



**AUSTRALIAN  
ACCESS FEDERATION**

[www.aaf.edu.au](http://www.aaf.edu.au)

# BUSINESS PLAN - 2012

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For approval by the AAF Inc. Members at the General Meeting on 6 October 2011

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## CONTENTS

<b>1. Executive Summary</b> .....	<b>2</b>
<b>2. Introduction</b> .....	<b>4</b>
<b>3. Operational Business Activities in 2012</b> .....	<b>5</b>
3.1 Operational Support Services.....	5
3.2 Compliance Support Activities .....	5
3.3 Core Support Model.....	5
3.3.1 Personnel:.....	5
3.3.2 Infrastructure Hosting:.....	6
3.4 Operational Support - CAUDIT Inc and AAF Inc.....	6
3.5 Marketing Communications .....	7
3.6 Training Workshops .....	7
3.7 Enabling Cross Border Access - Pilot Co-federation.....	7
3.8 Technology Maintenance .....	7
<b>4. 2012 Subscriptions (for Operational Business Activities)</b> .....	<b>8</b>
4.1 Operating Costs .....	8
4.2 2012 Subscriptions .....	8
4.3 Expenses .....	10
4.4 Budget Summary .....	10
<b>5. 2012 Development Activities (Subject to Additional Funding)</b> .....	<b>11</b>
5.1 Expanding the Services Available to Subscribers.....	11
5.1.1 Activity 1: Active Engagement with Service Providers .....	11
5.1.2 Activity 2: Levels of Assurance Information Package.....	12
5.2 Product Enhancements.....	12
5.2.1 Activity 1: Enhancing Core Technologies Available to Subscribers .....	12
5.2.2 Activity 2: Evaluating Future Products .....	13

## I. EXECUTIVE SUMMARY

The Australian Access Federation (AAF) was initiated by the Council of Australian University Directors of Information Technology (CAUDIT) in December 2008 to provide an access Federation for organisations and institutions which undertake or support education, research or research and development in Australia.

With 63 subscribers (as at end August 2011) the AAF has now reached critical mass and is now entering a phase of 'steady state' operation.

The core value proposition of the AAF is that as a shared service for the research and education sector it minimises the cost and effort for each individual Subscriber of managing federated identity. Without the AAF, for example, individual institutions would have to negotiate a series of unique one-on-one arrangements to provide access for their staff and students to inter-institutional services. Similarly, individual institutions would have to negotiate one-on-one agreements with a range of different providers (or operators) for access to national eResearch infrastructure such as research data storage (RDSI), virtual laboratories (NeCTAR), eResearch tools (NeCTAR) and instrumentation (eg. the Australian synchrotron). Finally, a national Federation provides the capability for collaboration on a global scale through the interconnection of national federations.

The AAF is now a significant part of the Australian eResearch infrastructure landscape.

In 2012 the AAF intends undertaking the following operational activities:

1. **Operational support services** to support existing Subscribers to gain value from their subscription (AAF Service Desk, Knowledge Base and technical documentation, assisting subscribers identify services of value to the Federation, assisting with best practice and technical architecture support on request). The AAF will also continue to assist new organisations to subscribe (policy advice, technical support and presentations on demand). The AAF will continue to work with publishers and the vendor community where there is significant benefit to have their services as part of the AAF;
2. **Compliance support activities** associated with the Federation Rules and annual Compliance Statements;
3. A **core support model** will be implemented for operational support and infrastructure hosting;
4. **CAUDIT Inc operational support** will continue throughout 2012;
5. Key **marketing and communication** activities that focus on promoting the AAF's value proposition will continue;
6. **Federating common services training workshops** will commence and be operated on a cost-recovery basis;
7. **Enabling cross border access** via a pilot of co-federation with the New Zealand Federation;
8. **Ongoing technology maintenance** of the Federation software stack (application patching, security bug fixes and minor enhancements to the Federation Registry).

The budget for undertaking these operational activities in 2012 is outlined in Table I.

<b>2012 Budget Summary</b>		<b>Calendar year 2012</b>
<b>Retained Earnings</b>		
Forecast Retained Earnings as at 1 January 2012		\$230,000
<b>Incoming</b>		
Forecast Subscription Income		\$503,826
Forecast Workshop Income		\$13,920
Forecast Interest		\$10,000
Additional Income		
<b>Total Income</b>		<b>\$527,746</b>
<b>Total Income + Retained Earnings</b>		<b>\$757,746</b>
<b>Outgoing</b>		
Operating Expenses		\$651,412
Operating Surplus		\$13,028 <i>2% Safety Margin</i>
<b>Retained Earnings as at 31 December 2012</b>		<b>\$93,306</b>

**Table I: 2012 Budget Summary**

Subscriptions in 2012 will be set to raise approximately \$503,000 in income. This represents a total increase of 20% in subscription revenue; however, due to the changing nature of the AAF subscriber base and incentives being provided to service providers, 2012 subscriptions will be approximately 30% higher in 2012 for a typical identity provider. The relatively large percentage increase in subscriptions also reflects the fact that the AAF has now moved from being almost totally underwritten by DIISR to being self sustained.

While the proposed budget for 2012 enables continuation of AAF operations at a similar level to that currently provided, it does not enable further development of the AAF in key areas such as:

- **Expanding services available to subscribers** through active engagement with Service Providers (NeCTAR, RDSI, Commonwealth agencies, current subscribers and vendors) as well as the development of an information package to assist subscribers put in place processes for providing higher levels of assurance.
- **Product enhancements** by building on the core technologies available to subscribers (Federation Registry, Virtual Home and Virtual Group tools) as well as evaluating future products (non-web based access and new generation discovery services).

Undertaking these “growth activities” will require additional funding beyond that outlined in Table I above and the AAF Executive is pursuing additional funding opportunities to enable these activities to be carried out.

## 2. INTRODUCTION

The Australian Access Federation (AAF) was initiated by the Council of Australian University Directors of Information Technology (CAUDIT) in December 2008 to provide an access Federation for organisations and institutions which undertake or support education, research or research and development in Australia.

The AAF's rapid growth to date has been underpinned by a number of carefully executed strategies that has enabled it to reach a critical mass to operate as a steady state federation in 2011. As at the end of August 2011 the AAF had 63 subscribers.

The core value proposition of the AAF is that as a shared service for the research and education sector it minimises the cost and effort for each individual Subscriber of managing federated identity. Without the AAF, for example, individual institutions would have to negotiate a series of unique one-on-one arrangements to provide access for their staff and students to inter-institutional services. Similarly, individual institutions would have to negotiate one-on-one agreements with a range of different providers (or operators) for access to national eResearch infrastructure such as research data storage (RDSI), virtual laboratories (NeCTAR), eResearch tools (NeCTAR) and instrumentation (eg. the Australian synchrotron). Finally, a national Federation provides the capability for collaboration on a global scale through the interconnection of national federations.

The AAF is now a significant part of the Australian eResearch infrastructure landscape.

### **The Australian Access Federation's Vision Statement is:**

*To be the first choice for enabling access to electronic resources for the Australian Higher Education and Research Sector.*

The AAF's vision will be realised by:

- Implementing best practice technologies, support systems, processes and policies to maintain and improve trust and usability;
- Supporting existing Subscribers to further unlock the value of the AAF;
- Providing new Subscribers with effective support to rapidly join the Federation;
- Implementing effective strategies to attract new services of value to the Federation; and
- Identifying new areas of expansion including co-federation and international collaboration.

## 3. OPERATIONAL BUSINESS ACTIVITIES IN 2012

This section outlines the key operational business activities planned for 2012.

### 3.1 Operational Support Services

AAF personnel will continue to support existing Subscribers to gain value from their subscription by:

1. Assisting Subscribers to identify services of value to other federation Subscribers
2. Providing ongoing support to Subscribers via the service desk, technical documentation and knowledge base
3. Assisting Subscribers to implement best practice as a Service Provider and / or Identity Provider
4. Providing technical architecture support for Subscribers.

AAF personnel will continue to support new organisations to subscribe to the AAF during 2012. In particular the AAF will provide:

1. Advice on interpreting and complying with the Federation Rules;
2. Technical support via the service desk, technical documentation and knowledge base to connect as an Identity and or Service provider to the Federation; and
3. Introductory presentations on demand.

The AAF will continue to work with Publishers in collaboration with the Council of Australian University Librarians (CAUL) as well as with the vendor/commercial community, where there is significant benefit to have their services as part of the AAF.

### 3.2 Compliance Support Activities

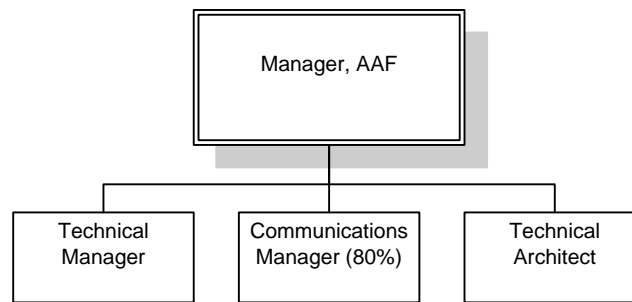
This will consist of continuing the following key activities:

1. Federation Rules:  
AAF Personnel will assist Subscribers meet their compliance requirements, in particular to submit their annual Compliance Statement on or before 30 June 2012.
2. Compliance with any applicable legislation in relation to data protection and privacy including, without limitation, the Australian Privacy Act 1988.
3. The AAF will establish advisory groups and communities of practice as required to assist with the above activities.

### 3.3 Core Support Model

#### 3.3.1 Personnel:

The AAF will maintain a core operational support model during 2012 as shown in Figure 1.



**Figure 1:** Core operational support personnel for 2012

### 3.3.2 Infrastructure Hosting:

To maintain high availability of the Federation infrastructure, the AAF will continue (where appropriate) to enter into agreements with its Subscribers to host Where are You From Servers (WAYFs). At a minimum, WAYFs will be hosted in Brisbane, Perth, Sydney and Melbourne.

The Test Federation infrastructure was migrated to the NeCTAR National Server Program (NSP) in 2011. Work will commence in early 2012 to migrate the Production Federation infrastructure and core AAF auxiliary systems (e.g. AAF website) to the NeCTAR NSP.

The AAF will continue to use cloud based services for its support systems (email, help desk and source code repository).

### 3.4 Operational Support - CAUDIT Inc and AAF Inc

As AAF Inc is a CAUDIT Inc sponsored activity and the bulk of AAF Subscribers are also CAUDIT Inc Members, throughout 2012 CAUDIT Inc will continue to support the AAF. This includes:

- The CAUDIT General Manager will provide day-to-day supervision of the Manager AAF and where possible provide assistance to the AAF Inc to manage staff absence through the use of CAUDIT Inc staff as appropriate;
- Financial management costs will be rationalised by jointly using the same service provider as CAUDIT Inc (e.g. for operation of bank accounts; collection of subscriptions; invoicing; accounts payable; meeting Australian Tax Office requirements and monthly financial reporting);
- As both CAUDIT Inc and AAF Inc are incorporated in New South Wales, CAUDIT Inc will provide the necessary support to ensure that the AAF Inc meets its legislative and reporting requirements under the Associations Act NSW; and
- Given the considerable overlap in the Primary Representatives for CAUDIT Inc and AAF Inc, CAUDIT Inc will work with AAF Inc to co-ordinate any consultation and engagement with IT Directors/CIOs. Further, CAUDIT Inc will facilitate the scheduling of the AAF Inc Annual General Meeting (AGM) in conjunction with its own AGM so that IT Directors/CIO's are not burdened with additional travel as part of their participation in the governance of the AAF Inc.

### 3.5 Marketing Communications

The AAF will continue to execute a comprehensive marketing and communication plan that focuses on promoting its value proposition. Activities include:

- Presence at key industry events (e.g. eResearch Australasia, TERENA Conference and REFEDS meetings) ;
- AAF bi-annual newsletter;
- Monthly technical newsletter;
- Content rich 'product centric' website which evangelises AAF products to Service Providers, Identity Providers and End Users; and
- Distribution of AAF merchandise.

### 3.6 Training Workshops

The AAF will commence its training strategy in 2012 by running five Federating common services workshops (Sydney, Melbourne, Brisbane, Adelaide and Perth). The workshops will focus on providing developers with a basic toolkit to federate applications. All attendees will be levied an attendance fee to cost recover expenses.

### 3.7 Enabling Cross Border Access - Pilot Co-federation

During 2011 the AAF assisted New Zealand with the establishment of their own Federation by following the AAF model (technical, policy and operational). In mid 2011 the New Zealand Federation launched their Pilot Federation. During 2011 a number of New Zealand Higher Education and Research organisations subscribed to the AAF during the transition period. In conjunction with the New Zealand Federation, the AAF will commence a co-federation pilot (from a strategy, technical and policy perspective) between the two countries.

### 3.8 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 Federation Registry where activities are critical for the successful operations of the AAF.



## 4. 2012 SUBSCRIPTIONS (FOR OPERATIONAL BUSINESS ACTIVITIES)

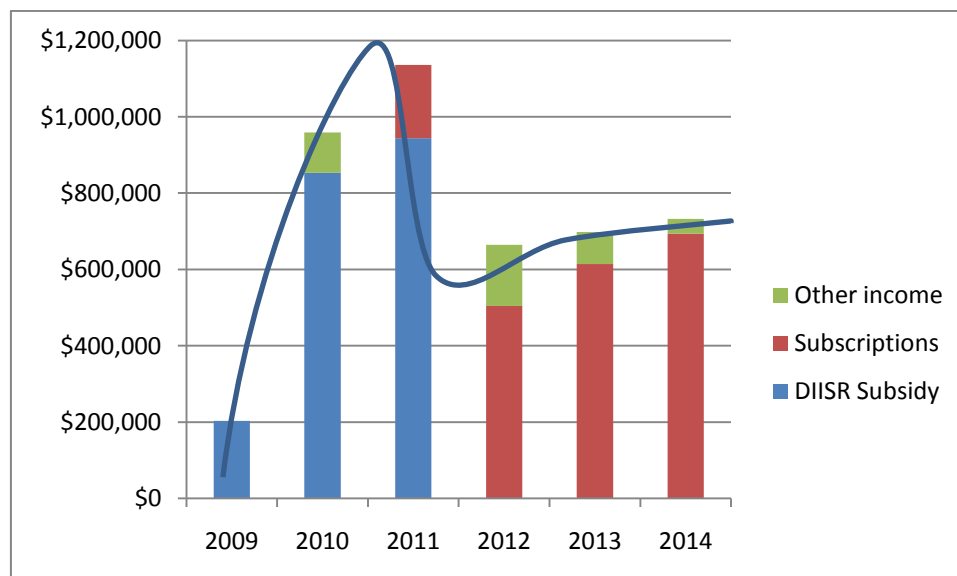
### 4.1 Operating Costs

Figure 2 shows the AAF operating costs for the period 2009-2014 noting that the costs for 2009-2010 are actuals, whereas the costs for 2011-2014 are forecasts. Figure 2 clearly shows the pattern of a start up technology based organisation.

The AAF was incorporated in June 2009 (hence the relatively low level of expenditure in 2009). In 2010 and 2011 significant expenditure was devoted to stimulating uptake through the use of selected investment in service development (this was achieved largely through the mini-grant process).

The operation of the AAF through the period 2009-2010 was totally subsidised by the \$2.0M grant from DIISR (the other income during 2010 was the interest on the grant). During 2010 the AAF Executive developed a subscription model for ongoing financial sustainability and subscriptions were first levied during 2011. As at the end of 2011 the AAF expects to have retained earnings of \$230,000.

Operating costs in the period 2012-2014 have been forecast to stabilise at \$664,000 in 2012 with increases of 5% per annum to \$698,000 in 2013 and \$733,000 in 2014. It should be noted that the operating costs for the period 2012-2014 are for operating the AAF in a steady state mode. Additional investment will be required to expand service coverage and further develop federation infrastructure (see Section 5 for more detail) beyond the steady state.



**Figure 2:** AAF Operating Costs 2009-2014

### 4.2 2012 Subscriptions

In determining the subscriptions for 2012 the AAF Executive has decided that it is appropriate to run down the retained earnings (expected to be \$230,000 at the end of 2012) over the three year period 2012-2014. Based on the current operating expenses forecast for 2012, subscriptions will need to be set to raise income of \$503,000 in 2012,

\$613,951 in 2013 and \$693,364 in 2014. Based on the \$418,000 in subscriptions the AAF expects to raise during 2011 this 3 year forecast represents an overall increase in total subscriptions of 20% (2012 compared to 2011), 22% (2013 compared to 2012) and 13% (2014 compared to 2013).

Two further points should be noted. The first is that the NZ Universities will have their own Federation in 2012 and therefore the AAF subscriber base will be reduced slightly in 2012. The second is that service providers are going to be offered discounts in 2012 for subscribing for a 3 year period. While this will reduce subscription income in the short term it is expected to further stimulate uptake in the longer term. The combined effect of these two points is that for the typical identity provider the increase in subscriptions over the next three years will be approximately 30%, 20% and 10%.

Table 2 and 3 below outline the subscriptions for 2012.

Subscription Component	2012	Description
One-time joining fee	\$4,550	A one-time joining fee levied to each new Subscriber.
Basic annual fee	\$4,628	A base annual fee for each Subscriber. This includes the provision for one (1) Identity Provider (IdP) and up to ten (10) services.
Fee per FTE	\$2.02	A fee calculated on the number of Full Time Equivalent Staff employed at the Subscriber's institution.
Extra service fee	\$3,250	An additional fee per extra 10 services that the Subscriber wishes to make available through the Federation.
Extra IdP fee	\$5,850	An additional fee per extra IdP that the Subscriber has in the Federation.

**Table 2:** For organisations that undertake or support education and research.

Subscription Component	2012	Description
One-time joining fee	\$4,550	A one-time joining fee levied to each new Subscriber.
Annual fee per service	\$3,900	This is a flat price per service connected to the Federation.
Annual fee per IdP	\$13,000	A flat fee per IdP in the Federation.

**Table 3:** For organisations that provide products and services for education and research

### **3 Year Service Provider Pricing Plan (for organisations that provide products and services for education and research)**

All new Service Providers will be given the one-off option of a 3 year Service Provider Pricing Plan. The plan requires the Service Provider to subscribe for a period of three calendar years. In return the Service Provider receives a significant discount on the fee per service added to the Federation for each calendar year over the period. This includes:

- a discount of 75% (calendar year 1), 50% (calendar year 2), 25% (calendar year 3); and;
- a 25% discount on the one-time sign up fee.

### 4.3 Expenses

Table 4 outlines the 2012 operating expenses.

<b>Operating Expenses</b>	
ICT Equipment	\$5,500
General supplies	\$1,020
Printing and Publications	\$2,000
Travel and Accommodation	\$20,000
Telecommunications	\$8,112
Promotions	\$800
Professional Fees	\$32,771
Bank Charges	\$1,622
Software Licenses and Certificates	\$6,819
Hosting Services	\$19,000
Conference Activities	\$16,400
General Expenses	\$2,080
Planning Meetings	\$2,184
Professional Development	\$6,300
Salaries	\$526,804
<b>Total</b>	<b>\$651,412</b>

Table 4: 2012 Operating Expenses

### 4.4 Budget Summary

Table 5 outlines the 2012 budget summary.

<b>2012 Budget Summary</b>		<b>Calendar year 2012</b>
<b>Retained Earnings</b>		
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<b>Incoming</b>		
Forecast Subscription Income		\$503,826
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Additional Income		
<b>Total Income</b>		<b>\$527,746</b>
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<b>Outgoing</b>		
Operating Expenses		\$651,412
Operating Surplus		\$13,028
		2% Safety Margin
<b>Retained Earnings as at 31 December 2012</b>		<b>\$93,306</b>

Table 5: 2012 Budget Summary

## 5. 2012 DEVELOPMENT ACTIVITIES (*SUBJECT TO ADDITIONAL FUNDING*)

In addition to the business activities required to keep the AAF operational, the AAF Executive have identified a number of development activities that are required to further improve the utility and value of the AAF to subscribers. These development activities include expanding the services available to subscribers and enhancing the core technologies upon which the federation depends.

The development activities that have been identified cannot be funded from within the AAF operational budget (described in Section 4) and the AAF Executive is pursuing additional funding opportunities to support these activities. It is estimated that an additional \$300,000 per annum is required to fund these activities.

### 5.1 Expanding the Services Available to Subscribers

This activity would allow the AAF to undertake a number of activities to engage with Service Providers as well as the development of an information package to assist Subscribers to put in place processes for providing higher levels of assurance.

#### 5.1.1 Activity 1: Active Engagement with Service Providers

Key engagement activities would include the provision of technical and architectural advice on connecting services as well as a number of targeted workshops. AAF staff would work directly with the following potential providers of services:

1. National eResearch Initiatives:
  - a. RDSI Data Sharing (DaSh) Programme (the RDSI Project Plan identifies that the DaSh technical architecture is to be integrated with the AAF).
  - b. NeCTAR Research Cloud Infrastructure Framework (the Project Plan has a requirement to support appropriate authentication mechanisms such as the AAF).
2. Commonwealth agencies (which are of interest to AAF Subscribers).
3. Current Subscribers:
 

In May 2011 the AAF conducted a survey of its subscribers to understand their experiences with, and plans for, connecting services to the Federation. The survey results highlighted the diverse maturity of its subscribers. While many subscribers are early adopters that have been working with federated authentication for a number of years, others are just beginning the journey. The AAF will undertake a program of work to assist its Subscribers to further understand the technology, provide advice on architecting federated systems as well as give guidance on integrating the AAF into current business processes.

#### 4. Vendors:

A number of AAF Subscribers are intending to use the AAF to authenticate to hosted services and it is anticipated that this trend will continue (these services usually have a 1:1 relationship between one Identity Provider and a Service Provider and do not necessarily provide cross-institution use). The AAF would also develop a strategy with the Manager Strategic Procurement (CAUDIT) to identify 'low hanging fruit' opportunities across the sector.

#### **5.1.2 Activity 2: Levels of Assurance Information Package**

Levels of Assurance are an important part of the trust fabric of the AAF. AAF Subscribers use a framework to describe the level of assurance associated with an instance of authenticating a particular user. This framework allows an identity provider to indicate to a service provider how much trust is behind the authentication event. Service providers, based on their own needs and assessment of risks, determine what level of assurance they require in an authentication event in order to allow the user access.

The framework proposed for use within the AAF is based on the NIST Electronic Authentication Guideline – NIST SP 800-63. The NIST guideline forms the basis of many assurance frameworks used internationally and was selected with a view to being interoperable with other Federations and to meet the requirements of IGTF.

At present all Identity Providers are at Level of Identity Assurance I. To address the requirements of the research community (including NeCTAR Research Cloud, RDSI and researchers requiring IGTF certified x509 certificates) the AAF would develop an information package to assist subscribers to put in place processes for providing a higher level of assurance. This activity would significantly assist with service expansion of key eResearch (NeCTAR Research Cloud and RDSI) services as well as put in place the basis for approved IGTF certificates based on AAF credentials.

## **5.2 Product Enhancements**

Product enhancements consist of two key activities that aim to enhance the current technologies available as well as provide new tools to Subscribers.

#### **5.2.1 Activity 1: Enhancing Core Technologies Available to Subscribers**

As the AAF continues to grow the need for sophisticated technologies is also increasing. Several core AAF technologies such as the VHO (Virtual Home Organisation) and WAYF (Where are You From) are starting to reach end of life status. Without intervention and investment the AAF will open itself to risks both from a security and maintenance point of view by continuing with such tools.

### 5.2.1.1 Federation Registry Enhancements

The key enhancements to the current version of the Federation Registry include:

- A rebuild of the AAF Virtual Home Organisation (VHO) to be integrated directly with the Federation Registry and include workflow
- Provide direct registration and management for standalone Attribute Authorities and provide a user interface to manage AAF Uniform Resource Name (URN) delegation
- Integration with new generation Discovery Service and metadata enhancements
- Other general enhancements identified through the course of steady state operations.

### 5.2.1.2 Virtual Group Tools

AAF Subscribers have a requirement for tools to assist with the authorisation of their End Users. In particular there is a need for tools which can allow authorisation to virtual groups (e.g. all university IT Directors). NeCTAR (Virtual Laboratories and Research Cloud) has also expressed the importance of such tools in successfully achieving their outcomes. This activity would see AAF staff undertake a requirements analysis which will include an evaluation of the tools being used by other international Federations (e.g. SWITCH Toolbox).

## 5.2.2 Activity 2: Evaluating Future Products

Activity 2 consists of evaluating federated access for non-web based services as well as evaluating new generation discovery services.

### 5.2.2.1 Federated Access for Non-web Based Services

Project Moonshot is a JANET(United Kingdom)-led initiative to develop a single unifying technology for extending the benefits of federated identity to a broad range of non-web services, including Cloud infrastructures, High Performance Computing & Grid infrastructures. The use of federated access for non web-based applications will significantly assist the research community as well as increase the value of the product offered by the AAF. Project Moonshot will enter a technology pilot phase in August 2011 and a service pilot phase in March 2012. This activity would enable the AAF to evaluate the outcomes of Moonshot and plan how it may become a future product of the AAF.

### 5.2.2.2 New Generation Discovery Service: evaluation of future WAYF technologies

The current AAF WAYF implementation has been provided by the SWITCH Federation (Switzerland). Since its implementation, many international Federations have redeveloped their WAYF software to include new metadata discovery and login extensions available in SAML 2.0. The new user interface metadata provides a more seamless discovery service and improves the overall user experience. WAYFs now include graphical and textual information about the Service Provider as well as improved search using contextual hinting and geographical recognition. This activity would allow the AAF to undertake a requirements analysis and evaluate the WAYFs developed by other international Federations.