

Mirox Cyber Security & Technology

Nila 4th floor, Technopark
Trivandrum, Kerala
P.O 695581 India
Ph: +91-471-4016888



Independent Verification & Validation Report Version 1.3 - Re-Verifying Report - NAAC

Date:	Services Performed By:	Services Performed For:
15-12-2020	Mirox Cyber Security & Technology Pvt. Ltd Nila 4th floor, Technopark Kerala PIN - 695 581	Kerala State Electronics Development Corporation Keltron House, Vellayambalam Thiruvananthapuram – 695033

This report contains sensitive information about the security state of IT systems and data assets. The data within this report must be treated with the same level of protection as the assets themselves, and should be classified as ‘confidential’ or ‘restricted’. By accepting this document you agree to keep the contents in confidence and not copy, disclose, or distribute this without written request to and written confirmation from the Information Owners. If you are not the intended recipient, be aware that any disclosure, copying, or distribution of the contents of this document is prohibited.

This Independent Verification & Validation (IVV) is subject to the terms and conditions contained in the Agreement between the parties. Any term not otherwise defined herein shall have the meaning specified in the Agreement. In the event of any conflict or inconsistency between the terms of this SA and the terms of the Agreement, the terms of the Agreement govern and prevail.

Document Details

Version	1.0
Author	Mirox IVV Team
Reviewed By	Mirox Security Auditors
Approved By	Mirox QA Team
Classification	Confidential

Reviewed By	Authorised By
Mirox QA AND IVV TEAM	Authorized officials of Keltron
Senior IVV Analyst & Auditor - Mirox	
Security Threat Assessment Team - Mirox	
	Mirox QA AND IVV TEAM
Assessment Auditor Conducted by (Name & Team)	Mirox VAPT Team
IT Security Technical Review & Support	Mirox PT & Analyst - Mirox

VERSION HISTORY

VERSION	DATE	PREPARED BY	CHANGES & REASONS FOR CHANGE
1.3	15-12-2020	Mirox QA AND IVV TEAM	Initial Formulation

DOCUMENT DETAILS

VERSION	DATE	Details	
1.3	15-12-2020	Client	Keltron NAAC
1.3	15-12-2020	Doc Title	IVV report
1.3	15-12-2020	Type	External & Internal
1.3	15-12-2020	Classification	Confidential
1.3	15-12-2020	Project Code / Name	IVV-RAIN
VERSION	Project Starting date	Completion Date	Status
1.3	25-10-2018	15-12-2020	Completed

Contents

1	IVV - Independent Verification & Validation Report.....	4
1.1	Summary	4
1.2	Approach.....	4
2	Findings	5
3	Conclusion.....	44

1 IVV - Independent Verification & Validation Report

Summary

Keltron has assigned to Mirox the task of carrying out IVV - Independent Verification & Validation of their client named **NACC Portal**. The purpose of the IVV is to determine AND evaluates the correctness and quality of the project's to ensure that it is being developed in accordance with customer Requirements and is well-engineered for production through Software Quality Management Process and system a combination of standards, process and practicing. A report including an recommendation to improve and secure the risks for Keltron will be provided after the IVV & Assessment. This engagement aims to the Application or software to perform well in unforeseeable scenarios and to keep a relatively low defect rate. also uncover risk and help to ensure the adequacy of the defensive measures.. As per the Scope of work Mirox has conducted IVV on the Application and Reverfying it subject to the acutal issues till been recitfied and fixed

Approach

- To maintain independence and integrity
To work with the vendor teams, business owners and Information technology staff
- To work in making the project successful
- To give advice/recommendation, not direction
- To be cognizant of staff time, and engage them only when required
- That all our risks, and recommendations are supported by finding
- Perform supplemental research and development activities to support analysis.
- Identify issues of immediate consequence and recommend solutions.
- Develop long-term recommendations to enhance security.

2 Findings

The below are findings based during IVV along with Description and status

Module Description	Functional Requirement ID	Functional Requirement	Remarks
REGISTRATION & IIQA MODULE 3.1	R1.001	The HEIs can register by providing Institution name, valid Institution e-mail ID, mobile number and Institution AISHE ID	Verified & Fixed
	R1.003	AISHE ID should be the primary identifier of a HEI. HEI's without AISHE id will not be accepted for registration. The AISHE ID should be in specified format as shown in the registration page of the HEI.	Verified & Fixed
	R1.004	Generates captcha validation to verify the user is human.	Verified & Fixed
	R1.007	Disclaimer Note should be displayed intimating that only University contacts (Email/Mobile/Address) which are not subjected to change should be entered at the time of registration	Verified & Fixed
	R1.008	System should include mobile number field while registration. The Mobile number field should accept only 10 digits numbers	Verified & Fixed
	R1.010	should allow account activation process through email link.	Verified & Fixed
	R1.011	System should have change password feature once the HEI login into their portal.	Verified & Fixed
	R1.0111	System should ask for accreditation details if the institution already accredited	Verified & Fixed

	R1.0112	System should automatically check the details in case of old HEI having accreditation details with the EC data available and should automatically recognize and approve.	Verified & Fixed
	R1.0113	System should have provision for manual approval in case of not matching with existing data in case of old registration	Verified & Fixed
	R1.012	System should have forgotten password feature.	Verified & Fixed
	R1.014	System should capture the Institution Type as part of the registration process.	Verified & Fixed
	R1.017	System to generate Password & send it to the concerned HEI to their e-mail.	Verified & Fixed
	R1.018	System should capture all the required fields for HEI profile as per the Manual for SSR	Verified & Fixed
	R1.019	System should capture 1 alternate email ids of HEI along with primary email.	Verified & Fixed
	R1.021	Should allow HEIs to enter all field details and submit IIQA along with prescribed fee through the HEI portal.	Verified & Fixed
	R1.022	Ability to upload and View the relevant documents online in desired format as required by NAAC	Verified & Fixed
	R1.023	Ability to allow HEIs to view, edit, delete and print the IIQA details and documents before final submission.	Verified & Fixed
	R1.024	Should allow HEIs to pay IIQA submission fees online (RTGS/NEFT/Internet Banking/Credit Card/Debit Card) only after the module become stable there will be option for offline as well until the module become stable.	Verified & Fixed
	R1.027	In case of Online Payment, There should be provision for finance verification and thus generated receipt should be viewable by the HEIs.	Verified & Fixed

	R1.028	On submission of IIQA system should auto generate acknowledgement e-mail and send to HEIs and Concerned Officers of NAAC	Verified & Fixed
	R1.029	Should allow concerned NAAC officials to view IIQA after getting acknowledgement e-mail generated by the system.	Verified & Fixed
	R1.030	Should allow NAAC to accept, reject or hold the IIQAs submitted by HEIs within the time line set (within 15 days of submission only alerts) by NAAC	Verified & Fixed
	R1.031	Should alert NAAC concerned official about the time to finish the activity/ left out time.	Verified & Fixed
	R1.032	Should allow NAAC to communicate the acceptance/rejection status of IIQA to the concerned HEIs through e-mail/SMS	Verified & Fixed
	R1.0321	Should have provision to ask clarification to HEI as part of IIQA verification.	Verified & Fixed
	R1.0322	Should have provision to edit IIQA as part of clarification. There should have provision to submit IIQA as part of clarification response submission.	Verified & Fixed
	R1.0323	There should be a provision to close the clarification for IIQAs which are fully filled by HEI.	Verified & Fixed
	R1.037	In case of second or higher accreditation cycle, all processes should be tracked by the Track ID.	Verified & Fixed
	R1.038	There should be a provision online to request for increase of the timeline limit for submission of SSR after approval of IIQA. The NAAC admin user will have a provision to extend the timeline for a HEI on request and after the approval of the Director of NAAC	Verified & Fixed
	R1.040	System auto generates SSR submission alerts 7 days, 6 days 5 days etc. to the concerned HEIs as a configurable feature.	Verified & Fixed

	R1.041	System to send e-mail alert/SMS to the concerned HEIs regarding the IIQA Acceptance status. The IIQA status shall be communicated through the application as well as through email / SMS.	Verified & Fixed
	R1.042	NAAC admin user should have provision to extend the SSR submission limit for a particular college in case of unavoidable reasons or for a reason not because of the HEI.	Verified & Fixed
	R1.044	HEIs can enter only SSR details after acceptance of IIQA. Once the IIQA is accepted then the SSR preparation link becomes editable.	Verified & Fixed
	R1.045	System should ensure that data points in SSR, which is filled in IIQA is auto populated and such fields should be non-editable in SSR. System should allow SSR Submission only after IIQA is accepted by coordinators.	Verified & Fixed
	R1.083	HEI portal should include certificate of recognition, details of recognition by statutory bodies along with the institution types	Verified & Fixed
	R1.084	HEI should be able to enter University contacts	Verified & Fixed
	R1.085	Should allow HEIs/NAAC to update the institution profile details in case of any change.	Verified & Fixed
	R1.086	On submission of IIQA the web link given by the HEI need to be validated	Verified & Fixed
	R1.088	The HEI after the registration can login to their portal using the username and password send to their registered email address at the time of HEI Registration.	Verified & Fixed
	R1.090	if college is not affiliated and if the college does not undertake any SRA programs then they college is not eligible to submit the IIQA	Verified & Fixed
	R1.092	System automatically validates whether the college has completed 6 years based on current date and established date as entered in this form.	Verified & Fixed
	R1.093	entered by the HEI can be saved before final submission.	Verified &

			Fixed
	R1:0132	IIQA shall be scrutinized by and final decision can be made by NAAC – coordinators.	Verified & Fixed
	R1:0133	If IIQA is rejected HEI have provision to resubmit 3 times with the same fees within an year after initial payment	Verified & Fixed
	R1:0134	Each member will be assigned Role by the admin and then according to their privilege they can view or edit any document.	Verified & Fixed
	R1:0135	The NAAC will provision to ask multiple clarifications to HEI and HEI in turn will have option to submit multiple responses for the clarification	Verified & Fixed
	R1:0136	There will be provision for NAAC coordinator to extend the date of response by HEI	Verified & Fixed
	R1:0137	is provision to add tooltip messages by the ADMIN	Verified & Fixed
	R1.0138	The IIQA should be assigned to the HEI based on 50:30:20 rule automatically while the submission of it by the HEI.	Verified & Fixed

SSR MODULE			Verified & Fixed
	R1.046	Facility to allow HEI to prepare and publish SSR for NAAC Portal	Verified & Fixed
	R1.047	Facility to allow HEIs to submit the SSR after approval of the IIQA.	Verified & Fixed
	R1.048	System should auto generate SSR submission alerts 15 days, 10 days 5 days etc. to the concerned HEIs as configurable feature.	Verified & Fixed
	R1.050	Facility to allow HEI to attach documentary proof wherever required.	Verified & Fixed

	R1.051	There should be provision for configuring the payment amount for per institution category, number of departments etc	Verified & Fixed
	R1.052	Should allow HEIs to make the payments online (RTGS/NEFT/Internet Banking/Credit Card/Debit Card)	Verified & Fixed
	R1.054	Should have online payment receipt generation viewable by the HEI.	Verified & Fixed
	R1.055	Upon submission, system should auto generate acknowledgement e-mail and send to HEIs and Concerned Officers of NAAC	Verified & Fixed
	R1.060	Key Indicator and metrics of SSR shall be configured based on classification of HEIs.	Verified & Fixed
	R1.062	System should allow hierarchy definition from Key indicator to Metrics and will be evaluated based on Questions populated in SSR.	Verified & Fixed
	R1.063	System should support both quantitative and qualitative metrics based evaluation mechanism by which the evaluation of the SSR can be done.	Verified & Fixed
	R1.064	Metrics should be mapped against Key Metrics and the weight ages and scores should be provisioned as a configurable entity.	Verified & Fixed
	R1.065	There should be provision to specify the calculation scheme for evaluation of the metrics from the answers of the questions in SSR	Verified & Fixed
	R1.066	Evaluation of metrics will be based on Direct or Derived Data Points, and these data points are generated based on responses to Questions in SSR.	Verified & Fixed
	R1.067	There should be provision to specify and configure the weightage of each metrics in a key indicator against the contribution of the overall weightage of the concerned key indicator.	Verified & Fixed
	R1.068	There should be provision to generate SSR scheme including the weightage distribution (quantitative & qualitative overall) and for the individual key indicator and the evaluation scheme for each key	Verified & Fixed

		indicator.	
	R1.074	Key aspects should be a configurable entity in the System so that NAAC can add/delete/update properties of Key Aspects	Verified & Fixed
	R1.075	System should display adequate remarks against questions in SSR to assist HEI in filling up the SSR.	Verified & Fixed
	R1.077	SSR Questions can be of multiple Types: Boolean, Multiple Selection, Single Selection and Text	Verified & Fixed
	R1.078	should cap the answer length to pre-determined Character Count	Verified & Fixed
	R1.079	System should auto generate PDF format of submitted SSR.	Verified & Fixed
	R1.080	Evaluation engine of SSR to be designed to map HEI entered values/calculated values with formulae to benchmark slabs so that to generate the scores automatically. This is applicable for Quantitative Types only.	Verified & Fixed
	R1.081	Profile section in SSR should include data capture given by SSR Manual (University, Autonomous, Affiliated UG & PG) and avoid any duplication with respect to IIQA	Verified & Fixed
	R1.082	There should be a provision for conducting student satisfaction survey which is going to be a metrics in the SSR evaluation.	Verified & Fixed
	R1.0821	There should be provision to upload student data into the system. Appropriate validation to be done while uploading of data regarding email ID.	Verified & Fixed
	R1.142	There should be provision to apply the Penalty Rule for excluded metric and to update the SSR.	Verified & Fixed
	R1.143	There should be provision to exclude some metric by the HEI before submission of SSR.	Verified & Fixed

	R1.144	The question is rendered based on the difference between the HEI establishment year and current year.	Verified & Fixed
	R1.145	SSR assignments are automatic by round robin algorithm based on 50:30:20 ratio rule. The assignment will be done at the time of SSR submission itself.	Verified & Fixed
			Verified & Fixed
Pre Qualification	R1.095	There should be provision for NAAC to configure the parameters for pre qualification.	Verified & Fixed
	R1.096	There should be provision for institution to sent mail on the status (Approve/Reject) of Pre qualification. If the pre qualification is rejected then that information along with the remarks has to be given to the HEI via mail after approval by EC in meeting. If the status is approved then the next proceeding to be given in mail.	Verified & Fixed
	R1.097	There should be provision for the NAAC to get report based on Pre Qualification.	Verified & Fixed
	R1.098	Pre qualification includes only quantitative value analysis not includes either qualitative or SSS. If the total value is greater than or 30% then only the HEI is qualified for the Pre qualification	Verified & Fixed
	R1099	Pre-qualification can be done after the penalty check & DVV Verification.	Verified & Fixed
			Verified & Fixed
Role based SSR Access	R1.0100	There should be provision given to SSR Manager to configure the ADMIN aspect of SSR.	Verified & Fixed
	R1.0101	There should be provision given to the SSR manager to add/ edit/ delete the members from the SSR coordinating Team.	Verified & Fixed
	R1.0102	There should be provision for the SSR Manager and the SSR Coordinating team to view all related documents.	Verified & Fixed

	R1.0103	There should be provision for the SSR Coordinating team members to view the activities assigned to them (DVV, SSS, PTV).	Verified & Fixed
	R1.0104	There should be provision given to the Finance Manager to view and verify the SSR payment details.	Verified & Fixed
			Verified & Fixed
DVV Module	R1.0105	The DVV Mangers will have provision to create the DVV Partners in the ADMIN Portal.	Verified & Fixed
	R1.01051	The SSR submitted should be assigned to DVV automatically after finance verification of SSR payment.	Verified & Fixed
	R1.0106	There should be provision for DVV managers to edit and deactivate the DVV Partners.	Verified & Fixed
	R1.0107	There should be provision to ADMIN/DVV Partners to view the SSR documents submitted by HEI.	Verified & Fixed
	R1.0108	There should be provision to manage the Dashboard and view the real time status of DVV Partners	Verified & Fixed
	R1.0110	After acceptance of verification request by the DVV Partner, if verification not completed within 15 days, then it will be shown in pending in the report table.	Verified & Fixed
	R1.0111	After the SSR DVV request assignment, there will be provision by DVV Partner to accept or reject by marking the conflict of interest.	Verified & Fixed
	R1.0112	There should be Provision to view and download the related documents of HEI.	Verified & Fixed
	R1.0113	There should be provision for NAAC to reassign the DVV request.	Verified & Fixed
	R1.0114	There should be provision for the Checker to create Multiple Maker profile and create their account to login.	Verified & Fixed
	R1.0115	There should be provision for the checker to deactivate/edit the maker's profile.	Verified & Fixed

	R1.0116	There should be provision for checker to approve / Reject and write comment against the report prepared by the Makers.	Verified & Fixed
	R1.0117	should be provision for Checker to see the responses of the HEI against the deviation and the maker comment corresponding to the deviation.	Verified & Fixed
	R1.0118	There should be provision for checker to Create and approve the Final report.	Verified & Fixed
	R1.0119	There should be provision for checker to send back the report to HEI or to NAAC.	Verified & Fixed
	R1.0120	There should be provision for Checker to manage deviation reports and also the HEI clarifications	Verified & Fixed
	R1.0121	should be provision to submit the clarification asked to HEI	Verified & Fixed
	R10140	The DVV Partners will be automatically assigned for verification of SSR by using Round Robin Algorithm	Verified & Fixed
	R10141	There will be provision for the DVV to enter findings for unsure question and the HEI will have the provision to edit the score.	Verified & Fixed
			Verified & Fixed
Student Satisfaction Survey (SSS) Module			Verified & Fixed
	R1.0122	There should be provision given to the HEI to upload the excel file for SSS as part of SSR submission.	Verified & Fixed
	R1.01221	There should be having a configurable model for SSS having different SSS schemes and the schemes for different institution type should be configurable like for university and for medical education colleges, it can be different.	Verified & Fixed

	R1.0123	There should be provision to capture the student details (Name, Roll No, Student ID, Sex, Email, DOJ etc).	Verified & Fixed
	R1.0124	There should be provision for the ADMIN to configure the parameter for the SSS (Total % to upload, Min % for evaluation).	Verified & Fixed
	R1.0125	There should be provision to view dashboard by NAAC .	Verified & Fixed
	R1.0126	There should be provision for NAAC to view the student details uploaded by HEI.	Verified & Fixed
	R1.0128	The SSS should be based on the algorithm given from NAAC for student selection.	Verified & Fixed
	R1.0129	There should be provision for getting email alert to HEI on SSS.	Verified & Fixed
	R1.0131	There should be provision to view the result of SSS by HEI.	Verified & Fixed
	R1.0137	The SSS will be initiated automatically after successfully submission of SSR and mail to 30% students,	Verified & Fixed
	R1.0138	Alerts for the students after 15 days will be automatic. After 25 days the send mail button becomes activated.	Verified & Fixed
	R1.0140	After 15 th day if needed attendance in survey is not reached, mail will be sent automatically by the system.	Verified & Fixed
	R1.0139	After 25 days SSS link will be sent to remaining students to fill SSS in case if the needed attendance is not obtained.	Verified & Fixed
			Verified & Fixed
Inflibnet Module	R1.013001	Inflibnet should be able to login to the system with their email address and password.	Verified & Fixed
	R1.013002	Inflibnet should get the pending list of HEIs for them to update the research details.	Verified & Fixed

	R1.013003	Inflibnet should get a dashboard for them to proactively know what to do next and in priority.	Verified & Fixed
	R1.013004	Inflibnet should be able to submit the research counts of scopus, web of science as well as ISI along with a file for the evidence.	Verified & Fixed
	R1.013005	Institution should be able to comment on the details submitted by Inflibnet within 7 days from the initial submission by inflibnet	Verified & Fixed
	R1.013006	The research input should automatically finalised if the HEI is not able to comment within 7 days.	Verified & Fixed
	R1.013007	If the institution submits the comments, Inflibnet should have option to accept or reject the comment of update the data if they want to relook the counts submitted.	Verified & Fixed
	R1.013008	There should be provision to re-submission.	Verified & Fixed
	R1.013009	Once resubmitted, the data should be final and the Metrics related should be automatically re-prepared.	Verified & Fixed
			Verified & Fixed

ASSESSOR MODULE 3.2			
	R2.001	Provision for NAAC Designated Officer to open/close the link for online submission of resumes for enrolment as new Assessors on NAAC's website in careers and opportunities page.	Verified & Fixed
	R2.002	Provision for NAAC Authorised official to create a list of probable assessors. The Director should have provision to approve the probable list. NAAC Authorised official can issue	Verified & Fixed

		official invites to enroll as assessors to apply and join NAAC Assessors team.	
	R2.003	The assessors should have provision to submit their CV and mark personal profile, experience details, subject of specialization, area / location / zone , previous designations so that to help in selection.	Verified & Fixed
	R2.004	Provision for NAAC designated officer to scrutinize the applications and send for approval to Director	Verified & Fixed
	R2.005	Director should have provision to approve the probable list so that the official invites can be sent to the persons in the list.	Verified & Fixed
	R2.006	Provision for NAAC Designated Officer to update Assessors Master and generates login IDs and passwords for approved Assessors, which will be intimated to Assessors through email and SMS.	Verified & Fixed
	R2.007	Through the Assessors portal, there should be provision for Assessors to login, create, view, edit, and print their profile information online.	Verified & Fixed
	R2.008	Assessors will get a separate dashboard and through which they will get all the communications and timeline alerts.	Verified & Fixed
	R2.009	There should be provision for Assessors to mark activities and availability for Peer Team Visit etc. in calendar and give feedback.	Verified & Fixed
	R2.010	Provision for Assessors to view new trainings calendar, apply for training if not taken already or express interest to be a Trainer. View Training material, and news and events.	Verified & Fixed
	R2.011	Once they undergo training, they will no longer be able to apply for further trainings and the link will be disabled for	Verified & Fixed

		them.	
	R2.012	The training intimations can only be viewed by the concerned trainer.	Verified & Fixed
	R2.014	There should be provision for Assessors to accept or reject a Peer Team Visit, and mark dropout once part of the Peer Team, by providing valid reasons.	Verified & Fixed
	R2.015	There should be provision for Assessors and NAAC regional co-ordinators to send/receive e-mail/SMS to and from for all the necessary communications concerned.	Verified & Fixed
	R2.016	Provision for NAAC Designated Officer to block or unblock an Assessor on intimation from Director.	Verified & Fixed
	R2.017	The system should limit the number of visits possible for an assessor in a calendar year to 6 times	Verified & Fixed
	R2.019	will be provided with training materials through the portal.	Verified & Fixed
	R2.020	Facility for Enrolled Assessors to Accept/Reject the "Code of Conduct" guideline approved by NAAC. This is mandatory.	Verified & Fixed
	R2.021	Facility for Assessors to accept/reject the "Conflict of Interest" guidelines approved by NAAC. This is mandatory for each visit.	Verified & Fixed
	R2.022	System should allow configuring the time limit within which assessors should accept the Code of Conduct.	Verified & Fixed
	R2.023	System should allow configuring the time limit within which assessors should accept Conflict of Interest.	Verified & Fixed
	R2.024	There should be provision for Preparation of PTR will in advance for the accepted visit. PTR preparation includes viewing reference and logistics documents and downloading the same in excel.	Verified & Fixed

	R2.025	should be provision for assessor to create and delete activity.	Verified & Fixed
	R2.026	There should be provision for the assessor to comment on the activities the other assessor have created.	Verified & Fixed
	R2.027	There will be provision for the assessor to respond on the metric wise observation.	Verified & Fixed
	R2.028	There should be provision to give comments to the appeal the HEI have put forward.	Verified & Fixed
	R2.029	There is a provision for the Assessor Admin to set the Assessor window for the assessor to apply online. The assessor can apply online based on the field specification, state etc	Verified & Fixed
	R2.030	There is provision for the Admin to enter the Legacy assessor details.	Verified & Fixed
	R2.031	There will be provision for the assessor to create ticket through helpdesk option.	Verified & Fixed

ASSESSMENT MODULE 3.3			
	R3.001	Provision for HEI to give three different slots for Peer Team Visit. Provision for NAAC Officer to choose one slot and intimate the HEI through email and SMS regarding the same.	Verified & Fixed
	R3.003	Provision for NAAC designated officer to do Peer Team selection process. Provision for multiple field search options. The criteria for selection should be automatically set based on the details of HEI to visit.	Verified & Fixed

	R3.004	There should be at least one chairman, one member coordinator and one member while selection.	Verified & Fixed
	R3.006	Provision for NAAC Designated Officer to generate a Peer Team List based on pre decided selection criteria and forwards the list to the Director for approval.	Verified & Fixed
	R3.007	Provision for Director to view the Peer Team List, and make suggestions from his/her ends to the list and approves or rejects the list in parts or in entirety. Automatic Email or SMS Intimation is sent to chosen team; also alert is displayed in individual Assessor's profile. System to generate the e-mail/SMS alert about the visit schedule to the HEIs and authorised NAAC Officials (Regional Coordinators) as well.	Verified & Fixed
	R3.008	Provision for Assessors who are selected as Peer Team Members to accept or disapprove to be part of the Peer Team. When accepting, they must sign the Code of Conduct declaration and No Conflict of Interest declaration with HEI, which is available for print/download.	Verified & Fixed
	R3.009	Provision for HEI to sign No Conflict of Interest Declaration on the Peer Team members.	Verified & Fixed
	R3.010	Provision for Assessors to dropout online by providing valid reasons.	Verified & Fixed
	R3.011	Provision for Authorised NAAC official to select and Director to approve the substitute for the Peer Team dropouts.	Verified & Fixed
	R3.0111	Provision for changing designation of per team members to NAAC Co-ordinator in case of dropout.	Verified & Fixed
	R3.012	There should be a provision to make postponement of a visit and rescheduling of the visit to some other date in case of any critical reasons.	Verified & Fixed

		R3.013: Provision for NAAC Designated Officer to see final list and forward to the Logistics team and coordinate all back and forth processes with them, until the Peer Team Visit is scheduled properly in a satisfactory manner.	Verified & Fixed
	R3.014	Once part of the Peer Team, they have privilege to view details about the Peer team visit, like schedule, other Peer team members, institution details etc. View /download System generated Pre-Inspection Report (summary of SSR, SSR,IIQA , SSR suggestions etc), analysis reports etc. before visit.	Verified & Fixed
	R3.015	System to generate NAAC Accredited HEIs details region wise (State/District/City/Location) near to HEIs to be visited. Provision for Peer Team to view /Analysis Reports and the complaints received against the SSR from the public etc.) for reference.	Verified & Fixed
	R3.017	Provision for HEI and Peer Team members to view and record details about each stakeholder interactions in the system.	Verified & Fixed
	R3.018	The online PTR and scoring sheet will be active from the visit assigned onwards. The entry and updating of PTR and scoring sheet will be one per peer team and the final submission provision will be available only to the chairman of the team.	Verified & Fixed
	R3.019	Provision for Peer Team members to fill online Peer Team Report, and provide scores such that automatic grading is generated by system. Final submission of the online filled PTR report and the grade sheet privilege given to chairman of the peer team.	Verified & Fixed
	R3.021	System to auto-calculate KA-GPS, CR-GPS, CGPA and Grade as per configurable weight ages and on the basis of PT report and grade sheet	Verified & Fixed

	R3.023	Provision to send the Overall Analysis and Feedback and Recommendations portion of the PTR to the HEI. Provision to give recommendations and feedback about visit to NAAC.	Verified & Fixed
	R3.024	Provision for HEI to give feedback about visit to NAAC and apply for reimbursement of visit expenses online.	Verified & Fixed
	R3.025	Provision for Peer Team members to give feedback about each other	Verified & Fixed
	R3.026	Provision for NAAC Designated Officer to block Assessors for bad conduct during Peer Team Visit after approval of Director. Director can view and approve the block assessor list.	Verified & Fixed
	R3.027	Provision for NAAC Executive and Standing Committee members to view and approve final grade, and declare result, which in turn will be available to the HEI portal and will be sent through Email & SMS to HEIs.	Verified & Fixed
	R3.028	Provision for HEI to file for appeal, if unsatisfied with the Assessment process or outcome.	Verified & Fixed
	R3.031	Provision for all stakeholders to send /receive Email and SMS for all communications concerned.	Verified & Fixed
	R3.032	There should be provision to evaluate based on the objective indicators	Verified & Fixed
	R3.033	After pre qualification the HEI have an Assessment Specialization Mapping process. In this process the coordinators have the authority to suggest the Specialization of assessor coming for the Visit.	Verified & Fixed
	R3.034	Provision to manage the replacement and mark the drop out.	Verified & Fixed

EC - GOVERNANCE MODULE 3.4			
	R4.001	Should allow EC Members to view the Peer Team reports, analysis reports, system generated scores and indicator reports. Those who are outside users will have access 2 days prior to the meeting and before two days after the meeting.	Verified & Fixed
	R4.0011	There should be provision to schedule meetings for EC/GC and FC will be done through the meeting module and the functionality will be defined in the meeting module.	Verified & Fixed
	R4.002	Should allow NAAC to declare the HEIs Accreditation Status based on the EC decision/outcome.	Verified & Fixed
	R4.003	System to send communication via e-mail to the concerned HEIs about the decision of EC (i.e. their Grade Point).	Verified & Fixed
	R4.004	Standing committee can check for gaps in the Peer Team Report and provides suggestions to the Executive Committee who finally approves the grading.	Verified & Fixed
	R4.005	The Director, then on recommendation from the EC can send the final grading and Accreditation status to the HEI.	Verified & Fixed
	R4.006	The changes and decisions of EC/GC committee, any generated documents etc. by the committee may be updated in the software by the coordinator of the committee or authorized person in the NAAC.	Verified & Fixed
	R4.007	The documents shared by the committee may be confidential /public or access limited to a class of users only which can be set by the authorized person at NAAC.	Verified & Fixed
	R4.008	System should automatically generate the report of decisions pending by the EC/Standing committee for the meeting.	Verified & Fixed

Training Module 3.5			
	R5.025	There should be provision for online training E-AOP for assessors and other training for users at each portals.	Verified & Fixed
	R5.026	There should be provision to upload a reference documents for training	Verified & Fixed
	R5.027	There should be provision to add video links for reference for each training	Verified & Fixed
	R5.028	There should be provision to add video session with a presentation links for training. The link should auto play on the start of training.	Verified & Fixed
	R5.029	There should be provision to edit, update delete and approve training. on approval, training link should come in the portals.	Verified & Fixed
	R5.030	There should be provision to add an online exam/test associated with training for the users. The questions for exam should be configurable for each test along with pass mark.	Verified & Fixed
	R5.031	The online exam, there should be able to submit for scrutiny to NAAC.	Verified & Fixed
	R5.032	There should be a provision to mark as trained or untrained based on the online exam marks by the NAAC user.	Verified & Fixed

MEETINGS MANAGEMENT MODULE 3.6			
	R6.001	System should allow the Meeting Coordinator to plan the Meeting.	Verified & Fixed
	R6.002	Should allow the decision taken in the meeting to be circulated among all committee members.	Verified & Fixed

	R6.003	The Meeting Coordinator schedules the meeting and intimates the same to committee members.	Verified & Fixed
	R6.004	The Coordinators can prepare the Agenda to be discussed along with the Documents and sends it to the Committee members before the meeting.	Verified & Fixed
	R6.008	The major decisions are taken by the committee and should be circulated to all the members and their respective stakeholders.	Verified & Fixed
	R6.009	There should be provision to add outside users for the meeting.	Verified & Fixed
	R6.010	There should be provision to add committee details and to map the committee details to committee members.	Verified & Fixed
	R6.011	There should be provision to Add Pre meeting activities like agenda, participant and to get them approved by concerned officials.	Verified & Fixed
	R6.012	Privilege must be given to admin to approve the meeting or edit or delete any time they need.	Verified & Fixed
	R6.013	There should be provision to sent invitation to all or individually with related documents via mail.	Verified & Fixed
	R6.014	There should be provision for the participants to mark their interest via mail.	Verified & Fixed
	R6.015	There should be provision to update the meeting status and to provide appropriate reason for cancellation or postponement.	Verified & Fixed
	R6.016	There should be provision to update Post meeting activities like the action taken etc and to send them for approval.	Verified & Fixed

	R6.017	There should be provision for the NAAC designated officers to approve the post meeting activities.	Verified & Fixed
	R6.018	There should be Provision to get customised reports based on user input parameters.	Verified & Fixed
	R6018	There will be provision for participant to mark their participation online.	Verified & Fixed
	R6.0151	The meeting module should work seamlessly with the EC , SC and other statutory committee meetings. The possible exceptional operations in case of statutory committees should be integrated as per the requirement of EC-governance activities.	Verified & Fixed

LOGISTICS MODULE 3.7			
	R7.001	NAAC is introducing a single logistics partner to handle PT visit logistics. Provision for NAAC official to Add/ Update/Remove Agency details.	Verified & Fixed
	R7.002	Provision for NAAC officials to Plan and Schedule Peer Team Visit and send e-mail/SMS about the Travel Plan of the PT visits (i.e. Schedule, Details of HEIs to be visited and Details of Peer Team Members) to the selected Agency.	Verified & Fixed
	R7.003	Provision for Agency to send the e-ticket, hotel details and contact person details of agency to the concerned Peer Team Members including NAAC co-coordinator	Verified & Fixed
	R7.004	Provision to View, download and Print the Logistics details by the PT member through our Module	Verified & Fixed

	R7.006	Option for PT member to add feedback about the Logistics arrangement.	Verified & Fixed
	R7.007	Provision to Add/Update entitlement details of the PT Members.	Verified & Fixed
	R7008	There will be provision for the logistic partner to sent sms and email to the peer team members.	Verified & Fixed

POST ACCREDITATION 3.8			
	R8.001	Should allow accredited HEIs to fill and submit the AQAR online as per the NAAC format which includes Implementation of the strategic plan over the academic calendar and compliance of the recommendations of the Peer Team.	Verified & Fixed
	R8.002	Ability to allow HEIs to upload the documents online as required by NAAC.	Verified & Fixed
	R8.003	Provision for HEI to View/ download document /Print document from their Module before final submission.	Verified & Fixed
	R8.004	Auto generates acknowledgement e-mail and send to HEIs and Concerned Officers of NAAC upon submission of AQAR.	Verified & Fixed
	R8.005	Provision to allow concerned NAAC officer to fill and send the feedback form about AQAR to HEIs online.	Verified & Fixed
	R8.006	System alerts for auto sending alert/e-mail to the HEIs regarding timely submission of AQAR with a copy to NAAC concerned officials.	Verified & Fixed

	R8.007	Provision in the system to track the status of AQAR submission for accredited HEIs.	Verified & Fixed
	R8.0101	Facility to post alerts to remind the HEI for submission of AQAR on time.	Verified & Fixed

DOCUMENT MANAGEMENT SYSTEM 3.9			
R9.001	The proposed DMS should be a pre-integrated system involving document management system, storage and archival system.		Verified & Fixed
R9.002	The proposed system should allow document/image capturing and indexing from multiple zones and should be able to send to a centralized repository.		Verified & Fixed
R9.003	The system to provide the features to link any type/ format of documents while providing capabilities to automatically update the version of the linked document whenever the original is updated.		Verified & Fixed
R9.004	The proposed DMS should be a web based application.		Verified & Fixed
R9.005	The web interface to provide multiple views of the content and allow users to access/modify folders based on their access rights and permissions. The proposed system should be able to restrict the users to access documents/images based on their pre-defined rights & privileges.		Verified & Fixed
R9.006	The proposed system should allow the users to add attributes/metadata to the images.		Verified & Fixed

R9.007	DMS should provide an audit trail with user, date and time details and should record when and which documents were accessed by which user id.	Verified & Fixed
R9.008	DMS should be based on open standards	Verified & Fixed
R9.009	should have ability to collate multiple scanned documents	Verified & Fixed
R9.011	DMS should have provision for web browser based search and retrieval.	Verified & Fixed
R9.012	System to allow the user to search and find documents based on any of the associated metadata, such as document type, author, title, location, active/inactive status, date created etc.	Verified & Fixed
R9.013	DMS should have ability to sort the search results on various criteria.	Verified & Fixed
R9.014	System should provide capability to search within so that users can narrow down the search.	Verified & Fixed
R9.015	There shall be interface for managing the entire lifecycle of content management, starting from its creation to its disposition.	Verified & Fixed

APPEAL MANAGEMENT MODULE 3.10			Verified & Fixed
	R10.001	Should allow HEIs to fill and submit the appeal intent online along with supporting documents as per the NAAC format.	Verified & Fixed
	R10.0011	The appeal submission should be restricted within 30 days of declaration of grade.	Verified & Fixed

	R10.003	Ability to allow HEIs to view, edit, print the details before final submission.	Verified & Fixed
	R10.004	Should allow Visited Peer Team Members to make remarks/comments/any changes for NAAC to analyse the appeal made by HEI.	Verified & Fixed
	R10.005	Should allow NAAC to accept, reject or hold the Appeal submitted by HEIs by the concerned co-ordinator	Verified & Fixed
	R10.006	Should allow NAAC to send communications/alerts to HEIs regarding the decision of EC i.e. No change/Change in CGPA/Grade Point/ revisit.	Verified & Fixed
	R10.008	After publishing the accreditation of HEI after PT visit, if HEI is unsatisfied with the grade, they can go for appeal. The first step is to raise an appeal intent which has to be raised within 30 days of publishing of result	Verified & Fixed
	R10.010	If they are unsatisfied they will raise an appeal remitting prescribed fee online.	Verified & Fixed
	R10.011	The appeal will be processed by NAAC and will be passed on to the appeal committee.	Verified & Fixed
	R10.012	The appeal committee can be a committee consists of internal members as well as outside members.	Verified & Fixed
	R10.013	Appeal committee evaluates and reviews the appeal and takes comments of PT chairperson if needed.	Verified & Fixed

	R10.014	Appeal committee suggests recommendations on appeal (No change, change in grade or revisit)	Verified & Fixed
	R10.015	Decision is taken by EC and is intimated to HEI.	Verified & Fixed
	R10.017	There should be provision to update stakeholder meeting decisions against an appeal.	Verified & Fixed
	R10.018	There will be provision for the PT members to give comment for the appeal the HEI have forwarded.	Verified & Fixed
	R10.019	The Admin will be given privilege for viewing and making necessary shore sheet for verification.	Verified & Fixed
	R10.020	There will be provision for the appeal committee to ask for clarification and intern the HEI can respond for the clarification within 7 days.	Verified & Fixed
	R10.022	Should allow HEIs to make the payments online only RTGS/NEFT/Internet Banking/Credit Card/Debit Card	Verified & Fixed
	R10.023	: There should be provision for the finance officer to verify the appeal payment.	Verified & Fixed
	R10.24	There will be provision to mark availability of the HEI for the stakeholder meeting.	
FINANCE MODULE 3.11			

	R11.001	Ability to provide a comprehensive picture for entire financial operations of assessment and accreditation.	Verified & Fixed
	R11.003	Ability to record and manages accounting data via the Accounts Receivable component and Accounts Payable component.	Verified & Fixed
	R11.006	Should calculate and displays the balances and consolidations of the receipts and payments in A&A process.	Verified & Fixed
	R11.009	Should support closing process of financials of application with process automation, and reconciliation.	Verified & Fixed
	R11.010	Ability to create the financial statements regarding A&A on year-end closing.	Verified & Fixed
	R11.011	There should be provision for finance officer to view the payment details and to approve the details.	Verified & Fixed
	R11.012	There will be provision for the system to perform Tally and Online Payment Bank Integration.	Verified & Fixed
	R11.013	There will be provision for the finance officer to approve the amount in a batch and to sent the details automatically to the server	Verified & Fixed
	R11.015	There will be provision to take print out of the receipt of payment.	Verified & Fixed
	R11.0151	There should be provision to capture the details of	Verified & Fixed

		payments to be made as an entry.	
--	--	----------------------------------	--

INCIDENT MANAGEMENT MODULE 3.12		
R12.001	Auto generation/Manual system for creating Ticket for different stake holders like HEIs, Assessors or any other third parties.	Verified & Fixed
R12.002	Auto generation of Ticket ID after completing the submission of complaint for future tracking the issue.	Verified & Fixed
R12.003	Provision for classifying different categories for complaints / queries arising from different stakeholders.	Verified & Fixed
R12.004	Option for Updating the Ticket and assigning the same to the higher official for further action.	Verified & Fixed
R12.008	Provision for closing the ticket with Remarks after solving the issuers.	Verified & Fixed
R12.010	After closing the ticket intimation on action taken has to be communicated to user.	Verified & Fixed
R12.011	There will be provision to add Category and create agents and assign those categories to the agents.	Verified & Fixed
R12.012	There will be screen to assign managers.	Verified & Fixed
R12.013	There will screen to add FAQ and the same will be shown to the HEI also.	Verified & Fixed
R12.014	There will be screen to view the status of the ticket and the action each assigned persons have taken to it.	Verified & Fixed

R12.015	The issue created will be automatically assigned based on issue category. In case of IIQA filling and SSR stage, the issue automatically assign to the corresponding co-ordinator.	Verified & Fixed
R12.016	If the issue reported does not belong to the assigned person, then the assignees can resign or escalate the issue	Verified & Fixed

ANALYTICS, DASHBOARD & MIS 3.13			
	R13.001	Should be able to create various Management dashboard user wise role wise functions wise.	Verified & Fixed
	R13.002	There should be provision for admin to set the default dashboard and the available sub views for each role function/portals (assessor portal & HEI portal).	Verified & Fixed
	R13.004	Each module there should be an extensive search based reporting system including all the searchable parameters so that the user can have option to generate configurable kind of reports. The search result should have option to generate in pdf as well as excel. The columns to be displayed in report in case of these reports should be configurable.	Verified & Fixed
	R13.005	The periodic reports should be available for time frames like weekly / daily / monthly / yearly.	Verified & Fixed
	R13.006	All table based reports should be available in pdf as well as excel.	Verified & Fixed
	R13.007	The reporting feature should support drill down (across reports/within reports), filter & sorting.	Verified & Fixed
	R13.008	Should support the feature of delivering the reports to the online users through email, portal	Verified & Fixed

	R13.009	Should support visualization of statistical data of accreditations state wise on maps.	Verified & Fixed
	R13.010	Should have provision to generate Various MIS and consolidated reports in each module as need by the statutory bodies.	Verified & Fixed

-ASSESSMENT & ACCREDITATION MODULE 3.14			
	R14.002	There should be provision to accommodate Quantitative and Qualitative indicators for each of the key aspects in SSR.	Verified & Fixed
	R14.003	There should be provision to generate key aspect wise score and suggestions by analyzing the objective indicators.	Verified & Fixed
	R14.004	There should be possible to generate random visit required on an institution by the system	Verified & Fixed
	R14.005	The objective indicators for Evaluation as per (EIAT) should be configurable.	Verified & Fixed
	R14.006	There should be provision to remove key aspect	Verified & Fixed
	R14.007	The evaluation criteria and scoring scheme of (EIAT) should be configurable for each type institutions	Verified & Fixed
	R14.008	There should be a provision to decide on the need of peer team visit even though in eAssessment it is not envisaged. There should be provision for grading with peer team visit on a decision basis even if the eAssessment is live.	Verified & Fixed

	R14.010	There should be a provision to combine the analysis score with peer team score and then generate the overall score and grade of the institution	Verified & Fixed
--	---------	---	------------------

WEBSITE MANAGEMENT MODULE			
		I. About NAAC	Verified & Fixed
		a. About the Organization covering the mission and vision	Verified & Fixed
		b. Value framework of the organization	Verified & Fixed
		c. Governance structure of the organization	Verified & Fixed
		d. Committees in NAAC	Verified & Fixed
		e. Former Directors	Verified & Fixed
		f. Regional Co-ordinators	Verified & Fixed
		g. Campus details	Verified & Fixed
		II. Assessment and Accreditation Process	Verified & Fixed

		a. Why Accreditation	Verified & Fixed
		b. Benefits of Accreditation	Verified & Fixed
		c. Eligibility Criteria for Institutions	Verified & Fixed
		d. Documents to be submitted	Verified & Fixed
		e. Process of accreditation	Verified & Fixed
		f. Criteria and Key aspects of assessment	Verified & Fixed
		g. Weightages	Verified & Fixed
		h. Grading and CGPA Computation	Verified & Fixed
		i. Assessment outcome	Verified & Fixed
		j. Re-assessment	Verified & Fixed
		k. Cycles of Accreditation	Verified & Fixed
		l. Grievance redressal	Verified & Fixed
		m. Fee structure for assessment	Verified & Fixed
		n. Post accreditation process and activities	Verified & Fixed

		III. Activities	Verified & Fixed
		a. Activities in NAAC	Verified & Fixed
		b. Peer team visit activities	Verified & Fixed
		c. Assessors List	Verified & Fixed
		d. NAAC Sponsored seminar details	Verified & Fixed
		e. IQAC Strategies, functions, benefits and composition	Verified & Fixed
		f. AQAR details	Verified & Fixed
		IV. Publications	Verified & Fixed
		a. Promotional Materials	Verified & Fixed
		b. Manuals	Verified & Fixed
		c. Guidelines	Verified & Fixed
		d. Analysis of accreditation reports	Verified & Fixed
		e. Books	Verified & Fixed
		f. Best Practices	Verified & Fixed

		g. Annual Posters	Verified & Fixed
		h. NAAC Newsletter	Verified & Fixed
		V. Collaborations	Verified & Fixed
		VI. Photo gallery	Verified & Fixed
		VII. Right to Information	Verified & Fixed
		VIII. Services	Verified & Fixed
		a. Link to HEI portal	Verified & Fixed
		b. Link to Assessors Portal	Verified & Fixed
		c. Link to Logistics Partner Portal	Verified & Fixed
		IX. Contact details	Verified & Fixed
		X. Feedback	Verified & Fixed
		a. Feedback registering	Verified & Fixed
		b. Status of feedbacks	Verified & Fixed
		XI. Other menu links	Verified & Fixed

		a. Copyright	Verified & Fixed
		b. Disclaimer	Verified & Fixed
		c. Hyperlink policy	Verified & Fixed
		d. Privacy Policy	Verified & Fixed
		e. Terms and Conditions	Verified & Fixed
		XII. Screen reader access	Verified & Fixed
		XIII. Search – search facility (keyword based)	Verified & Fixed
		XIV. Reports	Verified & Fixed
		a. Public reports	Verified & Fixed
		i. Accreditation status	Verified & Fixed
		ii. Peer team reports	Verified & Fixed
			Verified & Fixed
General Requirement			Verified & Fixed
	R15.001	website should replace existing website http://naac.gov.in	Verified & Fixed

	R15.002	The website should be integrated with application solution	Verified & Fixed
	R15.003	The website shall comply with all security requirements and should have visual appeal, easy navigation, link to Government of India websites as applicable, archiving etc	Verified & Fixed
	R15.004	website shall be user friendly and rich in contents	Verified & Fixed
	R15.005	The feedback form shall be integrated with NAAC website	Verified & Fixed
	R15.006	The feedback shall include name, phone number, email and Aadhaar number with validation along with the feedback	Verified & Fixed
	R15.007	The content should be manageable from NAAC (the website shall be developed using content management framework)	Verified & Fixed
	R15.008	The website shall have link to HEI portal and Assessors portal	Verified & Fixed
	R15.009	The website shall be bilingual (English and Hindi)	Verified & Fixed
	R15.010	The website shall be responsive in nature	Verified & Fixed
	R15.011	There shall be a content writer, reviewer and publisher workflow for publishing the content to NAAC website	Verified & Fixed

Testing & Related Components			
		Security Testing Reports Review	Verified & Fixed
		Performance and Load Test Review	Verified & Fixed

		Functional Test Review	Verified & Fixed
		Unit testing – Validates that individual units of product are working as designed	Verified & Fixed
		Integration testing – Units of product are combined and tested as a group	Verified & Fixed
		Function testing - Involves validating product functionality against defined requirements	Verified & Fixed
		System testing – Testing of both hardware and software on a completely integrated system	Verified & Fixed
		User acceptance testing – Black-box testing of product functionality to obtain release acceptance	Verified & Fixed
		Design against defined specifications	Verified & Fixed
		Verification of requirement against defined specifications	Verified & Fixed
		Verification of product code against defined standards	Verified & Fixed
		Verification of terms, conditions, payment, etc., against contracts	Verified & Fixed
		Code reviews – Systematic examination of the Solution's source code	Verified & Fixed
		Inspections – Peer review of work products and documentation	Verified & Fixed
		Reviewing and providing recommendations to improve both the management and technical aspects of the project including evaluating project progresses, resources, budgets, schedules, and reporting	Verified & Fixed

		Reviewing and analyzing project management and software development activities, performance, and operational policies, processes, documentation, and products for accuracy and completeness	Verified & Fixed
		Reviewing product architecture for feasibility, consistency, and adherence to related industry standards	Verified & Fixed
		Reviewing traceability of product functions to original requirements	Verified & Fixed
		Documenting IV&V activities and assessment results in the form of task reports, activity summary reports, anomaly reports, test documents,	Verified & Fixed

3 Conclusion

The IVV - provide detailed information's and snapshot of the Portal/Application and related components.

As per our conducted IVV between 25th-10-2018 and 15-12-2020, IV&V reviews, analyzes, evaluates, inspects, and tests the project's product and processes. This analysis includes the operational environment, hardware, software, interfacing applications, documentation, operators, and users to ensure that the product is well-engineered, and is being developed in accordance with customer requirements.

IV&V provides management with an independent perspective on project activities and promotes early detection of project/product variances. This allows the project to implement corrective actions to bring the project back in-line with agreed-upon expectations. Objectives of performing IV&V include:

- Facilitate early detection and correction of cost and schedule variances
- Enhance management insight into process and product risk
- Support project life cycle processes to ensure compliance with regulatory, performance, schedule, and budget requirements
- Validate the project's product and processes to ensure compliance with defined requirements

IV&V findings and reports provide supporting evidence that the product does satisfy client requirements. IV&V should be performed throughout the project's life and can be executed incrementally at specific points in the life cycle or be performed in a manner that is integrated into all project efforts. Although costs increase, IV&V is most

effective when integrated into the entire project life cycle, conducted in parallel with the project and product development activities.

For this Application to remain Standard, however, it must be evaluated and improved continuously. Establishing the organizational structure that will support these ongoing improvements is essential in order to maintain control of portal and related applications. The standard is never a constant. Hence, the authorities should regularly review, monitor and audit, on an ongoing basis to make improvements and take corrective actions.