions, with a multitude of different standards. It is often difficult therefore for staff, external stakeholders and clients to make contact with the right person, and get clear answers to digitisation questions e.g. to what standard should I digitise this? There have been at least three minor/major changes to organisation functional areas in the last few years. Combined with a slow but constant reduction in total number of staff due to government cuts, loss of expert staff through voluntary redundancies or resignation, and new senior appointments that lack archival and records management knowledge, there is a significant skill gap at the NAA (digital archivists, IT professionals, project managers, business analysts and conservators), with future skills needs being unknown. The level of staffing appears to be significantly under that required for scope of work. The extent of records to be deposited far exceeds the collecting scope of the National Library. The amount of digital records are exponentially increasing, and are in addition to the ongoing management of paper records and retrospective digitisation.

The NAA has been attempting to tackle some significant projects over the last few years, without additional funding or staff, and generally has moved existing staff onto large projects rather than recruiting project managers or specialist staff. This has compromised service operations and also led to a high rate of project failure. The projects needed to re-establish the NAA as a leader in the field are highly complex, inter-related, co-dependant, span across multiple locations and are likely to take some time e.g. the procurement/development of an archives management system, a digital preservation archive, upgrade of network, storage and servers, and potentially moving buildings and records again. It is questionable if the current multi-million dollar procurement project for a digital archive is/will be effective in this environment, despite being much needed and overdue. There is no public information on the website about the status or progress of the Digital Archives Program/Taskforce and how or if this relates to the Digital Archive prototype project from 2000. Have they all stopped or failed?

Recommendations:

- Review the existing organisational structure. Ensure that staff, stakeholders and clients have good understanding of and visibility about roles and responsibilities, and that the structure meets needs through a period of change.
- Undertake a workforce planning exercise to identify number of staff, roles required and current and future gaps over the next ten years.
- Recruit internationally so that the most skilled and innovative people in the world can be employed to tackle the challenges.
- Review appropriate salary levels, especially for IT roles in order to attract and retain high calibre staff.
- Establish a program management office with experienced project managers.
- Establish a position responsible for co-ordinating, reviewing, writing and managing policies and procedures to ensure a quality level of governance, consistency, effectiveness and style and monitoring the provision of documents to agencies and the public.
- Ensure current and future staff are trained and recruited for their leadership skills, and can demonstrate leadership at all levels, so that united they can help lead the organisation out of critical state and into effective operation.

8. Changes and Collaborations (Digitisation, Preservation, Collections, Systems, Storage, Facilities)

There are significant issues to be addressed which may require significant changes to legislation and agency responsibilities. Currently 64% of the NAA collection is not discoverable by clients because it is not described at item (file) level. Although 2 million items have been digitised over the last 15 years this only amounts to 5% of the collection and there are 39 million items not digitised. Other institutions internationally are aiming for 100% digitisation e.g. Norway, Finland. Although the NAA has made considerable investment in developing audio-visual digitisation labs and software, there is extremely limited staff expertise in this field with experts moving between ABC, NFSA, and NAA and many now retired. It doesn't seem viable for each institution to set up audio-visual centres of excellence. It is not clear to many clients why there are multiple government institutions that hold big collections of film and audio records: the NFSA, NAA, AIATSIS, and NLA and they have to visit each in turn. It is also perhaps frustrating for some researchers that they have to visit both the AWM and the NAA to get commonwealth war records. A more recent arrangement to give custody of a Prime Minister's records to UNSW is interesting, invoking for the first time 'section 64' of the Archives Act, which allows the NAA to give custody of its records to other people.

The physical size of the NAA collection is vast at 350 linear kilometres, but small compared to the amount of active records still being held by agencies, which is about 1000 kilometres at [last NAA survey](#). Another difficulty is the NAA being unsure how many of these will become records of national significance. They conservatively estimate 6-10%. The same survey indicates that there are 128,000 TB of digital data held by agencies with perhaps 3% being records of national significance. The unresolved issues of how to digitally transfer, archive, access clear and make public this data seem complex, costly and overwhelming. The NAA has embedded workflows geared towards paper archival processes which are largely irrelevant for digital. With the perceived lack of digitally experienced and IT focused staff, combined with lack of resource over many years NAA is now backed into a corner. If this was a business it would have gone bankrupt due to its lack of transition to client expectations and needs. We provide some ideas to resolve issues by institutional collaborations, innovation and technology.

Recommendations:

- Review 'shared custody' of national archives. Should this now be extended to allow agencies other than AWM and UNSW to manage NAA records? If so how will the shared agencies be funded e.g. cost per linear metre of records?
- Give custody of NAA Commonwealth personal war records to AWM so that both the official and personal war records are held in one institution.
- Transfer the responsibility of web archiving from NAA (who are mandated to collect but not able to do so) to NLA who currently are web archiving. Investigate partnerships to mirror/backup with the [Internet Archive](#).
- Give custody of NAA audio-visual records to the NFSA (and also those of NLA and AIATSIS?). This would enable the expertise, equipment and staff to be centralised so that challenges of digitisation and audio-visual obsolescence can be more efficiently and effectively tackled, with competition for and duplication of AV experts, specific and costly historic and state of the art equipment ending.
- The ABC Archive is a precious national historical resource. Other agencies have a stake in it (for example, its metadata should be in Trove and it is vital that the content be preserved). Organise a conference of all stakeholders, led by the ABC itself to discuss how these outcomes can be assured.

- Review the digitisation and rights issues with ABC Archives and find a path to enabling free public online access to the digitised archives from 1934-1990 (in a similar way that the UK BBC Archive is available).
- Put the 'digitise and disposal' policy on hold until the NAA are able to long-term preserve digital files.
- Develop state of the art, highly automated, robotic, centralised 'super centres' that are shared facilities between agencies for cultural heritage items including:
 - Digitisation centre for audio-visual (For NFSA, NAA, AWM, NLA)
 - Digitisation centre for paper
 - Physical storage for paper/archives/records. (160 agencies are currently outsourcing storage of 1700km records + NAA, NLA, AWM have approx. 500km of content in storage).
 - data storage centre for current born digital data that will become archives.
 - data archive and long-term preservation for digitised and sentenced data.
- Assess feasibility and cost of digitising 100% of NAA records and making them full-text searchable (currently digitised records are not full-text searchable).
- Provide funding to describe and make publicly available the 64% of the hidden physical NAA archive.
- Access clearance issues:
 - Address the backlog and provide a fixed compensation fee to clients who have been waiting over the agreed times of the Archives Act prior to the 25 April 2019 amendment.
 - Reverse the recent 25 April 2019 amendments to the Archives Act which significantly increase the waiting times of clients from months to years; discourage use of archives for research assignments and group study; and reduce the ability of the client to question response times.
 - Have a risk managed approach to access clearance, rather than a risk averse/conservative approach.
 - Place new requirements on agencies to access clear records within a clearly specified and short timeline for example three months. If any agency fails to respond within the timeframe then the records will automatically deemed to be cleared and provided to the client (risk managed approach).
 - Ensure there is 'how to' training, procedures and guidance in place for agencies on access clearance, and a NAA helpline to call for advice.
 - Make completely transparent through a client portal the progress through the workflow (like a parcel delivery).
 - Place responsibility of keeping the client informed on the NAA, rather than the client having to follow up.
 - Change the manual process of inspection i.e. a person has to read every page of every record into a fully or semi-automated digital process.
 - Consider Rose Holley's '*Operation Bumble Bee*' idea of Artificial Intelligence (AI) Access Clearance. In summary: For paper records that have clearly typed text first digitise them and apply optical character recognition (OCR) to make them full text searchable. Ideally this method of digitisation should be used anyway, but is not currently being done by NAA. Run the OCR output files through a customised Artificial Intelligence (AI) Access Clearance Programme. This would look for specific 'buzz' words within certain sequences or within proximity to other words and if buzz words are not found the records would be automatically cleared for public access and made available in a public search portal. If the buzz words were

found then the records would be automatically uploaded into an enhanced version of the existing [NAA Crowdsourcing platform 'The Hive'](#), available only to agencies and NAA staff. Agencies would be prompted to login to the Hive to process records for access clearance. This would enable a combination approach of automation and human checking by eye, with transcription of hand written notes. Agency staff would see the highlighted buzz words in the records, redact them if appropriate, and make access decisions. After this the records would then either automatically load to a public search portal if access cleared, or be held in a retention period for review again by the agency in x years.

The artificial intelligence access clearance 'Bumble Bee' program could also be applied to all the 'born digital' records, enabling fast, effective, automatic access clearance in the future. Combining OCR, AI and human transcription would also make historic NAA records full text searchable for clients and enable data mining of a huge corpus. This would enable researchers to make new discoveries that bring social, scientific and economic benefits to the nation.

Note: Australia is unique in the international archive world for accepting all records, before they have been selected as records of national significance or de-classified, and then only trying to answer these questions when the record is requested by a client. This is seen either as an unworkable inefficient model, or potentially very progressive. It should therefore be reviewed.

To prevent future access clearance issues:

- Require all agencies to de-classify records before depositing them with NAA (digital and physical).
 - Identify and select records of national significance at time of deposit, rather than accepting everything and trying to decide which records are significant and should be retained later.
- Review all current business process workflows for paper and digital records with a view to identifying and resolving the issues upstream, that cause the downstream issues e.g. access clearance wait times
 - Take a user centric approach and significantly enhance both the public client and the donor agency user experience.
 - Train all NAA staff in brainstorming and then run brainstorming sessions for all staff in the NAA at all locations to gather ideas about how the issues can be resolved. Some of the issues and workflows are very complex and best brainstormed by staff who fully understand them.

9. Resource Estimates

It is very clear that the NAA requires both a significant injection of capital budget and ongoing recurrent investments if it is to have any viable chance of meeting its currently legislated responsibilities. The substantial investment required needs to be considered in terms of: the major economic benefits and business advantages a digital archive would bring to the nation; the aspirations of the government to rise in world rankings for freedom and openness (reliant upon open data); and on the innovation and creativity that will likely occur if 100% of the collection is digitised. It is noted that it was an election commitment of the Liberal government in May 2019 to provide [funding to digitise all WW2 records](#). It is our expectation that the NAA would have consistently provided recommendations to government for capital funding bids over the last fifteen years, particularly for the upgrade/replacement of RecordSearch, and a Digital Archive, and that the NAA will be making its own response to the Tune Review, outlining the operational resources it needs. We

understand the NAA currently has approximately 350 staff across 8 offices and an [operating budget](#) of **\$95 million**. We provide some very general estimates and examples of funding granted for similar purposes to those now needed, that we hope will help inform members of the review panel, and support NAA requests.

Estimates for NAA Collection:

- Critical injection to address immediate NAA IT infrastructure and systems gap (2009 Digital Deluge Bid) \$26 million
- Digitisation of AV and addressing obsolescence challenge \$50 million
- Description of whole collection at item level (26 million physical items) \$52 million
- Digitisation of whole collection (39 million paper items, using NLA \$2 per page costings) \$2.3 billion

Funding Granted to similar projects:

- 2009: US National Archives (NARA) \$795 million to 'go digital'
- 2009: Netherlands film and sound archives \$252 for audio-visual obsolescence challenge
- 2006-2010 New Zealand Archives and Library \$40 million for digital preservation system
- 2016: State Library of New South Wales \$40 million to replace digital infrastructure and digitise
- 2018: CSIRO \$43 million for new building to house national collections e.g. insects
- 2019: AWM \$500 million for extension to public galleries

Recommendations:

- Review the operating budget of the NAA against its expected functions and take into account the lack of ownership of buildings (budget required to rent, move and fit out premises, and staff time to plan and resource), physical location in each state, mandated scope of collecting and activities, proportion of IT staff required.
- Provide stimulus funding to the NAA to move them from critical into stable state, particularly for IT infrastructure, public search portal and digital archive.

Appendix 1:

PRECIS OF JOINT NLA, NAA, NFSA 'DIGITAL DELUGE' FUNDING BID 2009

In 2009/10 the National Archives of Australia, in collaboration with the National Library of Australia (NLA) and the National Film and Sound Archive (NFSA), submitted a funding bid under the title "Dealing with the Digital Deluge". The bid was supported by a cost-benefit analysis.

The bid sought funding to allow the three agencies to fulfil their legislative mandates in an environment where records are now in digital form, and to respond to these four challenges:

- *the digital collecting challenge*: providing robust infrastructure to collect and store "born digital" content
- *the digital preservation challenge*: preserving digital content for long term access in the face of technical obsolescence
- *the audiovisual obsolescence challenge*: migrating very large audiovisual collections to digital format to rescue them from obsolescence which will render them inaccessible
- *the digital access challenge*: converting traditional content into digital form, and delivering digital content to make it easily accessible to the Australian people.

The funding bid identified that the NAA lacked:

- an IT infrastructure capable of managing high volumes of digital records of archival value
- the capacity to ingest, preserve and store digital records up to Top Secret classification
- the ability to process records created in a variety of native file formats, including formats that are now obsolete
- off-site digital backup facilities to ensure fast recovery and business continuity in the event of a disaster.
- the capacity to preserve at-risk analogue video collections.
- a digital asset management system which integrates with RecordSearch
- the capability to digitise paper records at volumes sufficient to meet user needs, including the staff numbers required to process access clearances.

Many of these IT capability gaps are likely to still exist, a decade after that funding bid.

The funding bid identified the modules of work that need to be undertaken in order to address these gaps. It estimated the funding needed to meet the NAA's most critical challenges of preserving the collections amounted to \$26M over five years, and \$5.3M per year thereafter. Substantially higher funding of \$147 million was needed to meet all four of the challenges set out above.

The funding bid identified the following opportunities for the NAA to collaborate with the NLA and the NFSA:

- Establish a joint Digital Preservation Taskforce, in order to develop and share innovative approaches, tools and processes for preserving digital records
- Establish a joint, distributed disaster management and backup storage arrangement
- Establish joint contracts for video and audio preservation, led by the NFSA
- Establish a joint Legacy Formats Facility, led by the NLA, to support the ingest and management of digital collections which are received as files stored on physical carriers that are now obsolete.
- Establish a joint web harvesting activity, led by the NLA.