The Australian Access Federation (AAF) provides the solution for accessing online resources and services within the Australian Education and Research sector. This is achieved by delivering a secure framework which exchanges information between an organisation, an individual and a service provider of digital resources. The outcome of the AAF’s work facilitates data sharing and collaboration, which benefits end users in Australian universities and research organisations.

The AAF was initiated by the Council of Australian University Directors of Information Technology (CAUDIT) in December 2008 and seed funded by the Department of Education (the then Department of Industry, Science and Research) in 2009 to provide an access Federation for organisations and institutions which undertake or support education, research, or research and development in Australia.

With 99 Subscribers and in excess of 270 services registered in the federation (September 2016), the AAF has reached critical mass and has been operating as a self-funded service since January 2012.

As an underpinning service, the AAF is vital to the Australian teaching, learning and eResearch infrastructure landscape. The AAF’s core value proposition is a service owned by, and for, the Australian research and education sector. On a national level the AAF is also an integral part of the Federal Government’s National Collaborative Research Infrastructure Strategy (NCRIS).

Through the AAF, subscribers benefit from a service that:

- lowers costs and reduces effort with managing federated identity in individual subscriber organisations;
- provides users with one login that is a fast and simple way to access the services they need online;
- allows academics and researchers to easily collaborate with their colleagues in other organisations;
- enables users to quickly and easily connect with a growing number of digital resources connected to the federation, including national research infrastructure (e.g. teaching and learning tools and services and research data storage, virtual laboratories, eResearch tools and instrumentation); and
- enables service providers to quickly and easily connect their services to over one million users (e.g. teachers, students, administrative staff, researchers) across the research and education sector.
Operating as a shared service for the sector, the growing AAF subscriber base encompasses many leading organisations in the research and education sector today.

In 2017, the AAF will continue to undertake the following operational business activities:

1. Provide **support services** (connecting services of value to federation subscribers, Service Desk, Knowledge Base and technical documentation and best practice and technical architecture advice) to ensure existing subscribers gain best value from their subscription;

2. Ensure the **technology** on which the AAF depends is **appropriately maintained** (application patching, security bug fixes and minor enhancements to AAF’s software stack where activities are critical for the successful operations of the federation);

3. Continue **partnerships, memberships and supporting international initiatives** through:
   a. **Partnerships** with national eResearch infrastructure projects and other subscribers where mutually beneficial opportunities exist;
   b. Continue bronze **sponsorship** of global REFEDS (Research and Education Federations) group;
   c. Continue to provide **leadership and support** to the global community through holding an open seat on the REFEDS Steering Committee and continue leadership and support to the Asia Pacific community through chairing the APAN (Asia Pacific Advanced Networking) Federated Identity Management Working Group;

4. Provide **compliance support activities** associated with the Federation Rules and annual Compliance Statements;

5. Provide a range of **professional services** (install and configure Identity Providers, and software development services for bespoke federated identity management solutions) to support subscriber needs;

6. Develop and deliver **bespoke Identity Management workshops** on-demand;

7. Continuation of AAF’s **business development** and **innovation capabilities** to further build upon the utility and value of the federation; and

8. Undertake **communication and engagement** activities that focus on promoting the AAF’s value proposition to subscribers, ORCID members and the international community.

In 2017 the AAF will continue to be the ORCID (Open Researcher and Contributor ID) Consortium Lead for Australia. Key activities will include:

- Providing administrative support to the Consortium;
- Managing and supporting the on boarding of Consortium Members;
- Being the central technical support contact to all Members (Tier 1); and

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1 refeds.org
• Maintaining consortium documentation and technical documentation repositories.

2017 will see the AAF work on a number of projects and new initiatives. These include:

• **Internationalisation of the federation** via a multi-year program of work (enabled by external funding);
• Developing a strategy to maintain and grow **AAF’s thought leadership globally** - by leveraging AAF’s success as a thought leader in advanced federated identity management in the Asia Pacific Region;
• **Delivering a new technology solution** through a 12 month early adopter program for a new Software as a Service Identity Provider service (funded by investment from interested parties); and
• **Delivering new tools** that will assist with growing the AAF subscriber base, enable efficiencies with business development, provide educative information for current subscribers and further promote the AAF’s services via a digital asset and marketing initiative.

Subscription fees will increase by 14% in 2017 and 14% in 2018 in line with the strategy approved by the Members in 2015 to continue to build a sustainable business development and innovation capability for the AAF. Increases will also support the growing requirement for the AAF to manage and operate an increasingly complex range of technology based tools and services.

Highlights from the 2017 and 2018 (forecast) operating budget are summarised in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>Budget 2017</th>
<th>Forecast Budget 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retained Earnings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forecast Retained Earnings as at 1 January</td>
<td>$536,977</td>
<td>$442,539</td>
</tr>
<tr>
<td>Total Income</td>
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<td>$1,880,710</td>
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<tr>
<td>Total Income + Retained Earnings</td>
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<td>$2,323,249</td>
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<tr>
<td>Total Expenses</td>
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<td>$1,876,800</td>
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<tr>
<td>Retained Earnings as at 31 December</td>
<td>$442,539</td>
<td>$446,449</td>
</tr>
</tbody>
</table>

Table 1: 2017 and 2018 (forecast) Operating Budget

2 The AAF aims to maintain a cash flow buffer with its retained earnings of approximately 3 to 4 months of its annual operating costs.
2. Introduction

The Australian Access Federation (AAF) provides the solution for accessing online resources and services within the Australian Education and Research sector. This is achieved by delivering a secure service which exchanges information between an organisation, an individual and a service provider of digital resources. The outcome of the AAF’s work facilitates data sharing and collaboration, which benefits end users in Australian universities and research organisations.

The Australian Access Federation (AAF) was initiated by the Council of Australian University Directors of Information Technology (CAUDIT) in December 2008 and seed funded by the former Department of Industry, Science and Research, now Department of Education, in 2009 to provide an access Federation for organisations and institutions which undertake or support education, research or research and development in Australia.

With 99 Subscribers and in excess of 270 services registered in the federation (September 2016), the AAF has reached critical mass and has been operating as a self-funded service since January 2012.

As an underpinning service, the AAF is vital to the Australian teaching, learning and eResearch infrastructure landscape. The AAF’s core value proposition is a service owned by, and for, the Australian research and education sector. On a national level the AAF is also an integral part of the Federal Government’s National Collaborative Research Infrastructure Strategy (NCRIS).

Through the AAF, subscribers benefit from a service that:

- lowers costs and reduces effort with managing federated identity in individual subscriber organisations;
- provides users with one login that is a fast and simple way to access the services they need online;
- allows academics and researchers to easily collaborate with their colleagues in other organisations;
- enables users to quickly and easily connect with a growing number of digital resources connected to the federation including national research infrastructure (e.g. teaching and learning tools and services and research data storage, virtual laboratories, eResearch tools and instrumentation); and
- enables service providers to quickly and easily connect their services to over one million users (e.g. teachers, students, administrative staff, researchers) across the research and education sector.
“Many organisations have natural sensitivities and concerns about their data and require advanced security solutions to be in place. AURIN [Australian Urban Research Infrastructure Network] leverages the AAF to provide all academics across Australia with authenticated access to these data resources and tools, with transparent extensions to provide finer-grained authorisation.”

Professor Richard Sinnott, Director eResearch
The University of Melbourne
This section outlines the key operational business activities planned for 2017.

3.1 Support Services

AAF personnel will provide a range of support services to Subscribers including:

1. Connecting services of value to federation Subscribers;
2. Ongoing technical support to current and new Subscribers via the service desk, technical documentation and knowledge base; and
3. Subscriber support with interpreting best practice technical architecture as well as Service Provider and/or Identity Provider configurations.

3.2 Technology Maintenance

The AAF will continue to maintain the software stack of the Federation. This includes planned maintenance activities for application patching, security bug fixes and minor enhancements to the AAF software stack where activities are critical for the successful operations of the AAF.

3.3 Partnerships, Memberships and Supporting International Initiatives

3.3.1 Partnering with national eResearch Infrastructure Projects

The AAF will continue to partner with the NCRIS capabilities to assist with developing and supporting their identity management needs. This work will be done as part of AAF’s Professional Services capability.

3.3.2 Partnering with Subscribers

The AAF will undertake partnerships with national eResearch infrastructures and subscribers where mutually beneficial opportunities exist.
3.3.3 Sponsorships and Memberships

The AAF will continue to remain a Bronze sponsor of REFEDS in 2017.

3.3.4 Supporting International Initiatives: REFEDS and APAN Federated Identity Management Working Group

The General Manager will continue to take a leadership role and represent the views and interests of the Australian Higher Education and Research sector through holding an open seat on the global REFEDS Committee. Likewise, the Technical Engagement and Support Manager will take a leadership role in continuing to assist the Asia Pacific community as Chair of the APAN working group for federated identity management.

3.4 Compliance Support Activities

AAF will support the following key activities:

1. Annual Federation Rule compliance program:
   AAF Personnel will assist Subscribers to meet their compliance requirements, in particular to submit their annual Compliance Statement on or before 30 June 2017.

2. Compliance with any applicable legislation in relation to data protection and privacy including, without limitation, the Australian Privacy Act.

3.5 Professional Services

The AAF will provide a range of Professional Services to the sector in 2017. This includes:

1. On-request, and where practical, professional service engagements to install and configure Identity Providers; and

2. Software development services for bespoke federated identity management solutions.
3.6 Bespoke Identity Management Workshops

Bespoke Identity Management workshops will be provided on an on-demand basis over 2017. All attendees will be levied an attendance fee to cost recover expenses.

3.7 Continuation of AAF’s Business Development & Innovation Capabilities

Two new capabilities commenced in 2015 for the AAF, business development and innovation. These capabilities aim to further build upon the utility and value of the federation to AAF subscribers and ensure long term sustainability of the service into the future.

3.7.1 Business Development

The objectives within the 2017 Business Development Plan will continue to focus on:

- **Increasing** new subscriptions of the AAF services;
- **Building** further value for the members;
- **Growing** new federated services connected to the federation; and
- **Raising** brand awareness, external marketing and promotion with a focus on thought-leader positioning.

Business development in 2017 will focus on five (5) key strategies:

1. Leveraging existing subscribers;
2. External marketing utilising digital assets;
3. Service provider sponsored events and workshops;
4. Formal procurement and contract management (PCM); and
5. Communication and engagement.

In line with the AAF Business Development Plan, the focus for 2017 will see it prioritise its business development activities into two core categories:

**Category 1: Primary target markets:****

- Providers of services in the following categories:
  - Research support
  - Scholarly and Publication Resources
  - Cloud
  - Teaching and Learning
  - Learning Management Systems
- Vocational and Education Providers (VET), Registered Training Organisations (RTO) and Higher Education Providers (HE);
- Large Medical Research Institutes (MRIs); and
• Galleries, Libraries, Archives and Museums (GLAMs).

**Category 2: Secondary target markets:**
• Local Government;
• Emerging Universities;
• State Government;
• Australian Government Science Information and Communication Technology (ICT) network;
• Health;
• TAFE; and
• Small Medical Research Institutes.

Supporting activities such as offering professional service engagements as well as ORCID Consortium subscriptions will help with the take up of new subscribers. In addition new products and services that are released in 2017 will assist with business development.

The progress of penetrating each target market in 2017 will be closely monitored as part of an ongoing review process. Through growth, new opportunities will arise that naturally fit within AAF’s remit. Engagement with the identified target markets will lead to ongoing refinement of the current strategy and also the development of further strategy.

### 3.7.2 Innovation

2015 saw the introduction of an innovation capability to AAF’s operations. The continuation of this capability in 2016 is vital to enable the AAF to build upon its services and remain relevant to its subscribers as their requirements and platforms continue to evolve.

Innovation is important to the AAF for a number of reasons; firstly, the technology landscape of federated identity management continues to evolve at a rapid pace. There is a greater need for tools and technology to assist with collaboration both locally and internationally and new and emerging standards for authentication and authorisation are being developed and adopted. Secondly, in many cases research infrastructure projects make their own ‘fit for purpose’ choice of technology for authentication and authorisation. This makes it difficult for the AAF to plan for these requirements and an innovation capability is required to respond to these needs. Finally, innovation of federated identity management technologies is not an activity that AAF subscribers could cost effectively undertake individually.

To address these requirements and ensure that the AAF maintains a service in line with international best practice, 2017 will continue to build upon this innovation activity which commenced in 2015 in line with the AAF Strategic Plan and Technology Roadmap.

*Extending AAF Services - expand AAF's identity and access management products*

The technology requirements for federated identity management are often complex, diverse and in many cases still evolving. In addition the authentication and authorisation landscape
is continuing to evolve with the emergence and adoption of other sources of trusted and
not-trusted login mechanisms, for example self-asserted authentication sources such as
Google and Facebook.

To support these requirements into the future, AAF’s innovation capability will see it
continue to undertake a program of work each year to expedite the development of
technologies in line with AAF’s technology roadmap. 2017 would see it undertake evaluation
and development, where appropriate, of the following kinds of new technologies:

- The evolution of AAF’s technology stack to build upon its functionality and to
  support other authentication protocols such as OpenID Connect and OAuth2;
- Shibboleth Version 3; and
- Attribute Authorities.

AAF will evaluate these technologies in line with best practice to determine suitability to
meet subscriber requirements and the potential to become a future service. Should
technologies be proven to meet these needs they would then be further developed to form
part of the AAF’s production service offering.

The AAF will continue to seek investment funding from a number of sources where it aligns
with the use of AAF’s services in 2017 or in the future. This may include but not limited to
NCRIS, federal government agencies and initiatives. Investment will assist and expedite the
advancement of innovation activities where they may be mutually beneficial.

3.8 Communication and Engagement

The AAF will execute a communication and engagement plan that focuses on promoting the
AAF’s value proposition to current subscribers, ORCID members and the international
community. Activities include:

- Presence at key industry events locally and internationally (e.g. eResearch
  Australasia, THETA, Géant Association Conference, international Research Education
  Federations (REFEDS) meetings and APAN (Asia Pacific Advanced Networking)
  conference and Identity Management Access Working Group);
- Regular newsletters for targeted groups;
- Content rich product centric website which describes AAF products to Service
  Providers, Identity Providers and End Users;
- Content development and design of publications and promotional material;
- Promotional and educative communication campaigns;
- Develop and deliver webinars, events, ‘how to’ videos and guides; and
- Develop a Marketing Plan for external target markets that focuses on new products
  and the development of digital assets to promote the AAF.
4. ORCID Consortium Lead

ORCID (Open Researcher and Contributor ID)\(^3\) is an international, open, non-profit, community-driven effort developed by and for the research community to provide a unique persistent identifier for researchers. It is used to link research publications, data and other research activities to the right researcher.

The AAF commenced as the ORCID Consortium Lead for Australia in January 2016 with 40 members. Participation in the consortium is open to organisations and institutions of higher education, non-profit organisations and government research institutes and funding agencies in Australia.

The AAF will continue to undertake the following key responsibilities as Consortium Lead:

- Provide administrative support to the Consortium;
- Manage and support the on boarding of Consortium Members;
- Be the central technical support contact to all Members (Tier 1); and
- Maintain consortium documentation and technical documentation repositories.

In 2017, the AAF team will continue to participate in the ORCID Consortium Advisory Group and the AAF President will continue to hold a seat on the ORCID Consortium Governance Group.

This ORCID consortium model has been designed so that support resources will scale in line with the growth of the consortium membership, should it occur.

\(^3\) See: orcid.org
5. Projects and Other New Initiatives

This section outlines the projects and other new initiatives for 2017.

5.1 Technologies and Trends Supporting Global Research and Education – Internationalisation of the Federation and Global Thought Leadership

Being at the forefront of technologies and trends supporting global research and education is vital for the AAF. 2017 will see the AAF focus on internationalisation of the federation and global thought leadership to meet these needs.

*Internationalisation of the Federation – a multi-year program of work seeking funding*

Connecting the federation to the rest of the world is the next evolutionary step for the AAF. It is an important part of connecting organisations using the AAF with their counterparts’ operating services connected to other federations globally. It will also provide international collaborators with access to AAF connected teaching, learning and research applications.

Fully enabling the AAF to connect globally is a multi-year program of work. In 2016 the AAF completed the first phase of this program of work (Phase 1) which was a proof of concept. This first phase has proved international connectivity via eduGAIN⁴ (the global federation initiative) is successful.

While the AAF has made a significant investment to date in undertaking the Phase 1 activities, further work needs to be done. The second phase (Phase 2) of work is to undertake the policy development and technical enhancements required to begin a limited release of the service. Phase 3 will see the AAF roll out the service on a national level.

In 2017, the AAF will seek grant funding in part or full from the NCRIS capabilities and or other granting agencies to undertake this work in 2017 and 2018.

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⁴ Globally, federation operators have been working to enable this key functionality via the international inter-federation initiative called eduGAIN. The purpose of eduGAIN is worldwide connection of Research and Education (R&E) identity federations. In line with the way a national federation operates, eduGAIN is made up with both policy and technology which connects federations to what is known as a global eduGAIN phonebook of Identity and Service Providers.
Maintain and Grow Global Thought Leadership

The AAF is a thought leader in federated identity management representing the interests of Australian Higher Education and Research. AAF’s leadership has enabled it to rapidly become an advanced federation operator in the Asia Pacific region. Today, the AAF technology stack has been adopted by the New Zealand, Hong Kong and Singapore federations. Since 2014 the AAF has played a key role with the APAN working group on identity management. This has led to many opportunities for the AAF in expanding its thought leadership in the region. The AAF will continue this work in 2017 through developing a strategy to maintain and grow its thought leadership globally.

5.2 New Technology Solution - SaaS Hosted IdP

Release of the AAF SaaS Hosted IdP service

January 2017 will see the completion of the final project milestone for the Next Generation AAF Project. This final milestone will result in the release of the new Software as a Service (SaaS) Hosted Identity Provider product, which will be offered by the AAF in the future.

The AAF is excited to be offering this new product which will:

- Accelerate the process for new subscribers to connect to the federation by reducing the need for specialist skills to install and configure servers and software;
- Eliminate the need for subscribers to deploy infrastructure in order to technically participate in the federation;
- Eliminate the need for subscribers to have specially trained staff to manage and maintain the technical infrastructure they currently have to participate in the federation. (This will be done via an AAF managed central, coordinated approach to security patching and upgrades);
- Introduce an offering that better meets the requirements of a diverse range of subscribers (small, medium and large organisations);
- Reduce many of the barriers that have prevented smaller organisations from previously joining the AAF.

2017 early adopter program

While the Next Generation AAF project is funded to create the software behind the Hosted IdP service, further investment is needed to refine the project outputs, identify the support requirements and ensure it meets the needs of AAF subscribers.

A Department of Education and Training funded ($850,000 July 2015) project to build Next Generation AAF technologies
In 2017, the AAF will seek funding contributions from AAF Subscribers to undertake a 12 month early adopter program. As part of the early adopter program, organisations will have an opportunity to use the service and help the AAF shape the new product as the Hosted IdP service is prepared to go to market. The project will work with a small number of investors in 2017 to:

- Pilot the Hosted IdP and refine the solution based on feedback;
- Create terms and conditions for the use of the new cloud-based service;
- Develop support material to help new customers connect and to resolve common problems;
- Develop marketing material to help reach new customers;
- Develop new business processes to simplify purchasing and renewing the service;
- Obtain professional advice on terms of service, product pricing, user experience and financial matters; and
- Understand and develop the business model and fees to cost recover the operations of the service from 2018 onwards.

AAF will develop a prospectus with details of the offer and sufficient detail for potential investors. It is expected that the prospectus will be available to AAF subscribers in late 2016.

5.3 Deliver New Tools to Assist with Growing the Subscriber Base, Enable Efficiencies with Business Development and Promote the AAF’s services

In 2017 and 2018 the AAF will undertake a small program of work to deliver new tools to assist with growing the subscriber base, enable efficiencies with business development and promote the AAF’s services. This will be achieved by the development of a Marketing Plan and a range of digital assets which will promote the AAF to external market segments and compliment the current communication and engagement plan.

The Marketing Plan will:

- Identify AAF current customers’ needs and how these requirements will be met to ensure customer retention and satisfaction;
- Identify new target markets and activities that will promote and educate new markets about the ‘Federation’ as a product and the service offerings provided by the AAF;
- Identify the AAF brand and the high quality product which is associated with the AAF; and
• Promote the AAF through communication activities which will include the creation of a suite of digital assets, communication campaigns and direct marketing initiatives.

As part of the overall marketing activities for the AAF, there is the need for the development of a suite of digital assets. These digital assets will:

• Enable the business development activity to reach a larger target market and also facilitate efficiency with sharing the AAF story and benefits;
• Promote the AAF and also inform potential subscribers about the benefits and how they can be part of the federation;
• Provide an opportunity for members and potential subscribers to interact with AAF staff through webinars and Q&A sessions;
• Develop short succinct promotional videos that explain the product/s, what the benefits are for subscribers and who the AAF is; and
• Maintain a digital repository for these digital assets that will include videos, presentations, media, files, webinars and Q&A sessions.
6. Support Model

This section outlines the support model for 2017.

6.1 Organisational Structure

The AAF operational organisational structure is shown in Figure 1. 2016 saw the addition of the ORCID Technical Support Analyst positions as part of AAF’s role as the Consortium Lead. A casual Finance Officer also joined the team in mid-2016. These roles will continue in 2017.

The Next Generation Project team will finish operations in January 2017 in line with the project completion. Project teams will be established in line with any funding raised in 2017.

Figure 1: Organisational Structure 2016
6.2 Infrastructure Hosting

In 2016, the AAF commenced running its infrastructure on a host provider that is certified by the Australian Government’s Information Technology security guidelines published by the Australian Signals Directorate. This was part of a continuing strategy to ensure AAF’s systems are secure and information is protected. The continuation of this arrangement will ensure the robust operations of the AAF’s services in 2017.

The AAF will continue to use cloud-based services for its support systems (DNS, email, service desk, mail campaigns, client management system, accounting and source code repository).
7. Operating Expenses and Subscriptions

This section outlines the operating costs and subscriptions for 2016.

7.1 Overview

The AAF was incorporated in June 2009 with funding provided by a $2.0M grant from the Department of Education. A subscription model has been applied since 2011 with the strategic intent to be self-funded and operate at a break-even level. As at 1 January 2017, the AAF expects to have forecast retained earnings of $536,977, noting that it is forecast that this amount will be reduced to an estimated $442,539 at 31 December 2017.

Operating costs have risen with the addition of a Technical Support Analyst in 2015 and the introduction in 2015 of the business development and innovation capabilities in line with the strategies to build and sustain these capabilities as on-going. Operating cost increases are also in line with the need to support the growing requirement for the AAF to manage and operate an increasingly complex range of technology based tools and services.

Figure 2 outlines the 2009-2018 income sources for the AAF. Figure 3 outlines the 2009 – 2018 expenses matched to funding sources.

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6 The introduction of business development and innovation capabilities as from 2015 is part of a strategy (approved by the members) to build and sustain these capabilities as ongoing. The strategy consists of the following fee increases over 2015-2018 to subscriptions in line with AAF’s strategic intent to operate at a break-even level:

- 11% (inclusive of CPI) subscription fee (Enterprise, Team, Hosted) increase in 2015;
- 11% (inclusive of CPI) subscription fee (Enterprise, Team, Hosted) increase in 2016;
- 14% (inclusive of CPI) subscription fee (Enterprise, Team, Hosted, Publisher) increase in 2017; and
- 14% (inclusive of CPI) subscription fee (Enterprise, Team, Hosted, Publisher) increase in 2018.
7.2 Subscriptions

The subscription fees outlined in Table 2 are based on a 2017-2018 strategy to continue to build a sustainable business development and innovation capability for the AAF and the need to support the growing requirement for the AAF to manage and operate an increasingly complex range of technology based tools and services. For the typical subscriber (AAF Enterprise, AAF Team, AAF Hosted and AAF Publisher) to the AAF, subscription fees will raise 14% (inclusive of CPI) in 2017 and 14% (inclusive of CPI) in 2018. Based on a subscription income forecast in Table 4, subscriptions will be set to raise a total forecasted income of $1,188,142 in 2017 (inclusive of forecast new subscriptions through business development).
<table>
<thead>
<tr>
<th>Subscription Component</th>
<th>AAF Enterprise</th>
<th></th>
<th>AAF Team</th>
<th></th>
<th>AAF Hosted</th>
<th></th>
<th>AAF Publisher</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year</strong></td>
<td><strong>2017</strong></td>
<td><strong>2018</strong></td>
<td><strong>2017</strong></td>
<td><strong>2018</strong></td>
<td><strong>2017</strong></td>
<td><strong>2018</strong></td>
<td><strong>2017</strong></td>
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<td>Joining fee</td>
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<td>$4,209</td>
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<td>Base price</td>
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<td>Fee per FTE7</td>
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**Table 2:** Subscription Fees for 2017 and 2018 (ex GST)

7 Full Time Equivalent Staff Member
7.3 2017 Expenses

Table 3 outlines the operating expenses inclusive of new business development, innovation expenses and project expenses for 2017.

<table>
<thead>
<tr>
<th>2017 Expenses</th>
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<tr>
<td>Salary Expenses AAF Operations</td>
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<tr>
<td>General Supplies and Expenses</td>
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<td>Professional Development</td>
<td>$7,000</td>
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<tr>
<td>Professional Fees</td>
<td>$30,000</td>
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<tr>
<td>Marketing and Communication</td>
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<tr>
<td>Telecommunications</td>
<td>$6,500</td>
</tr>
<tr>
<td>Software and Certificate Services</td>
<td>$18,000</td>
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<tr>
<td>Hosting Services</td>
<td>$18,300</td>
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<tr>
<td>Engagements, Meetings and Events (inc Business Dev)</td>
<td>$91,900</td>
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<tr>
<td>Digital Assets</td>
<td>$30,000</td>
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<tr>
<td>ORCID Leader (inc Member Licensing)</td>
<td>$405,785</td>
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<tr>
<td>ICT</td>
<td>$5,000</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$1,844,770</strong></td>
</tr>
<tr>
<td>Operating Surplus (2% Safety Margin)</td>
<td>$36,895</td>
</tr>
<tr>
<td><strong>Project Expenses</strong> (Dept Edu Grant)</td>
<td>$30,000</td>
</tr>
<tr>
<td><strong>Total (inc Operating Surplus &amp; Project Expenses)</strong></td>
<td><strong>$1,911,665</strong></td>
</tr>
</tbody>
</table>

*Table 3: 2017 Operating Expenses*
7.4 2017 and 2018 Operating Budget

Table 4 outlines the 2017 and 2018 (forecast) budget.

<table>
<thead>
<tr>
<th></th>
<th>Budget 2017</th>
<th>Forecast Budget 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Retained Earnings</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forecast Retained Earnings as</td>
<td>$536,977</td>
<td>$442,539</td>
</tr>
<tr>
<td>at 1 January</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subscription</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forecast Subscription Income</td>
<td>$1,025,142</td>
<td>$1,168,662</td>
</tr>
<tr>
<td>(existing subscribers)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pending new subscribers</td>
<td>$63,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>previous year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forecast Increase in</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>subscription income through</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Development activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forecast Professional Service</td>
<td>$50,000</td>
<td>$50,000</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forecast Interest</td>
<td>$17,000</td>
<td>$17,000</td>
</tr>
<tr>
<td><strong>ORCID Consortium Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forecast ORCID</td>
<td>$267,800</td>
<td>$275,834</td>
</tr>
<tr>
<td>Consortium Leader Fee Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forecast ORCID</td>
<td>$164,285</td>
<td>$169,214</td>
</tr>
<tr>
<td>Consortium Member Fee Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Project Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCRIS Capability Initiatives</td>
<td>$100,000</td>
<td></td>
</tr>
<tr>
<td>Next Generation AAF Project</td>
<td>$30,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total Income</strong></td>
<td>$1,817,227</td>
<td>$1,880,710</td>
</tr>
<tr>
<td>**Total Income + Retained</td>
<td>$2,354,204</td>
<td>$2,323,249</td>
</tr>
<tr>
<td>Earnings as at 1 January</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Expenses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operating</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational Expenses</td>
<td>$1,266,049</td>
<td>$1,244,818</td>
</tr>
<tr>
<td>Business Development Expenses</td>
<td>$142,936</td>
<td>$147,223</td>
</tr>
<tr>
<td>ORCID Consortium Expense</td>
<td>$405,785</td>
<td>$417,959</td>
</tr>
<tr>
<td>Digital Asset &amp; Marketing</td>
<td>$30,000</td>
<td>$30,000</td>
</tr>
<tr>
<td>Strategy (new)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Surplus (2% Safety</td>
<td>$36,895</td>
<td>$36,800</td>
</tr>
<tr>
<td>Margin)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>**Project Expenses (Dept Edu</td>
<td>$30,000</td>
<td></td>
</tr>
<tr>
<td>Grant)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td>$1,911,665</td>
<td>$1,876,800</td>
</tr>
<tr>
<td>**Retained Earnings as at 31</td>
<td>$442,539</td>
<td>$446,449</td>
</tr>
<tr>
<td>December**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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8 Based on a medium case forecast for new subscriptions.
9 A medium case Professional Services income.
10 ORCID Member Licence fee paid by AAF on behalf of the Members to ORCID.
11 The AAF aims to maintain a cash flow buffer with its retained earnings of approximately 3 to 4 months of its annual operating costs.
The AAF maintains an ongoing evaluation of its risk profile via the AAF Inc. Risk Management Register which covers the following risk categories:

- Human capital management;
- Financial management;
- Business and service continuity;
- Governance;
- Workplace Health and Safety;
- Compliance;
- Remaining relevant and subscriber retention;
- Reputation.

Any risks associated with the introduction of the new capabilities and services in 2016 have been incorporated into the overall risk profile for AAF Inc. These risks will be managed by the General Manager and AAF Inc. Executive Committee.