

Project Information

Project title (in English) HKCAAVQ IT Infrastructure Development Project	Project title (in Chinese) 香港學術及職業資歷評審局資訊系統基建發展項目
---	--

Project summary

*(Please provide an executive summary of the project proposal in **no more than 500 words.**)*

This Project aims to strengthen and improve quality assurance and assessment services provided to education and training institutions, course providers and the general public by the Hong Kong Council for Accreditation of Academic and Vocational Qualifications (HKCAAVQ).

In 2011/12 alone the HKCAAVQ accredited over 180 programmes ranging from local and transnational education programmes to in-house training and skills development, spanning qualifications from certificate to bachelor degree level. The HKCAAVQ also assessed over 3,000 qualifications, 1,500 Continuing Education Fund courses and 120 Continuing Professional Development courses.

Following the restructure of the HKCAAVQ, these related services are now grouped into functional areas. These functional areas serve a common set of clients. In order to obtain desired synergies and improve the delivery of services there is a need to improve efficiency and have better information technology support for these arrangements; A new IT system, incorporating an integrated database for capturing and storing operational data such as information on Specialists and operators is therefore needed to enhance work efficiency, communication and exchange of information both internally and externally.

The review of the HKCAAVQ four-stage quality assurance model has proposed the implementation of annual reporting and periodic monitoring of the performance of operators and their learning programmes so as to ensure that expected standards are maintained during the validity period. In practical terms, a Central Repository is essential to enable the Secretariat to perform such a role effectively and efficiently. Data collected from the operators will also be used in subsequent re-accreditation exercises to ease both the preparatory work of the operators and the accreditation panels. The Central Repository will also facilitate standardisation of data collection to facilitate analysis cross-sectorally and longitudinally and further inform the quality assurance model in the longer run.

After analysis of the user needs, the following broad requirements have been identified for the IT Infrastructure Development Project:

- to facilitate the effective collection of data and create a central repository containing information on all operators and Specialists.
- to enhance communication and exchange of information with internal staff and external (operators and Specialists) stakeholders in a secure environment.
- to facilitate data analysis and reporting for all business processes.
- to improve quality of services, work efficiency and collaboration in the various functional areas.

The Project will be broken into three phases and delivered over a period of 37 months. At its heart will be a Customer Relationship Management system (CRM)

The integrated CRM database would have scalable features to enable the HKCAAVQ to meet evolving needs. The system would also contain the capacity to provide information for regular and ad-hoc operational and management queries.

The proposed CRM database will be designed to support the Four-stage QA process and the daily operation of the various functional areas.

This centralized repository and database would hold all the accreditation information and qualification assessment records including the maintenance of the historical and training records for Specialists. The CRM would also be used to maintain records on operators and accreditation management as well as maintain the records for QA management, record panel survey information and provide management reports and alerting functions.

* Please delete where inappropriate.

Project objectives		
<i>(Please identify the project objectives and explain how they will be attained.)</i>		
Objectives	To be attained by	
1. To facilitate the effective collection of data and create a central repository containing information on all operators and Specialists	1.1 Electronic submission of documents and applications will be available for operators. 1.2 Data can be collected from operators for monitoring and to establish "track record" 1.3 Specialists' data can be kept updated through the Internet service. 1.4 Digital storage of information. 1.5 Data integrity, confidentiality and availability will be enhanced.	
2. To enhance communication and exchange of information with internal staff and external (operators and Specialists) stakeholders in a secure environment.	2.1 Enhanced communication and data sharing with outside organisations and individuals and communication within the Council. 2.2 Electronic submission of documentation and applications will be available for individual applicants.	
3. To facilitate data analysis and reporting for all business processes	3.1 Management statistics and preparation of regular and ad-hoc reports will be available to facilitate the making of management decisions.	
4. To improve quality of services, work efficiency and collaboration in the various functional areas	4.1 Efficiency of the infrastructure system will be enhanced with larger and faster system capacity that will increase the efficiency of the accreditation process. 4.2 Security will be enhanced through the upgrade of the infrastructure system. 4.3 Data can be shared among different functional areas. 4.4 Alerts can be generated as early reminders for overdue exercises or applications. 4.5 Applicants can have an updated status of their application online. 4.6 Electronic payment will be available to applicants. 4.7 HR data can be digitalized for better management of e-learning, recruitment and resource planning. 4.8 The time recording functions can support the fee charging process.	
Implementation, deliverables, beneficiaries and cashflow		
<i>(Please describe the activities to be implemented and indicate the expected number of beneficiaries, the outcomes/deliverables and cashflow in each timeframe of the project.)</i>		
Estimated start date of project:		Dec 2013
Timeframe	Activities and beneficiaries	Deliverables and cashflow
Oct 12 – Nov 12	<ul style="list-style-type: none"> Initial user requirement analysis Expected no. of beneficiaries: HKCAAVQ staff and all non-self accrediting operators	Project proposal

<p>Mar 13 – Nov 13</p>	<ul style="list-style-type: none"> ● Prepare and complete the request for proposal (RFP) ■ Develop area's functional requirement ■ Prepare request for proposal (RFP) ■ Vendor feedback ■ Vendor presentation and selection 	<ol style="list-style-type: none"> 1 Detailed Specifications 2 Request for Tender
<p>Dec 13 – Jan 15 (14 months)</p>	<ul style="list-style-type: none"> ● New system implementation (Phase 1) <p>Dec 13 – May 14:</p> <ul style="list-style-type: none"> ■ Server consolidation and domain update ■ SAN and Backup solution <p>Dec 13 – Jan 15:</p> <ul style="list-style-type: none"> ■ Customer Relationship Management (Accreditation module) ■ Document Management System (Accreditation module) ■ Reporting system for Accreditation ■ Specialists database and Management Information System (MIS) migration <p>Expected no. of beneficiaries: All staff (about 60) performing accreditation exercises and education and training providers (about 200)</p>	<ol style="list-style-type: none"> 1 Server consolidation to host multiple servers into a single set of hardware. 2 Operating Systems upgraded to meet the requirements of new IT system. 3 New SAN and Backup solution to be enhanced with larger and faster system capacity to store the CRM and DMS data. 4 Customer Relationship Management (CRM) system will be developed to provide a centralised repository database for storing operators, Specialists, exercises and communication data for the accreditation function. It will also provide a standardized process and predefined rules to control the academic and vocational accreditation process, as well as training and event process. 6 The Document Management System (DMS) will be introduced to provide an electronic filing system to store the communication data (e.g. Email) between internal and external accreditation related information. 7 Reporting System will be introduced to allow users to retrieve, analyse and report data stored in the CRM. 8 Data will be migrated from the two existing applications of the Specialists database and Management Information System (MIS). <p>Cashflow: \$6,291,000</p>
<p>Mar 15 – Feb 16 (12 months)</p>	<ul style="list-style-type: none"> ● New system implementation (Phase 2) <p>Mar 15 – Jun 15:</p> <ul style="list-style-type: none"> ■ Email exchange upgrade <p>Mar 15 – Aug 15:</p> <ul style="list-style-type: none"> ■ Customer Relationship Management (CPD, CEF and OTI) ■ Document Management System (CPD, CEF and OTI) <p>Sep 15 – Feb 16:</p> <ul style="list-style-type: none"> ■ Customer Relationship Management (qualification assessment) ■ Document Management System (qualification 	<ol style="list-style-type: none"> 1 Email communication services will be upgraded from MS Exchange 2003 to MS Exchange 2010 to enhance internal and external communication services. 2 Extend the CRM, DMS and reporting system to CPD, CEF and OTI assessment function. 3 Extend the CRM, DMS and reporting system to individual qualification assessment function. 4 An Internet service which provides a

	<p>assessment) <ul style="list-style-type: none"> ■ Internet Service for Accreditation <p>Mar 15 – Feb 16:</p> <ul style="list-style-type: none"> ■ Reporting system enhancement ■ Data Management System (DMS) and Management Information System (MIS) migration <p>Expected no. of beneficiaries: All staff (about 70) performing accreditation or assessment exercises, providers (about 200) and Specialists (about 1000).</p> </p>	<p>web interface connecting the CRM for the communication and data sharing between operators and Council, and Specialists and Council.</p> <p>5 Extend the Reporting System to provide flexibility to tailor make users' own queries and templates of reports for data analysis.</p> <p>6 The data will be migrated from two existing applications of the Data Management System (DMS) and Management Information System (MIS).</p> <p>Cashflow: \$4,140,000</p>
<p>Mar 16 – Jan 17 (11 months)</p>	<p>● New system implementation (Phase 3)</p> <p>Mar 16 – May 16:</p> <ul style="list-style-type: none"> ■ Web filtering <p>Mar 16 – Aug 16:</p> <ul style="list-style-type: none"> ■ Internet Service for Qualification Assessment ■ Human Resource Information System ■ Accounting system - CRM Integration ■ QA booking system - CRM Integration ■ QR Systems - CRM Integration <p>Sep 16 – Jan 17:</p> <ul style="list-style-type: none"> ■ Staff Intranet <p>Expected no. of beneficiaries: All staff (about 90), individuals seeking qualifications assessment (about 3000) and other users of our services and providers (about 200).</p>	<p>1 Installation of web filtering appliance to enhance the Internet connection security.</p> <p>2 Extend the Internet service for qualification assessment function by allowing applicants to submit applications and payments online.</p> <p>3 A Human Resource Information System provides e-learning and training platform to strengthen the competency and capacity of staff in quality assurance. It will also provide for employee record management and self-service E-leave, E-payroll, and E-MPF.</p> <p>4 The CRM system will provide the interface to communicate with the existing QR system by alerting QR operators once the accreditation exercise is completed. It will also provide the interface to import the applicants' reservation data from the QA booking system. After implementing the online payment service through the Internet service, it can streamline the payment process in the accounting system.</p> <p>5 A Staff Intranet provides time recording function to support the fees charging process, enhance internal communication and other management tools.</p> <p>Cashflow: \$3,610,000 (TBD)</p>
<p>Estimated completion date of project</p>		<p style="text-align: center;">31 Aug 2015</p>
<p>Expected total no. of beneficiaries by the end of project:</p>		<p style="text-align: center;">HKCAAVQ staff and all other users of our services</p>

Project budget				
Projected Expenditure <i>(Please provide detailed breakdown under each item.)</i>	Amount in HK\$			
	Phase 1	Phase 2	Phase 3	Total
a. Manpower	0	0	0	0
b. Equipment / Facilities	2,993,000	992,000	425,000	4,410,000
c. Services	3,298,000	3,148,000	3,185,000 (TBD)	9,631,000
d. General Expenses	0	0	0	0
e. Others (e.g. auditor's fee)	0	0	0	0
Total Expenditure :	6,291,000	4,140,000	3,610,000 (TBD)	14,041,000
Projected Income <i>(if any)</i>	Amount in HK\$			
	Phase 1	Phase 2	Phase 3	Total
a. (e.g. fees received)	0	0	0	0
b.	0	0	0	0
c.	0	0	0	0
Total Income :	0	0	0	0
Sources of funding				
a.	Amount of grant sought under this application:	4,000,000		
b.	Other sources of funding <i>(e.g. donations, contributions from the applicant/its parent organisation, etc. Please give the name(s) of the sponsor(s), the amount of funding, and indicate whether the funding has been secured.):</i>	Other funding for the Project will come from the Hong Kong Council for Accreditation of Academic and Vocational Qualifications budget		

Key personnel involved and self-evaluation mechanism

(Please indicate in each timeframe the evaluation measures to be conducted, the key personnel to be involved and their roles/duties, and the scope of each evaluation measure.)

Project Evaluation

The overall evaluation measures have a focus on participant satisfaction and new system performance.

Proposed measures include:

1. Participant satisfaction with project processes, project deliverables and project success against objectives
2. User satisfaction with the system functionality and performance

Due to the nature of IT projects, ongoing monitoring against deliverables and evaluation will also be required as described below.

Measurement tools and processes will include:

- Project Monitoring Committee Meetings
- Status Report with Project Board, Project Director and IT Project Manager

Launch Evaluation for Internal users

- Functionality of new IT systems
- Performance of new IT systems
- User training
- User support

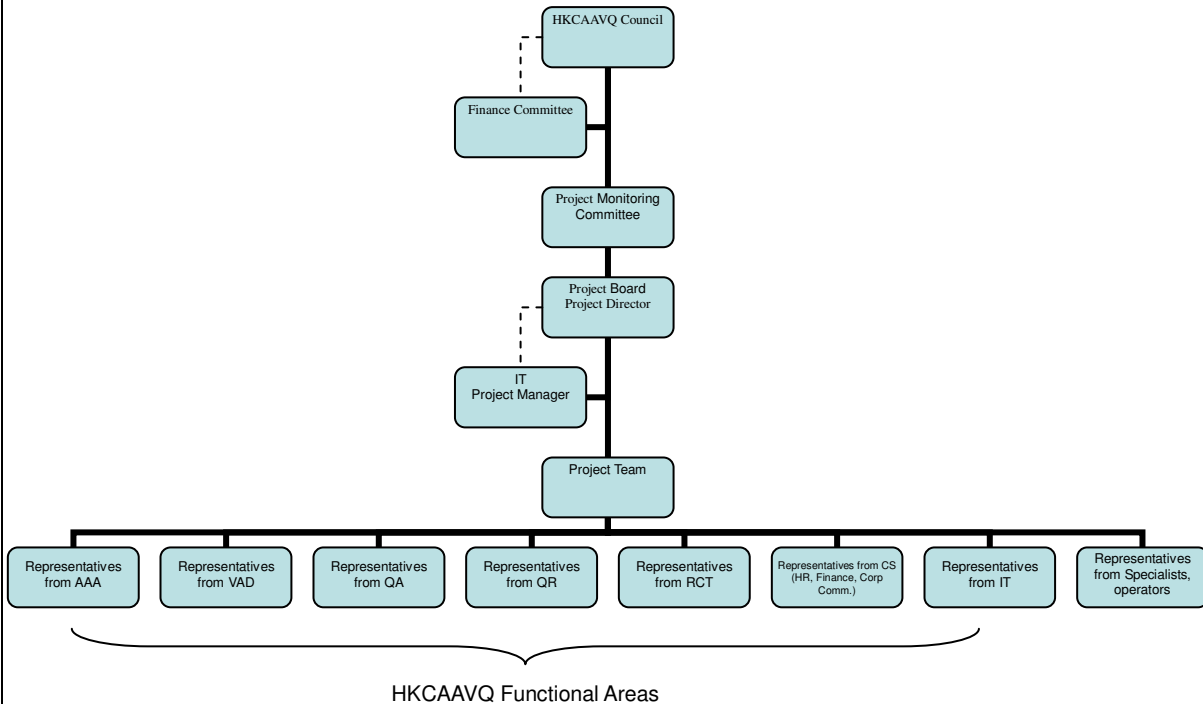
Launch Evaluation for Specialists and operators

- Functionality of new systems
- Performance of new systems
- User support

Launch Evaluation for Qualification Assessment applicants

- Usability of new systems

Project governance: evaluation and monitoring bodies:



Body	Responsibilities and accountabilities
HKCAAVQ Council	<ol style="list-style-type: none"> 1. Approve the project proposal, project plan and review Final report 2. Review the project status
Finance Committee	<ol style="list-style-type: none"> 1. Approve and monitor the project budget and financial issues with the Project
Project Monitoring Committee (Council Members and external experts)	<ol style="list-style-type: none"> 1. Oversee the development, costing and implementation of the Project on behalf of the Council 2. Review the project proposal, project plan including quality assurance plan, approve the content of submission for external funding of the Project 3. Confirm the correlation of the Project to the business directions of the Council and ensure that the invitation for quotation is based on the approved scope of work and specifications 4. Regularly review the project status and emerging issues and provide advice and counsel to the IT Project Manager 5. Communicate any project budget and financial issues to the Finance Committee 6. Review outcomes at key milestones for time, quality assurance and budget in order to ensure progress 7. Review schedule changes, identify and report any impact to the Council 8. To provide regular updates to Council and submit a final report to Council after the Project is completed
Project Board (Includes Change Management Board) (Executive Director, Financial Controller and Deputy Executive Director)	<ol style="list-style-type: none"> 1. Provide vision and direction 2. Confirm business direction and correlation of project to business direction. Endorse the IT Project Manager to issue the invitation for proposal based on the approved scope of work and specifications 3. Reinforce cultural change 4. Ensure resource availability 5. Review and approve change request, recommend, and coordinate changes requested by stakeholders. 6. Resolve or influence project issues, direction and execution of objectives

Project Director (Deputy Executive Director)	<ol style="list-style-type: none"> 1 Identify and confirm all required Project Team members for the Project (e.g. representatives from functional area , users, and IT) and that they are available to fulfil their project responsibilities 2 Regularly review project status and emerging risks and select/approve potential solutions from those presented 3 Provide direction on prioritization of emerging issues and risks 4 Provide advice and counsel on major project and policy decisions 5 Attend regular project meetings to discuss outstanding issues, status and scheduled events 6 Provide assessment of existing business practices and definition or guidelines for future practices or requirements 7 Facilitate process improvement opportunities and prioritize which opportunities are to be slated for achievement
IT Project Manager	<ol style="list-style-type: none"> 1 Understand and communicate project objectives and expectations 2 Validate that the deliverables from the Project represent the views and meet the specific business needs of the Project Team and the Project Board. 3 Approve the implementation schedule and project plan 4 Continually monitor scope, time frame, budget and risk 5 Manage project resources to assure maximum efficiency, effectiveness and resource utilization and validate resource allocation according the statement of work and level of effort 6 Monitor open tasks and issues list 7 Periodic risk management and development of mitigating strategies. Significant or high impact risks should be addressed with the Project Director 8 Recognize change management issues and risks; develop recommendations and mitigating strategies 9 Periodically measure and confirm stakeholder, Project Board and Project Team Member satisfaction 10 Assist in change management issues as they relate to users of the system 11 Manage the customer relationship with the vendor and contract 12 Evaluate the Project, share the lessons learnt and apply them to future projects 13 To provide regular updates to Council and submit a Final Report to Council after the Project is completed.

Project Team Member	Representatives from AAA Representatives from VAD Representatives from QA Representatives from QR Representative from RCT Representatives from CS (HR, Finance, Corp Comm.) External representatives from Specialists External representatives from operators <ol style="list-style-type: none"> 1 Identification of user requirements within their functional areas 2 Provide expert knowledge of the subject area 3 Understand the "as is" environment and provide functional expertise and knowledge of the existing business practices 4 Liaison between user community and Project Team; Act as a mentor and liaison to other users of that functional area 5 Represent the user interests in system design and software configuration decisions 6 Identify and implement business process improvements and changes by the new IT systems 7 Work with users to develop necessary processes or procedural changes to accommodate the software application 8 Prepare test plan and thoroughly test the software and associated procedures to confirm that the primary business requirements are met 9 Provide a communication link between Project Team through attendance at regular Project Team meetings 10 Contribute to status reporting
Representatives from IT	<ol style="list-style-type: none"> 1 Provide expert advice and assistance in IT related matters 2 Review and confirm the IT system setup and configuration 3 Co-ordinate with vendor for system setup and configuration. 4 Manage the technical aspects of the Project (including system specification, architecture and deployment) 5 User and role management and administration 6 Monitor system usage and troubleshooting 7 Review and support the backup and restore procedure for the IT system.

Timeframe	Evaluation measures	Personnel involved (roles/duties)	Details of the evaluation mechanism
Bi-Weekly or Regularly Scheduled	Status Report	IT Project Manager Project Director and/or Project Board	Update on progress of the Project against milestones and budget
Weekly or Bi-Weekly	Weekly Team Meetings	Project Team	To develop and review detailed plans

At the completion of each milestone	Project Director /Project Board Briefing	IT Project Manager Project Director and/or Project Board	Identify improvement plans, lessons learned, what worked and what could have gone better. Review accomplishments.
Not regularly scheduled. As needed when issues cannot be resolved or changes need to be made to project plan.	Project Director Meeting	IT Project Manager Project Director and/or Project Board	Update Project Director on status and discuss critical issues. Seek approval for changes to project plan.
Monthly or Regularly Scheduled	Project Monitoring Committee Meeting	Project Monitoring Committee Project Director IT Project Manager	Regularly review the project status and emerging issues and provide advice and counsel to the Project Manager Review outcomes at key milestones for time, quality assurance and budget in order to ensure progress Review schedule changes, identify and report any impact to the Council
Quarterly	Finance Committee Meeting	FC members Project Director	Review project budget and financial issues
Half yearly	Council Meeting	Council members Project Director	Review project status
Phase 1			
Dec 13 – May 14	The virtualisation server is installed. The virtualised host server is migrated and consolidated. The functionality of the server is tested.	IT Project Manager and IT team	The virtualised host should be operational with no errors found.
Dec 13 – May 14	New Windows Domain Controller server is installed and existing Domain Controller is replaced. The DHCP and DNS is migrated to new domain controller, the service is test and verified.	IT Project Manager and IT team	The new domain controller server should be operational with no errors found. The DHCP and DNS service should be operational with no errors found.
Dec 13 – May 14	The disk storage is installed and the hard disk can be allocated to the CRM and DMS servers. The backup system is installed and backup speed is tested.	IT Project Manager and IT team	The disk storage should be operational with no errors found. The backup system should be operational with no errors found. The full backup time for all data for the disk storage should be < 24hours.

Dec 13 – Jan 15	The CRM application is installed and tested. The Data migrated from SS Database and MIS is tested and verified. The Specialists management function in CRM is tested. The Training and Event management in CRM is tested. The operators management function in CRM is tested. The academic accreditation exercise workflow in CRM is tested. The system alert generated from predefined cases is tested. Role based access control is defined and tested.	IT Project Manager, IT team and Accreditation users	The data in the CRM database is operational with no errors found. The academic accreditation exercise workflow in the CRM is operational with no errors found. The system alerts is generated and operational.
Dec 13 – Jan 15	The DMS application is installed and tested. Document publishing, version control and searching the information description of documents is tested. Role based access control is defined and tested.	IT Project Manager, IT team and Accreditation users	The data in the DMS is operational with no errors found.
Dec 13 – Jan 15	The schedule database replication from CRM to reporting system is setup and tested. Statistical management reporting is defined and tested. Role based access control is defined and tested.	IT Project Manager, IT team, Accreditation users and senior management	The data replication from CRM to reporting system is operational. The data in the Reporting system database is operational with no errors found.
Phase 2			
Mar 15 – Jun 15	New email server is setup and tested. Outlook Web Access is setup and tested.	IT Project Manager and IT team	The email system should be operational with no errors found.
Mar 15 – Aug 15	The Data migrated from DMS and MIS is tested and verified. The operators management function in CRM for CPD, CEF, OTI is tested. The CPD, CEF, OTI accreditation workflow in CRM is tested.	IT Project Manager, IT team and Accreditation users	The data for CPD, CEF and OTI in the CRM database is operational with no errors found. The workflow for CPD, CEF and OTI in the CRM is operational with no errors found. The system alerts is generated and operational.
Sep 15 – Feb 16	The Data migrated from DMS and MIS is tested and verified. The qualification assessment workflow in CRM is tested. The system alert generated from predefined cases is tested.	IT Project Manager, IT team and Qualification Assessment users	The data for qualification assessment in the CRM database is operational with no errors found. The workflow for qualification assessment in the CRM is operational with no errors found. The system alerts is generated and operational.
Sep 15 – Feb 16	The Internet service for accreditation is tested and installed. The Internet service for specialist is tested and verified. The Internet service for operators is tested and verified. The application information output to CRM is tested and verified in CRM system.	IT Project Manager, IT team, Accreditation users and RCT users.	Internet service for accreditation should be operational with no errors found.

Mar 15 – Feb 16	The user learnt how to develop query and generate the report in the reporting system.	IT Project Manager, IT team, Accreditation users and Qualification Assessment users	The user query report is verified with no errors found.
Phase 3			
Mar 16 – May 16	New web filtering appliance is installed and tested.	IT Project Manager and IT team	The web filtering should be operational with no errors found.
Mar 16 – Aug 16	The online assessment application is tested and installed. The payment function to different providers is tested and verified. The application confirmation email is tested and verified. The application information output to CRM is tested and verified in CRM system. The application status tracking function is tested and verified.	IT Project Manager, IT team and Qualification Assessment users, Finance users	Qualification assessment portal should be operational with no errors found. The payment transaction data should be accurate and re-conciliate the report with different providers with no errors found. The application status tracking function should match the application status in the CRM with no errors found. The inputted data should be accurate and created in CRM identically.
Mar 16 – Aug 16	The Human Resource Information System application function is tested and verified. The employee self-service portal is tested and verified.	IT Project Manager, IT team and HR users	The Human Resource Information System and employee self-service portal should be operational with no errors found.
Mar 16 – Aug 16	The interface for exchanging the data between the existing system such as QA online booking system, QR system and Accounting system on the payment information is tested and verified.	IT Project Manager, IT team, Qualification Assessment users, QR system users and Finance users	The import and export function of data from and to CRM, QA online booking system, QR system and Accounting system should be operational with no errors found.
Sep 16 – Jan 17	The staff intranet system is tested and verified. The Content Management System (CMS) is tested and verified.	IT Project Manager, IT team and all users	The Staff intranet system should be operational with no errors found.

III Other Information (if applicable)

1 Sharing of project deliverables *(Please describe how the deliverables/outcomes will be shared or used by other institutions in the sector and what information can be uploaded on relevant EDB websites during and/or after the project period.)*

All deliverables will be used in some form with non-self-accrediting operators in the course of quality assurance activities. Information on revised and updated processes using the IT functionality will be shared with all operators. EDB websites can link to relevant sections of the HKCAAVQ website that contain updated guidelines and information on new processes that arise from the Project.

2 Project sustainability *(Please indicate how staff will commit to ensure project sustainability and describe how the recurrent expenditure involved will be met after completion of the project.)*

The Project will be sustained by HKCAAVQ IT staff and supported through the budget of the HKCAAVQ. Recurrent expenditure will be funded through the overhead charges in fee for service delivery by the Council.

3 Past experience in organising projects of similar or relevant nature and achievements

The HKCAAVQ as the Qualifications Register Authority has administered the Hong Kong Qualifications Register (QR) on behalf of the SED since 2008. The maintenance of the database and website has involved both hardware and software upgrades on a regular basis requiring the development of specifications and tendering and monitoring of implementation by the Council. These developments have been successfully undertaken and the QR system has run efficiently throughout the HKCAAVQ's period of stewardship.

4 Publicity plan *(Please describe all the publicity activities to be involved and how they will be carried out and list all the publicity materials to be produced to acknowledge the support of Quality Enhancement Support Scheme.)*

It is intended that recognition would be given to the Quality Enhancement Support Scheme through publications, training programmes and in our communication to operators on the developments brought about through the IT infrastructure development project.

5 Others

A detailed project plan is included with this application.