Setting the scene
Over the past several years there have been changes in the ANU Library, Press and Archives services and the information behaviour of students and academics. This paper contains some detailed analysis for the library based on data from previous years and a prediction based on statistics for 2017 and some more overarching comments regarding the Press, Repository and Archives.

ANU Press
The ANU Press is operating in a primarily digital world. While there remains a love for print and sales indicate steady print use, the difference between this year’s use of press titles is likely to be around 1.8 million downloads compared to less than 100,000 printed items (including sales to the public and copies for authors).

While it is a great testament to the quality of the publications and processes of the authors, boards, reviewers and press staff there are increasing pressures on the press with the work that is required to support the increasingly diverse publishing output.

The Press remains primarily a manual production process—despite the maturity of the publishing technology market with products that could automate parts of the process including managing of workflows, creation of digital formats and optimising digital distribution.

A world class press needs modern technology—certainly more than email and shared drives to achieve greater productivity and enable the publications to be produced more effectively and achieve greater engagement and impact.

ANU Open research and collection digitisation
Open Research provides access to the research outputs of ANU researchers. With likely over 1 million downloads this year, primarily to an international audience, it is an important part of the scholarly communication ecosystem at ANU.

DSpace is used for the system and the operational setup and workflows are not best practice. Many processes such as DOIs, required for measuring impact, are manual and inefficient. There is no automatic gathering of data from published sources.

Next year will see “go live” of RIMS and integration with the repository.

In this era there is a need for development of the system to improve the accessibility of the research outputs. This will significantly increase downloads and communication of ANU research.
There are also problems in stability and the system has not been implemented or managed to ensure preservation of the digital content. As a consequence resources can “disappear”, functionality (such as albums), also disappears and as a consequence resources need to be redigitised and metadata manually added.

The workflows do not support efficient practice so resources are not made available as effectively as occurs at other universities, leading to lost opportunities in terms of achieving knowledge transfer and loss of productivity.

A world class university produces research that should be communicated successfully to the world – to researchers, the community and funders. The focus for 2018 will continue to be digital and requires planning and scoping technical change for a UICT proposal.

Digitisation has very successfully made many resources, including more than 3,000 theses available online for the first time in 2017. Information is being collected on the impact of the project.

**ANU Archives**

The ANU Archives had a major breakthrough with the implementation of its first online system in 2013 using ICA AtoM open-source software. This enables descriptions of collections to be entered and discovery of those descriptions. It also provides for management of information about 65% of items in the collection.

ERMS was implemented in 2015 and training efforts continue to encourage increasing uptake throughout Service Divisions and Colleges.

As noted above, there is no curation/preservation within DSpace and digitised archives which results in images disappearing and being lost. Then they need to be completely redigitised and the metadata completely redone.

The ANU Archives has already received a number of transfers of born-digital records and expects this to increase rapidly over the next few years. The program of digitising audiovisual, photographic and text material has resulted in complex materials that cannot be replaced as the physical format was at end of life (e.g. Umatic tapes). At present, the digital files are either loaded to Digital Collections if they are publicly available or stored on a shared drive (if not) but are not protected from deletion or amendment. To ensure the long-term survival of born-digital records, the Archives requires both suitable infrastructure and staff development. Note that if digital files are “lost” they cannot be replaced as there will be no physical material to redigitise.

Infrastructure is required for the following archival processes:

- Appraisal and sentencing of digital files before formal transfer
- Transfer of digital files into a controlled digital repository
- Conversion of digital files from native formats (ie normalisation)
- Transfer of digital files to an open repository once available for public access
- Redaction of files which are only partially available for public access
- Discovery of digital files through the Archives database to the open digital repository

The creation of online exhibitions and the addition of scholarly information is also completely manual and operates without appropriate efficient technology. Much needs to be done to achieve modern practice, productivity and a system that will actually preserve and make accessible digital archives.
ANU Libraries

There are two issues that clearly stand out in relation to use of the libraries and information resources. The first trend is the continuing high use of electronic resources and decline in use of the print collection. During the period 2013 to 2017 the decrease in print resources use was 43%.

That does not mean that the whole of the print collection is irrelevant. There is a convincing argument that the research collection needs to remain strong to support the diversity of research, and that with the majority of back set digitisation of journals having occurred, there is likely to be less opportunity to replace historic print runs with digital content. We are now in the long tail of commercial digitisation, back sets are not as likely to be digitised in the future, nor be very affordable. Our users will therefore still continue to need access locally to a strong print collection.

A three year deselection program has commenced across the libraries to ensure that the collection minimises duplication with resources that we have perpetual access to online, minimises duplication in the collection and ensures a relevant, tightly focused collection.

There are workforce impacts from this trend in reduced returns, shelving and assistance with loans.

The strategy of electronic preferred acquisitions has resulted in streamlining of acquisitions processing and increased use of the online resources we acquire. Using Patron Driven Acquisition/Demand Driven Acquisition has both increased the electronic monographs available to students and academics and resulted in increased use of those resources we purchase (over double the average use of newly acquired print monographs).

Secondly, use of the libraries has been steadily increasing, consistent with the experience of other libraries in research intensive universities, such as International Alliance of Research Universities and Group of Eight. Since 2013 there has been a 23% increase in use of the libraries.
Challenges from this trend can be seen in the decreasing satisfaction of students with physical spaces in the Library (International Student Barometer and Student Barometer). The impact of low maintenance on physical facilities can be seen in the failure of infrastructure elements (study furniture, toilets, roofs and condition of shelving). This has been exacerbated by increased demand for study spaces.

The issue of space has been exacerbated by the decrease in the availability of seating, the library has been required to give up space for other administrative services. In 2017 additional seating in level 3 of Chifley Library has brought some relief.

The major strategy of the library in relation to this increase in demand has been the introduction of 24 x 7 hours access spaces. In Chifley Library, level 2 became available 24 x 7 in May 2015, level 3 became available 24x7 in May 2017. Analysis of Chifley Library use\(^1\) last year found that access through 24x7 had increased use, particularly weekends and Friday nights. Higher Degree by Research students benefit from this initiative, particularly during the mid semester break and end of year break – previously the Library was only open 9-5 Monday to Friday during these periods.

The next development will be opening the study area of Hancock Library 24x7, all levels, in early 2018.

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While demand has increased for physical study space and therefore there are increased patrons in the libraries, there has been little change in client enquiries during this period. I note, however, the statistics are not as accurate as they should be in all years so comparisons are difficult.

Assessment of library use and interactions with patrons in 2017

Attendance and use of the libraries were collected over two periods in semester 1 to take a snapshot of use. Overall figures are also used to understand changing trends.

The overall pattern of use (visitation) for the libraries for the first three quarters of 2017 is:

The high use libraries remain Chifley and Hancock Library. The percentage of use is consistent with previous years, noting that the overall numbers are increasing.

For the libraries with lower use the result of the data collection were:

Art and Music Library
- evenings head count after 6pm less than 12
- evenings Enquiries after 6pm 1 enquiry
• Saturday average headcount less than 20
• Saturday enquiries average 2 per hour (i.e. less than 8 in the period the library is open)

**Menzies**
• evenings head count after 6pm less than 30
• Evenings enquiries after 6pm 2 enquiries in the period (less than 1 per hour)

**Law**
• evenings head count after 6pm average 30
• evenings enquiries after 6pm average 3 per hour
• Saturdays – approximately 40 headcount
• Saturday enquiries average 3 enquiries per hour

For the higher use libraries the data collected was:

**Chifley**
• evenings head count after 6pm average 400
• Saturday average headcount around 400
• Saturday enquiries average 3 per hour

**Hancock**
• evenings head count after 6pm average 80
• Saturday average headcount average 200
• Saturday enquiries average 3 per hour

**International Research Universities**
The members of the IARU (ETH Zurich, National University of Singapore, Peking University, University of California, Berkeley, University of Cambridge, University of Cape Town, University of Copenhagen, University of Oxford, The University of Tokyo, Yale University) are also experiencing increased student use and digital use. The move to digital in older universities is not quite as strong as at ANU, perhaps because of the more extensive print collections, and reliance on legal deposit (Cambridge and Oxford although elegal deposit is now in place) for collection building.

IARU libraries have taken strategic approaches to developing services in relation to needs and trends, primarily in library spaces and technology. Some of the highlights include:

• At Oxford the Weston Library was completely renovated (https://www.bodleian.ox.ac.uk/weston/about-us/renovation)
• At Yale all Libraries have been renovated in the past decade with significant increases in new spaces for study (for example http://beineckelibraryrenovation.yale.edu/ and renovation of the Sterling Library)
• University of Tokyo library has had a complete rebuild including a new high density store
• Peking University has opened a new large library for ancient Chinese collections and study
• University of Cape Town significantly renovated the main library over the past 2 years
• At Berkeley the Bancroft Library has been renovated allowing the introduction of a digital humanities research centre along with other innovations.

In addition, Digital Scholarship centres and ongoing digitisation, most usually with teams of 5-15, have been established.

In comparison ANU lags behind, both in terms of general study and collection spaces and spaces for innovation such as digital scholarship or humanities support.
Future directions

Given the decreasing use of the print collection and increasing use of the electronic collection for our patrons, the value of the library can be seen in ensuring easy access to a growing digital collection. Priorities to reduce barriers, such as incorrect linking from Supersearch and increasing digital content, should be major areas of activity.

The increased use of the physical libraries needs to be explored in terms of innovations that will enhance the experience of patrons, and deliver the services they need – primarily access to online resources, study rooms, study space and importantly safe spaces. The concept of a research commons for HDR students, support for digital scholarship (with more than desktop PCs), linked to other learning experiences on the campus and planning for integration with Union Court are key areas for consideration.

The digital trend needs to shape our consideration of the future delivery mechanisms for reference and research support services – the SPOC and LibGuides are seeing increasing use and of course have the benefit of 24x7 access. Further analysis of the nature of reference questions could identify information that should be conveyed through the website or projects such as online tours of the libraries. It is timely to explore how the website and library catalogue can be improved to improve self-service, reducing enquiries and increasing the productivity of students and academics.

The pattern of use of the physical libraries also suggest an area for deeper investigation to establish where resources should be deployed. For example

- would prioritising work on digital delivery and access result in greater satisfaction and a reduced requirement of opening hours in some libraries?
- Should the backlogs in collections (up to 4 years) also be addressed so they are available digitally through catalogue records
- is the current deselection program and plan to increase patron space program sufficient to provide a better experience for patrons in extending the seating capacity of the high use areas, should the deselection program be accelerated?
- unmediated access is providing easy access to international and national collections (e.g. Bonus+ ) and providing high user satisfaction. Should new initiatives be explored to improve rapid access to resources for academics and students which in turn will improve their experiences and productivity?
- should the discovery services be reviewed with a view to better exploring Google Scholar and importing access to data and published works together with development of proposals that will implement technology and workflows in a much more efficient manner?

In relation to archives, press, reopen research and digitisation

- Identifying solutions to the preservation gap in our technology suite is essential
- Developing more productive workflows and better use of the systems will deliver increased success in communication of ANU research
- ANU Press requires review and support to fill the technology gap – the current reliance of email and shared drives in very sub-optimal causing inefficient practices and poor integration with researcher needs.

These are important questions to consider in looking towards 2018.