Subject: **Tender for "Development of River Navigation Application (River Pilot) for National Waterways" - Pre bid amendments**

Reference: TENDER NO. IN-IWAI-392366-NC-RFB

CPP Portal Tender no: 2024_JMVP_793073_1

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Amendment-3

Amendments triggered due to pre-bid responses:

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Sr. No	Description	As per Bidding documents	Amended
1.	IFB pg. (v)	The bidders are required to submit (a) original demand drafts proof towards the cost of bid document and registration on e-procurement website (if not previously registered); (b) bid security pursuant to BDS page-30 clause ITB-20.1 in approved form; and (c) original affidavit regarding correctness of information furnished with bid document with Vice Chairman & Project Director (JMVP), Inland Waterways Authority of India, A-13, Sector -1, Noida – 201 301 (UP) before the opening of the technical part of the Bid i.e. before 06.03.2024 either by registered post/speed post/courier or by hand, failing which the bids will be declared non-responsive and will not be opened.	Clause amended and shall be read as: (c) original affidavit **on stamp paper** regarding correctness of information furnished with bid document with Vice Chairman & Project Director (JMVP), Inland Waterways Authority of India, A-13, Sector -1, Noida – 201 301 (UP) before the opening of the technical part of the Bid i.e. before last date of submission either by registered post/speed post/courier or by hand, failing which the bids will be declared non-responsive and will not be opened.
2.	Instruction to Bidders: 4.3 pg 7	A firm that is a Bidder (either individually or as a JV member) shall not participate in more than one Bid, except for permitted alternative Bids. This includes participation as a subcontractor. Such participation shall result in the disqualification of all Bids in which the firm is involved. A firm that is not a Bidder or a JV member, may participate as a sub-contractor in more than one Bid	Clause amended and shall be read as: "A firm that is a Bidder (either individually or as a JV member / *Consortium*) shall not participate in more than one Bid, except for permitted alternative Bids. This includes participation as a subcontractor. Such participation shall result in the disqualification of all Bids in which the firm is involved. A firm that is not a Bidder or

			a JV member / **Consortium**, may participate as a sub-contractor in more than one Bid.
3.	Section VII, 1 pg. 68	Inland Waterways Authority of India intends to develop a Vessel Tracker application for facilitating the vessel operators with navigational routes, depth information, water level data, river information, metadata, bridge clearances, terminal details and navigational hazards for smooth voyage in the National Waterways.	Clause amended and shall be read as: "Inland Waterways Authority of India intends to develop a Vessel Tracker application for facilitating the vessel operators with navigational routes, depth information, water level data, river information, metadata, bridge clearances, terminal details and navigational hazards for smooth voyage in the National Waterways. **Weather data may be obtained by the bidder from a recognized body such as IMD / or any other app, background maps may be obtained from the Google Maps, Open Street Maps or any standard providers, Water level data will be provided by IWAI / CWC."**
4.	Section VII, 2 (a) pg. 68	Development of Vessel Tracker Mobile Application: The Mobile application shall be a GIS based application that can draw its connectivity entirely through the towers and repeaters of various mobile network providers as well as the satellite based services like GPS which are normally available in the current age smartphones/devices.	Clause amended and shall be read as: "The Mobile application shall be a GIS based application that can draw its connectivity entirely through the towers and repeaters of various mobile network providers as well as the satellite based services like GPS which are normally available in the current age smartphones/devices. **The position shall be obtained from the GPS existing in the smartphone / device. The Application is user centric and the communication shall be met-out from the user's network service provider."**
5.	Section VII, 2 (a) iv pg.68	**Tracking of Vessels and Maintaining Log Data**: The application should be capable of tracking the movement of vessels/ships. The log data of the previous tracks shall also be available.	Clause amended and shall be read as: "The application should be capable of tracking the movement of vessels/ships. The log data of the previous tracks shall also be available **for the duration as per IALA guidelines. The vessel track data from previous applications if any may be provided by IWAI."**
6.	Section VII, 2 (a) v pg. 68	Communication and Outreach: The application should be incorporated with a 24x7 alert system through which the	Clause amended and shall be read as:

		service provider may convey any information of utmost importance/urgency.	"Communication and Outreach: The application should be incorporated with a 24x7 alert system through which the service provider **(IWAI)** may convey any information of utmost importance/urgency."
7.	Section VII, 2 (a) vii pg. 69	Monitoring: Departmental user should able to update or upload data through the mobile application with online and offline capturing and synchronization of with central repository.	Clause amended and shall be read as: "Departmental user should able to update or upload data **such as Depth, Water level and Route (Line file), chainage, navigational aids, hazards etc.** through the mobile application with online and offline capturing and synchronization of with central repository."
8.	Section VII, 2 (a) xi pg. 69	**Ease of use features**: Intuitive User Interface, Quick Start Guide, One Click Navigation, Single Sign On (SSO) Facility, Contextual Help, Saved Favorites, Customizable dashboard, Minimal data Entry, Offline Functionalities, Smart Notification, Easy Route Modifications, Instant Sharing, Cross Device Synch, Feedback Mechanism.	Clause amended and shall be read as: "**Ease of use features**: Intuitive User Interface, Quick Start Guide, One Click Navigation, Single Sign On (SSO) Facility, Contextual Help, Saved Favorites, Customizable dashboard, Minimal data Entry, Offline Functionalities, Smart Notification, Easy Route Modifications, Instant Sharing, Cross Device Synch **(User shall be able to access his customizations, data added (if any) even by signing in from a different device with his existing credentials.)**, Feedback Mechanism."
9.	Section VII, 2 (a) xii pg.69	**Real-Time Weather Data Integration**: The application shall be able to incorporate all the weather data that is made available by any authentic sources.	Clause amended and shall be read as: "Real-Time Weather Data Integration: The application shall be able to incorporate all the weather data **such as Rainfall, Fog, Humidity, Visibility, Temperature, Wind speed etc.** that is made available by any authentic sources."
10.	Section VII, 2 (a) xiii pg.69	Global adoptability of the software solution. Real Time / Live Tracking of vessels. Event based SMS and Email Alerts. Vessel Stop alert through remote Server Communication. Speed 11.Monitoring Graph. Support Web Based/Android/iOS Ap12.plication. Geofence and Landmarks functionalities.	Clause amended and shall be read as: "Global adoptability of the software solution. Real Time / Live Tracking of vessels. Event based SMS and Email Alerts. Vessel Stop alert through remote Server Communication. Speed Monitoring Graph. Support Web Based/Android/iOS Application. Geofence and

			Landmarks functionalities. **Bidder shall make the arrangements for the inclusion of all the mentioned features.**"
11.	Section VII, 2 (b) i pg.69-70	**Updat13.ing of Data feed**: The web portal should be able to facilitate 14.updating of survey data or any other such as Virtual/ actu15.al Navigation aids and Markers, Electronic navigational 16.Charts (ENCs), Route Planning and Restrictions, Wa17.ter levels and Conditions, Emergency Contact Informatio18.n, Vessel Information, Maintenance Schedules, Regulatory19. Updates, Incident Reporting and Navigations, User Communication, Feedback Management, Data Validation and Quality Control, Multilingual Content, User Profiles and Monitoring, Collaborate with Authorities, App Updates and maintenance.	Clause amended and shall be read as: "**Updating of Data feed**: The web portal should be able to facilitate updating of survey data or any other such as Virtual/ actual Navigation aids and Markers, Electronic navigational Charts (ENCs), Route Planning and Restrictions, Water levels and Conditions, Emergency Contact Information, Vessel Information, Maintenance Schedules, Regulatory Updates, Incident Reporting and Navigations, User Communication, Feedback Management, Data Validation and Quality Control, Multilingual Content, User Profiles and Monitoring, Collaborate with Authorities, App Updates and maintenance. **Survey data, ENC, guidelines and Navigation related information may be provided by IWAI. Bidder shall acquire all the other data mentioned.**"
12.	Section VII, 2 (b) iv pg.70	**Adherence to IALA/IMO guidelines**: Virtual/ actual Navigation Aids as per Navigation Channel, AIS data Integration, Electronic Navigational Charts/ Thalweg data updation, Water Way Markings, Light Characteristics, Safer Water Depth, Weather and Environmental Information, Emergency Procedures, Regulatory Compliance, User Education, Updates, Collaboration with Authorities. Guidelines will be provided by IWAI.	Clause amended and shall be read as: "**Adherence to IALA / IMO guidelines:** Virtual/ actual Navigation Aids as per Navigation Channel, AIS data Integration, Electronic Navigational Charts/ Thalweg data updation, Water Way Markings, Light Characteristics, Safer Water Depth, Weather and Environmental Information, Emergency Procedures, Regulatory Compliance, User Education, Updates, Collaboration with Authorities. **All the Guidelines will be provided by IWAI at the time of implementation.**"
13.	Section VII, 2 (b) v pg.70	**Graphical Reports**. Activity Report. Log History. Back up data storage capacity- minimum 90 days (Engine log hours, movement details, speed etc.)	Clause amended and shall be read as: "**Graphical Reports**. Activity Report. Log History. Back up data storage capacity- minimum period **as per IALA**

			guidelines (Engine log hours, movement details, speed etc.)"
14.	Section VII, 2 (b) vi pg.70	The platform should be with all extensions and SDK's for further development of any application.	Clause amended and shall be read as: "The platform should be with all extensions and SDK's for further development of any application. **Any Open Source Platform may be used."**
15.	Section VII, 2 (b) xi pg. 71	GIS application should support 64-bit Windows and 64-bit Linux platform in native mode.	Clause amended and shall be read as: "GIS application should support 64-bit Windows **or** 64-bit Linux platform in native mode."
16.	Section VII, 2 (b) xii pg.71	The GIS server should have in built map caching capability for enhanced performance.	Clause amended and shall be read as: "The GIS server should have in built map caching capability for enhanced performance as **there will be several layers of maps and map caching shall benefit in better performance.**"
17.	Section VII, 2 (b) xiii pg.71	The GIS Server should provide freely available 2D and 3D Maps as base layers and also host the available map data with IWAI.	Clause amended and shall be read as: "The GIS Server should provide freely available 2D and 3D Maps (**standard maps such as google maps/ open street maps or any other standard maps**) as base layers and also host the available map data with IWAI **such as ENC/DNC etc.**"
18.	Section VII, 2 (b) xiv. b pg.71	Water level data along the river as and when available.	Clause amended and shall be read as: "Water level data along the river **will be provided by IWAI** as and when available."
19.	Section VII, 2 (b) xiv. c pg.71	Development of the Digital Navigational Charts (DNC) based on the hydrography data made available from IWAI.	Clause amended and shall be read as: "**Integration of** Digital Navigational Charts (DNC) based on the data made available from IWAI."
20.	Section VII, 2 (b) xiv.d pg.71	Design and development of navigational way points and virtual buoys based on the draft required for the ferry operations at different locations of the river sections.	Clause amended and shall be read as: "Design and development of navigational way points and virtual buoys based on the draft required for the ferry operations at different locations of the river sections a**s per IALA / IMO Guidelines.**"

21.	Section VII, 2 (b) xiv.e.iv pg.71	History of all past routes recorded duly taken for the knowledge of IWT operator and Admin.	Clause amended and shall be read as: "History of all past routes recorded duly taken for the knowledge of IWT operator and Admin. **Any standard and universal formats may be used**."
22.	Section VII, 3 pg.71	**Setting up of Command Control Centre**: A command control is to be set up at any location as decided by the employer through which the regular monitoring of the application along with any updates are to be maintained.	Clause amended and shall be read as: "**Setting up of Command Control Centre**: A command control is to be set up at any location as decided by the employer through which the regular monitoring of the application along with any updates are to be maintained. **The hardware sensors shall be monitored by the command control infrastructure.**"
23.	Section VII, 3.iii pg.72	Hardware to be supplied to the Control Centre are as follows: a. LED Data wall of atleast 80 inch in size is to be setup at a location decided by the employer. b. Supporting IT infrastructure like Desktop Monitor and all the accessories associated with it. All the hardware supplied shall have warranty for the tender period.	Clause amended and shall be read as: "Hardware to be supplied to the Control Centre are as follows: a. LED Data wall of atleast 80 inch in size is to be setup at a location decided by the employer. b. Supporting IT infrastructure like Desktop Monitor and all the accessories associated with it. c. All the hardware supplied shall have warranty for the tender period. **Any branded product which is compatible with the hardware is to be provided**."
24.	Section VII, 4 (2) pg.72	The CSP should have at least 3 Data Centers empaneled with MEITY and STQC audited at the bid submission.	Clause amended and shall be read as: "The CSP should have at least **2** Data Centers empaneled with MEITY and STQC audited at the bid submission."
25.	Section VII, 4 (5) pg.73	CSP should have successfully implemented / commissioned at least two (02) projects of DC/DR with Cloud Deployment.	Clause amended and shall be read as: "CSP should have successfully implemented / commissioned at least two (02) projects of DC/DR with Cloud Deployment. **The DR should be Active-Active with Almost zero RTO and RPO.**"

26.	Section VII, 5.ii pg.74	Establishment of dedicated Control Centre at IWAI H.O. Noida & Deployment of GIS expert with at least 05 years' experience and a computer operator.	Clause amended and shall be read as: "Establishment of dedicated Control Centre **as mentioned in Section VII, 3** & Deployment of GIS expert with at least 05 years' experience and a computer operator.
27.	Section VII, 5.iii pg.74	Providing of Cloud based application services.	Clause amended and shall be read as: "Providing of Cloud based application services. **Development of application on open source is preferable however, bidder can quote for enterprise based solution also**."
28.	Section VII, 5, FRS: User Registration Module: Sl.No. 10 pg.76	System shall be integrated to E-mail, whatsapp and SMS gateway for email, whatsapp and SMS notifications and alerts	Clause amended and shall be read as: "System shall be integrated to E-mail, whatsapp and SMS gateway for email, whatsapp and SMS notifications and alerts. **Mail server, WhatsApp API for integration, SMS gateway for integration shall be provided by successful bidder."**
29.	Section VII FRS: System Software & Support Services : Sl.No. 45 pg.83	The application should provide the users with adequate information regarding the privacy settings and implications with regards to the application.	Clause amended and shall be read as: "The application should provide the users with adequate information regarding the privacy settings and implications with regards to the application. **Privacy is related to user passwords only**."
30.	Section VII FRS: System Software & Support Ser33.vices : Sl No. 56 pg.84	The system shall allow process designers to define multiple automatic system defined stages, where no human intervention is required.	Tender Clause stands **Deleted.**
31.	Section VII FRS: System Software & Support Services : Sl No.57 pg.84	The interface shall be easy to use so that Process owners can change the business process as and when required without any programming knowledge.	Clause amended and shall be read as: "The interface shall be easy to **use**."

32.	Section VII FRS: System Software & Support Services : Sl No.58 pg.84	The system shall enable process designers to design multiple sub processes. This includes mapping of the existing process instance to the newly created process instance as per mapping defined in the route.	Clause amended and shall be read as: "The system shall enable process designers to design multiple sub processes **such as addition of few user friendly features and tools both on Web and Android applications**."
33.	Section VII FRS: System Software & Support Services : Sl No.59 pg.84	The workflow management system development environment shall provide easy navigation to choose sub-processes as required to be invoked from within a process.	Tender Clause stands **Deleted.**
34.	Section VII FRS: System Software & Support Services : Sl No.60 pg.84	Facility to copy and paste work stages along with all its properties.	Tender Clause stands **Deleted.**
35.	Section VII FRS: System Software & Support Services : Sl No.61 pg.84	Facility to define documents viewed and to be attached at individual stages.	Tender Clause stands **Deleted.**
36.	Section VII FRS: System Software & Support Services : Sl No.62 pg.84	The Process designer shall support multiple Introduction stages for introducing different document types from different acquisition sources	Clause amended and shall be read as: "The **application** shall support multiple Introduction stages for **introducing different tools and features types** from different acquisition sources"
37.	Section VII FRS: System Software & Support Services : Sl No.**64. pg.84**	The system shall provide facility to define hold stages so that a particular instance or the workflow can be kept on hold for specified interval on the basis of predefined condition. The system shall also provide facility to define conditions for resuming the instance from hold stage.	Tender Clause stands **Deleted**.

38.	Section VII FRS: System Software & Support Services : Sl No.**65. pg.84**	The system shall allow process designers to design properties for each work stage like default document view, form view or Exception view etc.	Tender Clause stands **Deleted**.
39.	Section VII FRS: System Software & Support Services : Sl No.**66. pg.84**	The system shall allow users to define entry level settings like Increase of priority or sending an email trigger on the basis of pre-defined conditions or setting up particular variable or property etc.	Clause amended and shall be read as: "The **web application** shall allow users to define entry level settings like Increase of priority or sending an email trigger on the basis of pre-defined conditions or setting up particular variable or property etc. **acting as an alarm system**."
40.	Section VII FRS: System Software & Support Services : Sl No.**67. pg.85**	The workflow management system shall support the definition of roles and allow many-to-many relationships between users and roles to be defined.	Tender Clause stands **Deleted**.
41.	Section VII FRS: System Software & Support Services : Sl No.**68. pg.85**	The workflow management system shall be capable of automatically deploying an entire business process application (including forms and adapters) to the servers from the development environment	Tender Clause stands **Deleted**.
42.	Section VII FRS: System Software & Support Services : Sl No.**69. pg.85**	The system shall provide inbuilt facility to design Custom forms that can be attached at one or more stages of workflow.	Tender Clause stands **Deleted**.
43.	Section VII FRS: System Software & Support Services : Sl No.**70. pg.85**	The Form designer interface shall support facility to define text boxes, Combo boxes, radio buttons, Drop down etc	Tender Clause stands **Deleted**.

44.	Section VII FRS: System Software & Support Services : Sl No.**71 pg.85**	The system shall provide facility to define variables in the process or in external database tables, which can be linked to fields defined in the form for efficient data entry	Clause amended and shall be read as: "The **web application** shall provide facility to define variables in the process or in external database tables, which can be linked to fields defined in the form for efficient data entry."
45.	Section VII FRS: System Software & Support Services : Sl No.**80. pg.86**	The system shall provide facility to define exceptions at individual stages, which shall dynamically change the route on execution.	Tender Clause stands **Deleted**.
46.	Section VII FRS: System Software & Support Services : Sl No.**81. pg.86**	The system shall facility to give rights to raise and clear exceptions at different stages of the process with user comments.	Clause amended and shall be read as: "The **mobile application** shall facility to give rights to raise and clear incidents during navigation with user comments."
47.	Section VII FRS: System Software & Support Services : Sl No.**82. pg.86**	Facility to raise triggers on the basis of exceptions.	Clause amended and shall be read as: "Facility to raise **alarms on the basis of navigational incidents/hazards.**"
48.	Section VII FRS: System Software & Support Services : Sl No.**83. pg.86**	Facility to raise automatic exceptions on the basis of pre-defined conditions.	Tender Clause stands **Deleted**.
49.	Section VII FRS: System Software & Support Services : Sl No.**84. pg.86**	The system shall track all the exceptions raised in the course of process and shall maintain history of that with username, date, time and comments.	Clause amended and shall be read as: "The applications shall track all the **incidents during navigation** and shall maintain history of that with username, date, time and comments."
50.	Section VII FRS: System Software	The system shall clearly differentiate process instances with and without exception	Clause amended and shall be read as:

			"The applications shall clearly differentiate various **incidents or accidents**."
51.	Section VII FRS: System Software & Support Services : Sl No.**86. pg.86**	The system shall provide facility to define tasks for individual or group of users with deadlines.	Clause amended and shall be read as: "The applications shall provide facility to define tasks **such as survey data updating, uploading latest satellite imageries and maps** for individual or group of users with deadlines."
52.	Section VII FRS: System Software & Support Services : Sl No.**87. pg.86**	The system shall provide facility to define check lists for individual stage with option to make particular checklist items as mandatory.	Clause amended and shall be read as: "The system shall provide facility to define check lists **which shall include navigational aids and hazards like cross structures and least available depths etc**. for individual stage with option to make particular checklist items as mandatory."
53.	Section VII FRS: System Software & Support Services : Sl No.**88. pg.86**	Facility to raise triggers on the basis of checklist.	Tender Clause stands **Deleted**.
54.	Section VII FRS: System Software & Support Services : Sl No.**89. pg.86**	The workflow management system shall have email notification to user when the user is not logged on to the workflow management system. Upon receiving theemail, the user shall be able to click on the attachment in the email to automaticallylaunch the Workflow management system and present the user with the task to act on.	Tender Clause stands **Deleted**.
55.	Section VII FRS: System Software & Support Services : Sl No.**90. pg.86**	Automatic reminders to concerned users for delegated tasks.	Clause amended and shall be read as: "Automatic reminders to concerned users for delegated tasks **such as Survey data updating, Uploading latest satellite maps and imageries etc**."

56.	Section VII FRS: System Software & Support Services : Sl No.**91. pg.86**	The system shall allow definition of audit stages to audit work of new users. Theusers shall be able to define percentage of work to be audited on the basis of which, random instances shall be picked up and sent to auditing supervisor.	Clause amended and shall be read as: "The application shall allow definition of audit stages. Audit of **total users, types of vessels, category of usage etc. shall be done**."
57.	Section VII FRS: System Software & Support Services : Sl No.**92. pg.86**	The workflow management system shall provide user-definable job filters and sorters for the outstanding tasks for viewing and work prioritization.	Clause amended and shall be read as: "The web application shall provide user-definable job filters and sorters for the outstanding tasks for viewing and work prioritization **to upload, authorize and publish the various data that is to be updated on the application."**
58.	Section VII FRS: System Software & Support Services : Sl No.**93. pg.87**	The workflow management system shall allow the users to route/re-route the jobs toone or more other users by job and byusers (e.g. on long leave, resignation).	Clause amended and shall be read as: "The **web application** shall allow the users to route/re-route the jobs to one or more other users by job and by users (e.g. on long leave, resignation) **regarding the uploading of data application shall allow other user to upload the data when the concerned official is not available.**"
59.	Section VII FRS: System Software & Support Services : Sl No.**94. pg.87**	The workflow management system shall allow automatic temporary re-routing of jobs to one or more other users (e.g. temporary covering of duties).	Tender Clause stands **Deleted**.
60.	Section VII FRS: System Software & Support Services : Sl No.**95. pg.87**	The system shall provide facility to define custom triggers like Emails, Word template or launching executable etc. on predefined conditions	Tender Clause stands **Deleted**.
61.	Section VII FRS: System Software & Support Services : Sl No.**96. pg.87**	The system shall provide facility to define custom templates for the triggers with static and dynamic data.	Clause amended and shall be read as: "**Both the applications** shall provide facility to define custom templates for the alarms with static and dynamic data **of any hazards or incidents. Application shall have customized pop-ups for different alarms.**"

62.	Section VII FRS: System Software & Support Services : Sl No.**98. pg.87**	The workflow management system shall have email notification to user when the user is not logged on to the workflow management system. Upon receiving theemail, the user shall be able to click on the URL in the email to automatically launchthe Workflow management system and present the user with the task to act on.	Tender Clause stands **Deleted**.
63.	Section VII FRS: System Software & Support Services : Sl No.**99. pg.87**	The workflow management system shall be based on an N-tier, open, scalable architecture.	Clause amended and shall be read as: "The **web application** shall be based on an N-tier, open, scalable architecture."
64.	Section VII FRS: System Software & Support Services : Sl No.**100. pg.87**	The workflow management system shallsupport thin client architecture.	Clause amended and shall be read as: "The **web application** shall support thin client architecture."
65.	Section VII FRS: System Software & Support Services : Sl No.**101. pg.87**	The workflow management system shallsupport Web based interfaces.	Clause amended and shall be read as: "The **web application** shall support Web based interfaces."
66.	Section VII FRS: System Software & Support Services : Sl No.**102. pg.87**	The workflow management system shall support XML messaging and SOA Architecture.	Clause amended and shall be read as: "The **web application** shall support XML messaging and SOA Architecture."
67.	Section VII FRS: System Software & Support Services : Sl No.**103. pg.87**	The workflow management system shall have the ability to integrate through messaging.	Clause amended and shall be read as: "The **web application** shall have the ability to integrate through messaging."

68.	Section VII FRS: System Software & Support Services : Sl No.**104. pg.87**	The workflow management system shallhave the ability to integrate through APIs.	Clause amended and shall be read as: "The **web application** shall have the ability to integrate through APIs."
69.	Section VII FRS: System Software & Support Services : Sl No.**106. pg.88**	The workflow management system shallrun in a clustered environment.	Clause amended and shall be read as: "the **web application** shall run in a clustered environment."
70.	Section VII FRS: System Software & Support Services : Sl No.**107. pg.88**	The workflow management system shall be scalable through both horizontal clustering (multiple channels) and vertical clustering (multiple Instances per machine).	Clause amended and shall be read as: "The **web application and mobile application** shall be scalable through both horizontal clustering (multiple channels) and vertical clustering (**at multiple Instances for both the applications**)".
71.	Section VII FRS: System Software & Support Services : Sl No.**126. pg.89**	Process Owners or workflow administrator shall be able to intervene the flow of work items and reassign to specific user and shall also support ad-hoc routing to specific stage in case of delays or bottleneck.	Clause amended and shall be read as: "**IWAI may internally direct its employees for some actions in the application** and reassign to specific user and shall also support ad-hoc routing to specific stage in case of delays or bottleneck."
72.	Section VII FRS: System Software & Support Services : Sl No.**144. pg.91**	The workflow management system shallsupport integration based on messaging.	Clause amended and shall be read as: "The **web application** shall support **registration** based on messaging."
73.	Section VII FRS: System Software & Support Services : Sl No.**145. pg.91**	The workflow management system shall support integration based on standards such as XML	Clause amended and shall be read as: "The **web application** shall support integration based on standards such as XML"

74.	Section VII FRS: System Software & Support Services : Sl No.**148. pg.91**	The workflow management system shall allow documents used in processes to comefrom inbuilt proposed Document Management System.	Tender Clause stands **Deleted**.
75.	Section VII FRS: System Software & Support Services : Sl No.**167. pg.93**	Requirement Description.	Tender Clause stands **Deleted**.
76.	Section VII FRS: System Software & Support Services : Sl No.**180. pg.94**	The system shall support consistent, globally unique naming and addressing scheme for data made centrally and automatically/systemically.	Tender Clause stands **Deleted**.
77.	Section VII FRS: System Software & Support Services : Sl No.**183. pg.94**	Online application shall be designed to permit user for easy insertion of new modules and new enhancements.	Clause amended and shall be read as: "Web application shall be designed to permit **IWAI** for easy insertion of new modules and new enhancements."
78.	Section VII FRS: System Software & Support Services : Sl No.**223. pg.98**	The system shall have ability to customize user menus and screens based on user access authority.	Clause amended and shall be read as: "**Both the applications** shall have ability to customize user menus and screens approved by the authority."
79.	Section VII: Firewall Services, pg.118	Firewall Services specifications	Clause added at Section VII: FRS: Firewall Services, Sr.No. 42 and may be read as: "**If the CSPs provide Native CSP Firewall Services, it shall provide Packet Filtering, Stateful Inspection, Intrusion Detection and Prevention, Application Layer Filtering and VPN support as a part of its service.**"

80.	Section VII: Firewall Services: Sr.No.2: Pg No.119	The Firewall Appliance / solution / offering should have certifications like NDPP / ICSA / EAL4 or more	Clause amended and shall be read as: "The Firewall Appliance / solution / offering should have certifications like NDPP / ICSA / EAL4 or more. **OR Native Firewall services of CSPs shall be compliant to SOC 1/2/3 as well as follow standards like HIPAA eligible, PCI-DSS compliant, and ISO (9001, 27001, 27017, 27018, 27701) and CSA STAR Level 2 V4 compliant.**"
81.	Section VII: Firewall Services: Sr.No.3: Pg.119	The Appliance / virtual /cloud offering based security platform should be capable of providing firewall, IPS, and VPN (both IPSecand SSL) functionality in a single appliance	Clause amended and shall be read as: "The Appliance / virtual /cloud offering based security platform should be capable of providing firewall, IPS, and VPN (both IPSecand SSL) **functionality.**"
82.	Section VII: Firewall Services: Sr.No.4: pg.119	The Appliance / virtual /cloud offering hardware should be a multicore CPU architecture with a hardened operating system to support higher memory	Clause amended and shall be read as: "The Appliance / virtual /cloud offering hardware should be a multicore CPU architecture with a hardened operating system to support higher **memory / cloud service provider native firewall solution.**"
83.	Section VII: Firewall Services: Sr.No.5: pg.119	Proposed Firewall should be open architecture based on multi-core cpu's to protect & scale against dynamic latest security threats.	Clause Amended and Shall be read as: "Proposed Firewall should be open architecture based on multi-core CPU's to protect & scale against dynamic latest security threats. / **cloud service provider native firewall solution.**"
84.	Section VII FRS: Presentation Layer: Sl.No 44 pg.130	The system should be capable of displaying the previous interaction histories on email/SMS and the same should be available to voice based users.	Clause Amended and Shall be read as: "The system should be capable of displaying the previous interaction histories on email/**SMS**"
85.	Section VII FRS: API Management pg. 131		Clause Added at Section VII: FRS: API Manager, Sr. No. 56 and may be read as: **"API services provided by CSPs through cloud should include functional requirements like Support for RESTful APIs and WebSocket APIs, Easy API**

			Creation and Deployment, API Operations Monitoring, API Lifecycle Management."
86.	Section VII FRS: API Management, Sl. No. 9 pg.131	API Manager-System should support clustered architecture to allow linear scalability across multiple instances with automatic failover	Tender Clause stands **Deleted**.
87.	Section VII FRS: API Management, Sl. No. 13 pg.131	System should help with effective Governance and control all APIs by supporting branching of API's, global API parameters, API debug tracing, real time API validation	Tender Clause stands **Deleted**.
88.	Section VII FRS: API Management, Sl. No. 16 pg.131	System should support features to limit API access based on user, time of day and/or IP address	Clause Amended and Shall be read as: "System should support features to limit API access based on user **/** time of day and **/** or IP address."
89.	Section VII FRS: API Management, Sl. No. 17 pg.131	System should support route API traffic based on geography, IP address and/or backend response times	Clause Amended and Shall be read as: "System should support route API traffic based on geography **/** IP address and **/** or backend response times."
90.	Section VII FRS: API Management, Sl. No. 22 pg.132	Systems should have in-built features to handle composition, versioning, rollback and orchestration of API's	Clause Amended and Shall be read as: "Systems should have in-built features to handle composition **/** versioning **/** rollback **/** orchestration of API's."
91.	Section VII FRS: API Management, Sl. No. 28 pg.132	System should be able to do threat detection and message content filtering	Tender Clause stands **Deleted**.
92.	Section VII: Compliance with latest security guidelines pg.137	The security of the solution developed, and cloud provisioning should be compliant with the latest National Critical Information Infrastructure Protection Centre (NCIIPC) guidelines	Tender Clause stands **Deleted**.

All other terms and conditions of the Tender remains unaltered.