



Institute of Actuaries of India

Unit no. F-206, 2nd Floor, 'F' Wing, Tower 2,
Seawoods Grand Central, Plot no R-1, Sector 40, Seawoods,
Near Seawoods Railway Station, Navi Mumbai - 400706
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Scope of Work for IAI Website and Mobile Application Development

The Institute of Actuaries of India is a statutory body under the act of parliament i.e., the Actuaries Act, 2006 to regulate and develop the profession of Actuaries. It has its head office at Unit no. F-206, 2nd Floor, 'F' Wing, Tower 2, Seawoods Grand Central, Plot no R-1, Sector 40, Seawoods, Near Seawoods Railway Station, Navi Mumbai – 400706.

The expected Scope/deliverables pertaining to www.actuariesindia.org is placed below:

Scope / Deliverables:

1. Development of new website using latest ASP.Net technology platform, framework and architecture.
2. Creation of database using MS SQL, Data archival, MIS generation Dashboard & Graphical representation- Pie Chart, Histogram, Bar Chart etc. at various levels as per the requirement of the modules.
3. The website should be able to address the future scalability requirements.
4. To maintain a centralized database consisting of all information and integrate all the functional areas so that all relevant information is always available with latest & updated information online. This will also ensure accuracy, completeness and consistency of the information.
5. Provide interfaces required to integrate the solution with other systems and solutions.
6. Integration of payment gateway using secured and latest approach.
7. The new website should be facilitated with an advanced and comprehensive Content Management System (CMS) as is available in the existing website. Some of the existing features are creating users, creating roles, uploading contents, editing contents, content version control etc.
8. Website response time should not be more than 3000 milliseconds. (Documentary evidence in this regard to be submitted)
9. All the contents, facilities and services as is available in the existing website are to be taken in the new website with reorganization of options and contents as per educational websites. In case required, new options may have to be created.
10. Additional features like Members Login, Members Alumni, Innovations, Initiatives, Flash news, Committee's Event, Notification, e-Services, announcements scrolling, chapter details creation/modification/deletion/deactivation and any other options as may be provided by IAI during requirement gathering session will have to be designed and developed.
11. Study / Understand the requirements of the Institute and submit SRS and design document for approval of the Institute.
12. Design and submit minimum five attractive templates with professional look and feel for the home page of the Institute's website out of which one template may be finally selected by the IAI management for implementation. All five templates are to be initially got



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- approved by the IAI Management and in case any of these templates is not found suitable, the bidder has to replace it with another new template. Color print outs and soft copy of five sample templates should be submitted to IAI.
13. Studying the problems / issues in the existing website and providing solution for the same in the new website.
 14. Design all other pages of the website as per the approved / accepted home page template and getting these approved by the Institute before implementation.
 15. The new template designs should be compatible to all web browsers.
 16. The new template designs should be responsive (compatible to all mobile devices, tabs etc), bug free and should have Optimistic navigation, animated Images on home page with banners and sliders.
 17. All the pages of the new website should be mobile friendly and SEO friendly.
 18. Search Engine Optimization of websites must ensure high rank on web searches and all relevant techniques for SEO (Search Engine Optimization) must be adopted.
 19. During development, warranty and after warranty maintenance phase, bidder has to provide graphics design support required for creating images on website home page / other pages.
 20. Uniformity in look and feel of the pages should be maintained across the website.
 21. New website should support and be compatible with HTML 5/CSS 3.
 22. All existing features of the current website should be migrated during new website development process.
 23. Bidder will be responsible for migration of the complete data from the existing website to the new website
 24. All the database driven query modules (for e.g.; member's login, member's administration module, Statistics, Reports in the child portals etc) as is available in the existing www.actuariesindia.org site are to be implemented in the new website with uniform look and feel of the pages. In case these modules are to be customized / redeveloped for the purpose, the same is to be done by the bidder.
 25. Handover all the source codes, CSS, source files etc., and any other files used for the development to the Institute.
 26. Handover technical and user manuals / documentations pertaining to the development to the Institute.
 27. Provide warranty maintenance support for a period of 12 months for the new website www.actuariesindia.org from the date of acceptance of all the deliverables in writing by the IAI to cater to all kind of bugs, issues, minor and cosmetic changes etc.
 28. Comprehensive and adequate Technical, Administration and operational training should be provided to the IAI users.
 29. All costs other than hardware cost should be included by the bidder in the commercial bid.
 30. The Institute may like to avail the maintenance support for the new website and mobile app after the 12 months warranty period and the bidder shall have to extend its support at the cost quoted in the commercial bid for at least next 3 years after the warranty period.
 31. Defining and provisioning the hardware specification for the new web platform and Creating detailed project deliverables document.



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32. Deploying the new websites and going live with them.
33. Building the required bridges, connectors, reports, etc.
34. Managing security for the system.
35. Managing Operating system and software updates.
36. **Archival of old data:** The architecture being implemented by the bidder should provide for the archival of older content and for backing up the same offline.
37. Web visitors count feature is to be implemented in the home page of the new website.
38. New website should be integrated with the social networking sites like FaceBook, Twitter, LinkedIn, YouTube etc.
39. All third party links as is available in the existing website should be made available in the new website. In short, transition to the new platform should in no way reduce the search engine rankings or page rank of IAI's website. All new links should be search engine friendly.
40. New website should have Multilingual features (Hindi, English, Bengali, Tamil, Telugu, Gujarati, Kannada, Malayalam, Oriya, Marathi) including content change to other languages (data change).
41. Child portals are maintained for member's administration, Global Conference Annual events in existing website. All these child portals should be migrated to the new website. New template should be maintained uniformly for all the child portals. Further migration of all the data/contents from the child portals of the existing website to the child portal of the new website will be the responsibility of the bidder.
42. Search facility is to be provided in the new website. The search feature should be able to search both HTML pages and documents, such as PDF files and Microsoft Word documents.
43. Indian map with the provision for marking of all the offices, as and when they come up, with address and contact details in the form of popup on mouse over is to be developed and implemented in the new website.
44. New website is to be integrated with Google Analytics.
45. Data Analysis (Dashboards - page wise, traffic wise and others) is to be implemented in the new website.
46. IAI's security integrator will audit the websites and provide the penetration testing and vulnerability assessment report to the bidder. The bidder shall fix/rectify all the issues reported by the auditor within given timelines.
47. Quality Control requirements
 - a. W3C compliance 508 priority 1.
 - b. OS/ SQL/ System config., optimization with error capturing, client side validation of all fields
 - c. Load testing by using win runner / win loader by simulating 10,000 users
 - d. Regular Auditing will be done by the bidder on monthly basis (for one year) on risk mitigation on DR, code addition, malware and related threats. An audit report shall be made available through automated mechanism on the number of updations made by any user / administrator between two dates.

The audit report will differentiate between deletion, addition and modification.

- e. HTTPS communication channel to prevent data leakage and maintain information integrity and privacy.
- f. The application should support predefined security configuration to protect website resources and data against any attacks (i.e. SQL Injections, XSRF attacks, DOS /DDOS etc.). The bidder will have ready infrastructure / mechanism to negate /counter any possible cyber attacks.
- g. Existing and new features are required to be implemented in new website in workable and complete form. (For Ex. Optimistic Navigation, Site Map, Collaborative Calendar (IAI Community/ IAI events), Auto Archives of events, contents, Flash images to be changed on monthly, Dynamic Organisation Structure etc.
- h. The application should support predefined security configuration to protect website resources and data against any attacks (i.e. SQL Injections, XSRF attacks etc.)
- i. The website must be compliant with WCAG (Web Content Accessibility Guidelines) 2.0, Open Web Application Security Project (OWASP) framework, CERT-IN, RBI, Ministry of Finance, IT Act 2008 including its amendments time to time.
- j. The complete solution should be capable of being deployed on a public/private cloud and must support virtualization.
- k. The modules as given below will be developed and implemented in a phased manner.
- l. Each module will be tested with proper test cases and user acceptance will be taken from stakeholders, before go live.
- m. During the course of development if any new features/Modules required either due to statutory requirement or business requirement, same should be provided for.

48. SCOPE OF WORK – (Module Wise)

* W – Required in Website

M – Required in Mobile

	ACET Module (Entrance Exam) (W/M)	<ul style="list-style-type: none"> • Criteria/ eligibility check • Online submission of registration form • Upload of documents online • Master (exam centre's etc.) • Uploading of photo(s) with logs • Online Payment of fees • Email/ SMS communication • Login module to download exam material, hall ticket, view profile data, edit photo etc. • Verification of photo(s) uploaded by user(s) • Generating photos in soft copy format (image file) • Generation of Hall ticket • Downloading of Hall ticket • Marks Uploading with history • Maker and checker • Exam Result Declaration • Maintain CPD credits for ACET • QP creation and storage by examiners with logs • Vendor details (name, address, bank account details etc) • Logs • Migration of old data • Report Generation
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	<p>Admission Module (W)</p>	<ul style="list-style-type: none"> • Online submission of admission registration form for below routes:- <ol style="list-style-type: none"> 1. ACET, 2. Non-ACET (offline & online) 3. MRA/Affiliate 4. Honorary Fellows • Admission category should be flexible (addition/ deletion) • Change of category module • OTP feature • Criteria/ eligibility check • Masters to populate various data in the form • Uploading of photo, certificates, documents etc. • Online payment of fees • Email/ SMS communication • Module to re-upload photo, certificates etc. • Verification of photo(s), certificates uploaded by user(s) • Verification of certificates -hard copy and soft copy • Generation of admission confirmation letter and default login credentials/ rejection letter • Maker and checker • Destruction module • Institute ID card issue • Downloading of admission confirmation letter. • Vendor details (name, address, bank account details etc) • Logs • Migration of old data • Report Generation
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	Subscription Module (Post admission) – For regular members (W/M)	<ul style="list-style-type: none"> • Subscription renewal based on financial year basis • Criteria/ eligibility check • Masters to populate various data in the form • Subscription Fees (country wise) • Calculation of subscription fees (arrears, penalty, reduce rate, life membership etc) • For other category check if subscription paid for other Institute. • Payment Mode – Online and Offline • Uploading of documents • Logs to track subscription history • Module to make offline payment transactions • Suspension/ Discontinuation/ Expired membership details • Destruction module • Maker and checker • Logs • Email/ SMS communication • Migration of old data • Report Generation
	Study Material Module (Post admission) – For regular members (W/M)	<ul style="list-style-type: none"> • Criteria/ eligibility check • Masters to populate various data in the form • Splitting/ Merging of subjects (flexible) • Study material – Compulsory & optional • Study Material format - soft copy and hard copy • Online payment of fees • Module to track requests for soft and hard copy related transactions • Maintain and track hard copy study material request • Maintain and track hard copy courier status (Domestic and International) • Inventory management • Hard copy printing – vendor bill checking • Delivery type - post and courier • Delivery status • Email/ SMS communication of dispatch transactions to members • Download option for soft copy study material (non-sharable/transferable) • CT9 subject study material exe format with expiry date (should work on all OS platforms) • Study Material Royalty Module • Maker and checker • Logs • Migration of old data • Report Generation

	<p>Examination Module (Post admission) – For regular members (W/M)</p>	<ul style="list-style-type: none"> • Criteria/ eligibility check. • Master (exam diet, exam fees, exam centre's etc.) • Members category master for becoming associate/ affiliate/ fellow (flexible) • Online submission of exam registration form • Uploading of documents • Online Payment of fees • Email/ SMS communication • Under login module to download exam hall ticket, change exam centre etc. • Generation of Hall ticket • Downloading of Hall ticket • Generation of Codes • Grade calculation on uploading of exam marks (excel document) with examiners details • Exam Result Declaration with history and version • Maintain CPD credits for exam activities • Destruction module • Maker and checker • Logs • Vendor details (name, address, bank account details etc) • Copying case history • Examination Rules Master • Honorarium to Examiners/Centre's • Marksheet upload by examiners • Stock maintenance of Exam Material • Examiner Approval System • Examiner Seminar attendance • Mapping of transition arrangements • Meeting details • Migration of old data • Report Generation
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	Exemption Module (W)	<ul style="list-style-type: none"> • Criteria/ eligibility check • Masters to populate various data in the form • Online submission of exemption form • Uploading of documents, certificates etc. • Online Payment of fees • Email/ SMS communication • Approval Workflow • Generation of Exemption Letter • Downloading of Exemption Letter • Exam credit to members • Destruction module • Maker and checker • Logs • Migration of old data • Report Generation
	ID Card Module (W/M)	<ul style="list-style-type: none"> • Criteria/ eligibility check • Masters to populate various data in the form • Category - Revalidate/ Loss • Online submission of form • Uploading of documents etc. • Online Payment of fees • Email/ SMS communication • Approval Workflow • Maker and checker • Logs • Vendor details storage • Migration of old data • Report Generation
	Additional Exam Modules	<ul style="list-style-type: none"> • Associateship /Fellowship Module • CA2/CA3/CT9/ST9 subjects Module • Counseling/ Coaching module • Discussion Forum Module • Auto generation of CAT/DAT/Promotion certificates
	Data Maintenance	<ul style="list-style-type: none"> • Change of Name/ Change of Name format (Name history) • Type of work (employee/ proprietor/ partnership/ consultant) • Members profile data updation. • Data updating reminders. • Logs/ history • Migration of old data.(All data of examination module is in excel) • Report Generation

	<p>Seminar Module – For regular members and outsiders. (W/M)</p>	<ul style="list-style-type: none"> • Criteria/ eligibility check • Masters to populate various data in the form • Online submission of seminar registration form (invoice with signature) • Individual and Group registrations allowed • Members/ Non-members registrations. • Complimentary registrations • Replacement provision • Dummy credentials to check the system before generating any letters, making module live etc. • Generate attendance sheet for seminars • Generate CPD/ Attendance letters for seminars • Maintain CPD credits for members/ complimentary members seminar-wise • Invoice and receipt module (offline) • Payment Mode – Online and Offline • Module to maintain offline payment transactions • Global Conference of Actuaries (GCA website and module) • Automated Email system with design/template for announcements and reminders. • Email/ SMS communication • Migration of old data • Maker and checker • Logs • Discussion Forum • Report Generation
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	Online Video Module (Seminars) (W/M)	<ul style="list-style-type: none"> • Criteria/ eligibility check • Masters to populate various data in the form • Online submission of video registration form • Complimentary registrations • Calculation of fees • Online Payment of fees • Email/ SMS communication • Under login module option to play the video • Uploading & maintaining of videos • Inclusion of questionnaire module with questions and answers(objective based) • Maintain CPD credits for members • Maker and checker • Logs • Migration of old data • Report Generation
	Accounts Module (W)	<ul style="list-style-type: none"> • Reconciliation Process • Reports from data aggregator are taken manually. Need to automate the process. • Updating of Transaction charges. • Service Tax/ GST Bifurcation • Automate all manual process for uploading and downloading. • Bills/ Vouchers / Conveyance Automation • Check Printing Automation • Budgetary planning and variance to be made available in the portal. • Importing of data into Tally • Migration of old data • Maintain CPD credits • Maker and checker • Logs • Reports

	HR and Accounts Module (W)	<ul style="list-style-type: none"> • Integrate Biometric attendance with the HRMS module in the new web application - Employee attendance shall populate in the portal (intranet). • Personalized profile for all employees in HRMS • Internal office announcements, alerts, attachments’. • Automated employees greetings - birthday, anniversary, work completion etc. • Automate leave application process. • Online Appraisal form Submission • Automated generation salary slips and issue Form -16 to employees. • It should enable HR team to calculate salary. • Payroll should happen through the portal • NEFT bank payment format. • Instruments to be deposited in bank. • Deposit & investment module. • Asset – tracking module • All transactions from old software to be migrated to tally. • Reports
	Compliance Module (W/M)	<ul style="list-style-type: none"> • COP Issuance / Renewal module • Public comments module with logs. • Migration of old data • Logs • Reports
	Library Module (W/M)	<ul style="list-style-type: none"> • Criteria/ eligibility check • Masters to populate various data in the form. • Online submission of form. • Inventory of list of books • Request for book(s) to read (copyright only 1 at a time – hard copy/soft copy) • Book made available in soft copy or hard copy. • Soft copy format should not be in downloadable format (non sharable/ non trasferable). • Tracking of books • Email/ SMS communication • Under login module option to play the video. • Migration of old data. • Logs • Report Generation

	Stationery & House Keeping Module (W)	<ul style="list-style-type: none"> • Criteria/ eligibility check • Masters to populate various data in the form. • Allotting & Tracking of inventory department-wise. • Report Generation
	Employment Portal (W/M)	<ul style="list-style-type: none"> • Criteria/ eligibility check • Masters to populate various data in the form. • Members will fill/update their graduation/ post graduation details • Members will fill/update their work experience. • Option to upload CV • Reminder to fill their details. • Employer registration and login portal • Workflow to approve/reject employer registration. • Advance Search engine for employer to search various members as per their criteria selection. • Provision for employer to update their details; provide feedback/suggestions. • Online Payment for employer registration. • Track employer activity • Email/ SMS communication • Logs • Migration of old data • Report Generation
	Inward -outward Module (W)	<ul style="list-style-type: none"> • Keep a track of every single document/ letters entering and going out of the office. It is similar to the Physical Register which most of the organizations use for registering the flow of documents inwards and outwards. • Track the document wherever it moves within or outside office. • Defining the type and category of document so that it becomes easy to filter at the time of searching. • Attaching the photo/scan copy of all the documents which are important should be made possible • The Movement of Document needs to be tracked not only upto the Reception of the Company but also to every single user's desk within the organization. Provision for user to accept or reject the acknowledgement of document in system, which is being handed over by other User in the physical form. This way, it is possible to track which document is lying on which table in real-time. • Report Generation

	Meeting/ Agenda Module (W)	<ul style="list-style-type: none"> • Criteria/ eligibility check • Masters to populate various data in the form. • Categorize, define and submit the meeting/ agenda details in the system. • Track all the meetings/ agendas as required. • Maintain history of all meetings/ agenda in the system. • Logs • Migration of old data. • Report Generation
	Document Management System (DMS) (W)	<ul style="list-style-type: none"> • Store and keep track of all documents in electronic format. • Security and Access Control • User friendly interface. • Indexing and classification • Robust Search Feature for easier retrieval • Search keyword inside the file also. • Versioning feature • Audit trails • Universal format support • Simple updating process • Report Generation
	Vendor Management Module (W)	<ul style="list-style-type: none"> • Centralized Vendor Information Database • Organize vendors for easy review, access and classification • Identify & manage vendor risk • Streamline vendor submittals and manage duplicates with ease • Track pricing • Centralize reporting for better decision making and delivering.

	<p>Research Module (W/M)</p>	<p>I. RESEARCH</p> <ul style="list-style-type: none"> • Announcements • Research park- Meeting point for proposers and undertakers • We are on research job- Research work in progress, topics and members • Publications-Published papers • Live chat/ You talk, we listen • FAQ's <p>II. KNOWLEDGE SHARING</p> <ul style="list-style-type: none"> • I share- To share any knowledge/ information • Ask a question – Posting questions by members • Actuary connect- Interact with an Actuary • Playing ground- Discussion place <p>III. TRAINING</p> <ul style="list-style-type: none"> • Announcements • Book your berth - Registration menu • Teacher's desk- Answering questions by the teacher • My classroom- Discussion by students on topics • FAQ's <p>For training Module:-</p> <ul style="list-style-type: none"> • Criteria/ eligibility check • Masters to populate various data in the form. • Online submission of training registration form. • Subject - wise registration option • Online Payment of fees • Email/ SMS communication • Under login module option to play the video. • Logs • Migration of old data. • Report Generation

	CPD Module (W/M)	<ul style="list-style-type: none"> • Criteria/ eligibility check • Masters to populate various data in the form. • Module will be linked with ACET/ Exam/ Seminar/ Accounts/ Compliance/ Online Video Modules. • Maintain CPD credits for members & non-members • Online entry of cpd data • Maker and checker • Migration of old data. • Report Generation
	Budget Module (W)	<ul style="list-style-type: none"> • Allows each department to prepare a preliminary budget on-line and submit it electronically for approval. • Text comments can be applied at any level. • Approvers can re-route the budget worksheet to the originator for modifications. • Creates multiple versions of the same budget • Displays budget vs. actual data for current and prior years • Capture budgets and forecasts with input forms for profit and loss, balance sheet, cash flow, payroll, capital expenses, revenues, and more. • Advanced workflow, with multi-step approvals, notifications and discussion area. • All reports should be exported to Microsoft Excel or printed as a PDF document
	Online Ticketing System (W/M)	<ul style="list-style-type: none"> • Centralize help desk ticket management – from request creation to resolution • Track and monitor requests in real time • Build pre-defined resolutions in the database for end-users. • Advanced workflow, with multi-step approvals and notifications • Reports • Logs

	Online Election Voting Module (W)	<ul style="list-style-type: none"> ● Security & Reliability ● Single Sign On, Website Integration ● Ballot Templates ● Ballot Shuffling ● Candidate Biographies ● Referendum voting ● Write-in Votes ● Ballot Counter ● On-demand paper ballots ● Multilingual Ballots ● High Delivery Email Reminders ● Voter Comments ● Email Reporting ● Email Solicitation ● Ballot Previewing ● Comprehensive Reporting ● Results Publishing ● Archived Results
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49. **Audio, video and graphics:** Pictures, videos, picture slide shows, animated graphs, podcasts, and charts, and other multimedia elements are an integral part of the content that IAI offers. Provision should be made both for hosting such content as part of the platform as well as for embedding such content from sites like Slideshare, Youtube, scribd, Wikipedia, Flickr, Picassaweb etc. on to individual pages.

For multimedia content hosted as part of the platform, particularly for video, compression mechanisms should be provided so that the content is easily playable by visitors.

A link to the content page where we use third party multimedia with their name and style and the name of the Institute if the multimedia is owned, developed, maintained and stored in the Institute's Drives shall be provided.

50. The site under reference to be developed by the bidder i.e. www.actuariesindia.org will be the primary site of the Institute. There are other sites of the Institute such as the domain OR subdomain of the website through which online service to the stakeholders is provided OR any other site like this, which will get a place in the form of link in the primary site i.e. www.actuariesindia.org . The bidder has to make the adequate provisions for this kind of links to be provided in the home page of the (to be) new site with attractive look and feel.

51. Each link / option on the website is to be associated with any of the departments in the Institute. The Institute would appoint website Nodal Officer for each department

and there should be facility in the site for the administrator to give privilege to these Officers for their respective links/options to update at their end. Further there should be a provision to generate a MIS.