

PART A - SPECIFICATIONS

SPECIFICATIONS

SPECIFICATIONS IN RELATION TO PANEL OF PREFERRED PROVIDERS (RFA 2018/01)
FOR THE PROVISION OF A RANGE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT)
SERVICES

Australian Curriculum, Assessment and Reporting Authority
ABN 54 735 928 084

Tenderers should refer to **AND PART B – PROPOSED CONTRACT AND PART C – REQUEST TO ESTABLISH A PANEL (INCLUDING APPLICATION RESPONSE SCHEDULES)** which sets out the conditions of application and application requirements.

CONTENTS

Table of Contents

1.	Services	3
	1.1. Introduction	3
	1.2. Background	3
	1.3. Work available for the panel of preferred tenderers	4
	1.4. Role of a Preferred provider	5
2.	Key Project Deliverables	5
	2.1. Key ICT project deliverables	5
	2.2. Related project management and reporting services	7
3.	Intellectual Property Management	7
4.	Meetings	8
5.	Progress Reports	8
6.	Review of key stages of a given project	8
7.	Project Close-out Meeting	8
8.	Required Contract Material	8
9.	Policies, Standards and Guidelines	9
10.	Time-frame	9
	Computer and devices	10
	Data Security	11
	Environments	12

SPECIFICATIONS

1. Services

1.1. Introduction

The Australian Curriculum, Assessment and Reporting Authority (ACARA) is responsible for the development of a rigorous, world class national Australian curriculum from Foundation to Year 12.

To complement the development of an Australian curriculum, ACARA is also responsible for developing and administering a national assessment program that measures students' progress. ACARA also provides information, resources, support and guidance to the teaching profession.

The National Assessment Program — Literacy and Numeracy (NAPLAN) commenced in 2008 in all Australian schools. Since 2008, all students in Years 3, 5, 7 and 9 have been assessed annually in the second full week of May using national tests in Reading, Writing, Language Conventions (Spelling, and Grammar and Punctuation) and Numeracy. Test Administration Authorities (TAAs) in each state and territory are responsible for the printing, distribution, administration, marking and reporting of the NAPLAN tests in their jurisdictions.

ACARA publishes the *My School* website, www.myschool.edu.au, which provides a profile page for almost 10,000 schools in Australia and is populated from a data repository created by ACARA. ACARA holds national school's data aimed at supporting school level performance reporting. Some data from NAPLAN is published on the *My School* website.

1.2. Background

ACARA's ICT business unit is required to provide a range of information and communications technology services to ACARA staff and key stakeholders. In addition, ACARA is also required to help drive innovation and develop ICT strategies to improve the business value of ICT. As the ICT leader, ACARA's CIO is responsible for supporting ACARA's technology environment, including supporting ICT infrastructure and business applications.

As part of the key deliverables, ACARA uses its ICT team and internal and external experts to produce and maintain ICT solutions, as well as evaluate the effectiveness of relevant applications and recommend ICT improvements.

ICT works closely with internal and external stakeholders (including senior leadership groups and subject matter experts), to build a holistic view of the organisation's strategy, processes, information, and information technology assets. The core function of the ICT unit is to design, develop, implement and analyse technology solutions and architecture, and manage cloud and non-cloud-based technologies within ACARA.

To support business-as-usual functions and business improvement and transformation initiatives, ACARA's ICT team performs the following centralised functions with internal and external experts:

- Network and infrastructure
- Security and compliance
- Web application development
- Productivity tools configurations
- Backup and restoration
- Hardware and software support

- ICT related services procurement
- Internet and Telephony services
- Business Analysis and functional analysis services
- Architecture and design services
- Database development and administration services
- User experience and User centric design services
- Quality assurance and user acceptance testing services
- Security and incident management
- Business continuity and IT disaster recovery

1.3. Work available for the panel of preferred tenderers

The purpose for establishing a panel of preferred providers is to identify, through a formal process, organisations and/or individuals with the required expertise and resources that ACARA may approach to request quotes for specific parcels of work.

This document provides the specifications for responses for quotes requested in relation to ICT services listed below. Initially, ACARA will request quotes from the panel of preferred providers for projects that will commence in 2018. It is anticipated that this model will continue to be used for all services through to June 2020, subject to ACARA's work plan and priorities.

The following services will be required, but no limited to:

Service type	Service description
Web Development using Microsoft & open source technology	<ul style="list-style-type: none"> - Web application development for large and small-scale applications and systems. - Web application development using content management systems such as Umbraco, Telerik, WordPress - Business Analysis and Quality assurance services
User Experience & prototyping services	<ul style="list-style-type: none"> - User experience & user journey analysis - User interface and HI-Fidelity designs - Digital transformation & analytical services - User centric designs development compliant with WCAG 2.0 (AA, AAA) standards
Cloud computing implementation services	<ul style="list-style-type: none"> - Cloud services provisioning e.g. SaaS, PaaS & IaaS on Microsoft Azure, Google Cloud or Amazon Web Services - Cloud computing monitoring and reporting services - Office 365 implementation & automation services - SharePoint and SharePoint online implementation & automation services - Cloud infrastructure management & administration services
Architectural services	<ul style="list-style-type: none"> - Design and development of Information Architecture, Solution Architecture & Enterprise Architecture

Database management services	<ul style="list-style-type: none"> - Database development & administration (DBA) - Data Quality Services & master data management - Performance tuning & improvement services - Machine learning & deep learning
Testing services	<ul style="list-style-type: none"> - Software quality assurance services by automated testing and regression testing development - Penetration testing & infrastructure testing - Load testing and performance testing
Software licensing services	<ul style="list-style-type: none"> - Microsoft licensing - Security service licensing - Cloud services licensing - Third-party licensing (e.g. Infrastructure software, cloud monitoring software,
Information & network security	<ul style="list-style-type: none"> - Security services and policy development - Security strategy and monitoring - Security incident reporting and analysis - Cyber security assessment 7 risk assessment
Training	<ul style="list-style-type: none"> - online training tools and technology - classroom based/instructor led training - technology and application documentation and user guide development services e.g. self-help resources for application and technology platform

1.4. Role of a Preferred provider

After formal acceptance of a purchase order from ACARA and initiation of a project the selected preferred provider is expected to work in close collaboration with ACARA's Project Manager at all stages of the project to ensure that ACARA's specifications, project deliverables and timelines are met. The selected preferred provider's project manager will report to ACARA's Project Manager on the basis agreed between ACARA and the selected preferred provider in the project plan.

2. Key Project Deliverables

After formal execution of a purchase order and initiation of a project the selected preferred provider (the Contractor) will provide one or more of the following key deliverables to ACARA for review and approval.

2.1. Key ICT project deliverables

The contractor will be required to provide one or more of the following as part of key deliverables. ACARA may request additional artefacts depending upon the nature of service requirements, service engagement or service sensitivity.

Service type	Required documentation
Web Development using Microsoft & open source technology	<ul style="list-style-type: none"> - Source code for application and systems - Sour code for scripts - Source code managed within ACARA's preferred toolset - Unit test scripts and execution plan - Continuous build with release and deployment guides for cloud infrastructure
User Experience & analytical services	<ul style="list-style-type: none"> - Business process mapping and analysis - Business requirements documentation - Functional requirements documentation - HTML based responsive wireframes and prototypes - HTML based responsive wireframes and prototypes
Cloud computing implementation services	<ul style="list-style-type: none"> - Configuration and deployment plan - User guides & automated scripts
Architectural services	<ul style="list-style-type: none"> - Design documentation (Logical designs and technical designs) which is business focused as well as IT focused. Artefacts that contains design considerations, vision, standards, technology landscape & actual designs - Information architecture - Gap Analysis - Foundation solution & common system solution
Database management services	<ul style="list-style-type: none"> - Database definitions - Database load and transformation scripts - Database performance plans - Database test scripts
Testing services	<ul style="list-style-type: none"> - Browser and device-based optimization and testing plan - QA Script & Test plan - Automated regression test scripts and plan
Information & network security	<ul style="list-style-type: none"> - Security model - Governance model - Risk based implementation plan - Monitoring and evaluation report - Audit and compliance report
Training	<ul style="list-style-type: none"> - Training materials including training manuals, user guides and self-help resources - e-Learning solutions - Training evaluation

Please refer to **Appendix A** for a list of ACARA's ICT minimum technical specifications.

2.2. Related project management and reporting services

2.2.1. Project Plan

A contractor will be required to provide a Project Plan after formal acceptance of a purchase order from ACARA. ACARA prefers to work in Agile development environment. The contractor will be required to provide project plans based on the Agile approach. The level of detail required in the project plan will be determined in conjunction with ACARA and it will be based on the scope of the work to be undertaken.

The project plan will need to be approved by ACARA and may include the following:

- an overall project management plan which includes a detailed description of how the methodology for the analysis outlined in the original tender will be applied;
- a description of how the quality control processes outlined in the original tender will be applied to monitor the project at every key stage, including an explanation of how the process proposed for deliverables in the original tender will be applied by the Contractor throughout the project;
- the names of all persons involved in the process, and their respective roles;
- a description of the auditing processes for ensuring that compliance with all analysis and specifications are met;
- a timeline for deliverables and critical deadlines;
- development plan using Waterfall or Agile backlog/sprint management.

2.2.2. Risk Management Plan

The Contractor will be required to provide a Risk Management Plan after formal acceptance of a purchase order from ACARA. The risk management plan will outline how risks identified in the original tender, as well as any further risks that have been identified, will be managed in relation to the project. The Risk Management plan will need to be approved by ACARA. This plan must include how all aspects of security are addressed.

2.2.3. Quality Assurance Plan

The Contractor will also be required to provide a Quality Assurance Plan after formal acceptance of a purchase order from ACARA. The quality assurance plan must be approved by ACARA and include descriptions of how the Quality Assurance and Quality Control processes outlined in the original tender will be implemented and monitored to produce high-quality deliverables by the Contractor throughout the project.

The Quality Assurance Plan must specify in detail all and any perceived risks that may impact on the quality of the contract deliverables and must provide detailed advice on the strategies for risk management for each identified risk. It is not sufficient to provide information only about generic quality assurance systems and quality manuals.

3. Intellectual Property Management

Contractors will be required to:

- i. properly manage Intellectual Property including maintaining accurate records of all Existing Material and/or Third-Party Material into Contract Material;

- ii. obtain all licences required to ensure Intellectual Property and Moral Rights are not infringed by use of the Contract Material by ACARA or any party authorised to use the Contract Material; and
- iii. maintain accurate records of all licences obtained from authors of original Material developed under the contract or from third parties including any fees paid and the extent of the rights granted under such licences.
- iv. Ensure that Intellectual Property rights obtained in third party materials are sufficient for a broad range of non-commercial purposes.

4. Meetings

During a project, Contractor personnel may be required to attend some face-to-face meetings with ACARA at key juncture points of the project. These meetings will be organised by ACARA and held at a time and location agreed with the Contractor(s).

5. Progress Reports

Throughout a project, Contractor/s will regularly consult with, the ACARA ICT team in relation to the day-to-day management of the project and any risks/issues. Written progress reports are to be submitted at nominated times to ACARA outlining progress on the key deliverables and issues that have arisen. Exception reports are required in the event of unforeseen circumstances.

6. Review of key stages of a given project

ACARA will closely monitor and report where necessary on the following aspects of the Contractor's work, including but not limited to:

- i. Project management;
- ii. Progress of deliverables;
- iii. Progress of any risks or issues identified.

7. Project Close-out Meeting

A Contractor will be asked to attend a project close-out meeting with key members of ACARA's project team at an agreed time after the provision of all project deliverables.

8. Required Contract Material

Any material developed as part of one or more service requested by ACARA, would remain as intellectual property of ACARA. Please refer to:

- Section 1.3 for list of potential services;
- Section 2.1 for list of Key ICT project deliverables.

9. Policies, Standards and Guidelines

The contractor should refer to the following policies, standards and guidelines for each project:

- The Commonwealth Style Manual, AGPS, Canberra (latest edition);
- Australian Standards for Document Management (AS ISO 15489)
- Commonwealth Fraud Control Guidelines – May 2002
- Data Standards Manual Student Background Characteristics (MCEEDYA, 2011), as updated from time to time.
- WCAG 2.0 accessibility standards
- Australian Government Digital Transformation Agency guidelines wherever applicable
- Current ACARA ICT – Minimum technical specifications as per Appendix 1
- *Privacy Act 1988 (Cth)*

10. Time-frame

Note to Applicants: The timeframe for any required project will be confirmed as ACARA calls for quotations from the panel of preferred providers, and a final timeframe will be included in the purchase order. Applicants should note the following information when preparing their Applications. Although ACARA is prepared to discuss changes to proposed timeframes, it reserves the right not to alter any proposed timeframes.

APPENDIX – A

ACARA ICT – Minimum technical specifications

Operating systems and browsers requirements		
Computer and devices	Operating system	Supported browsers
Windows Platform	Windows XP Windows 7 Windows 8 / 8.1 Windows 10	Internet Explorer 10 and above Mozilla Firefox Google Chrome Apple Safari Microsoft Edge
MAC	MAC OSX – 10.6 and above	Apple Safari Mozilla Firefox Google Chrome
Chrome	Google Chrome	Google Chrome Mozilla Firefox
Apple devices iOS	iOS – 8 and above	Apple Safari Mozilla Firefox Google Chrome
Android	5.0 (Lollipop) and above	Mozilla Firefox Google Chrome

Operating systems and browsers requirements

<p>Data Security</p>	<p>The Data present in ACARA ICT systems may contain non-identifiable data related to Curriculum, Assessment and Reporting content and metadata.</p> <p>However, it is still imperative that every required step is taken to ensure the security of the data during every stage of project lifecycle.</p> <p>The Data security measures will fit within the overall security guidelines prescribed within Australian Governments – <i>Protective Security Policy framework</i> (PSPF) and Information security manual (ISM).</p> <p>In order to maintain Confidentiality, integrity, authentication and non-repudiation, data must be secured At Rest, During transfer and at the time of release by the handler.</p> <p>Data Security measures are applicable to all data and metadata collected and created as part of ACARA’s website and content management systems.</p>
<p>Data Encryption</p>	<p>Any data that is deemed identifiable according to Australian Government Privacy Policy, is required to be encrypted using Australian Signals Directorate (ASD) approved cryptographic algorithms and protocols compliant product.</p>
<p>Data quality</p>	<p>Appropriate data quality measures must be taken to ensure the</p> <ul style="list-style-type: none"> - Quality of source data - Data standards and data dictionary definitions - Validations and quality assurance - Concurrency <p>Is maintained.</p>
<p>Data backup</p>	<p>Any data that is captured, published and managed using ACARA ICT’s content management system must have appropriate safeguards against potential loss and disaster recovery plan.</p> <p>Data must be able to recover point in time</p> <p>Content management system data snapshot</p>
<p>Web hosting infrastructure</p>	<p>ACARA’s website and content management system platform must be hosted on Microsoft Azure Cloud platform.</p> <p>Preference of the hosting model is Software as a Service (SaaS) as oppose to Infrastructure (IaaS) as a Service or Platform as a Service (PaaS).</p> <p>Hosting of any application must be done on Australian geographical locations.</p>

Operating systems and browsers requirements	
Database hosting infrastructure	<p>ACARA's website and content management system data base must be hosted on Microsoft Azure Cloud platform as Azure SQL.</p> <p>Database must be designed to scale and support growing need on peak and off-peak basis.</p>
Source code management	<p>ACARA will provide dedicated source code management environment for:</p> <ul style="list-style-type: none"> - Web application - Custom application - Presentation tier - Middle tier - Data tier - Security - Scripting and other development activities. <p>ACARA's preferred source code management environment is Visual Studio Online – Team Foundation Server.</p> <p>ACARA's scripting platform preference is PowerShell.</p>
Environments	<p>ACARA's website and content management system will require several environments to develop and to perform Quality assurance and User acceptance. All platform must be designed and developed on ACARA's hosting environment using ACARA's access control methods.</p> <p>All environments must be maintained with appropriate migration and deployment strategies defined by ACARA.</p> <p>List of environments are as following:</p> <ul style="list-style-type: none"> - Development environment - QA environment - User Acceptance environment - Production environment <p>All of the above environments must be hosted Australian geographical locations including all related services.</p>
Penetration testing	<p>ACARA's website and content management system final approval will be subject to satisfactory penetration testing and security checks.</p> <p>ACARA will conduct independent penetration testing and prior to production deployment all issues must be resolved, and risks are appropriately mitigated.</p>

Architectural requirements	
Optimal allocation of content and resources	Systems architecture should use mechanism such as caching at different layers and must allow the topology of services to be modified. To rebalance or optimise the assignment of resources to servers and hosts.
Separation of identity and data domains	Systems architecture should support an appropriate degree of separation of identity and data domains, so that clients and the services they use are suitably loosely-coupled.
Service orientation	Systems architecture should support services-oriented and component-based software architecture to be designed, deployed and managed.
Scalable design	Systems architecture should support the business requirements for performance and must be capable of being scaled horizontally as well as vertically when the user base expands.
Compliance with Industry standards and interoperability	Wherever possible, and industry standard protocol, interoperability framework or component must be used.
Accessibility	Systems components should support WCAG 2.0 A / AA accessibility standards.