Subject   : Tender for "Development of River Navigation Application (River Pilot) for National Waterwyas" - Pre bid minutes

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

CPP Portal Tender ID: 2024_JMVP_793073_1

Pre-bid meeting held on 12.02.2024 at 1600 hours.

Response to pre-bid queries raised by bidders

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
1.	Last Date And Time For Submission Of Bids	i	06.03.2024 Up to 1500 Hrs.	Keeping in view, the complexity of the project, in order to understand, prepare and submit a comprehensive bid proposal, we request you to provide us with at least 2 weeks of extension, in the bid submission end date, from the current date of submission, after the release of the pre-bid clarifications and corrigendum. Please consider and confirm	Last date of submission of bids will be 02 weeks from the date of uploading of Pre-bid minutes / amendments.
2.	Invitation for bids (IFB)	iii	National Competitive Bidding	We request you to kindly let us know the tender value & project estimation.	Bidder has to estimate as per the Scope of Work.
3.	IFB	iii. point 2	The bidders may submit bids for any or all of the Non-Consulting Services indicated therein.	Is partial bidding allowed?	No.
4.	IFB	iv, point 6	A non-refundable fee of Rs. 2950 (inclusive of tax) is required to be paid (to be submitted along with other documents listed in paragraph 9 below)	We request Waiver of Tender Fee, Bid Security and PBG to government organization as well as MSME registered organizations.	Tender conditions prevail.

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
			before the bid submission deadline. The mode of payment shall be in the form of DD drawn in favour of IWAI FUND – Jal Marg Vikas payable at Noida /New Delhi.		
5.	IFB	Page v, point 9	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.	Is affidavit required on stamp paper or company letter head?	Clause may 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.
6.	TABLE	vi		We would like to suggest the inclusion of a specific clause in the tender documentation to support start-ups participating in this project and provide relaxation for	Tender Conditions Prevails

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
				the work value with relevant experience in similar projects.	
7.				We are DPIIT recognized startup and there is no relaxation mentioned for such startups. We would urge if startups can also be allowed to participate in the project.	Tender condition prevail.
8. 9.	Instruction to Bidders: 4.3	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	We have noted that point 4 stipulates the requirement for a joint venture. However, we kindly request that this clause be amended to allow for a consortium structure instead. This change will offer flexibility and allow independent entities to collaborate. We would like to bring in your kind notice that the tender document only talks about formation of Joint Venture (JV). We would like to request you to kindly allow formation of consortium as well since bidders primary preference always is to form a consortium rather than Joint Venture (JV). Also, Joint venture formation involves lot of legal arrangements which is a time taking activity.	The clause 4.3 may 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

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
				Considering above our submission, we request department to kindly consider our point and allow consortium formation.	
10.	BDS ITB 21.3	30	The written confirmation of authorization to sign on behalf of the Bidder shall consist of: Legally valid Power of Attorney is required to demonstrate the authority of the signatory to sign the Bid; and In the case of Bids submitted by an existing or intended JV, if permitted as per ITB 4.1, the authorization shall be evidenced by a Power of Attorney signed by legally authorized signatories of all the members.	Kindly allow other documents such as delegation of power which authorizes to sign contract/bid to be submitted.	Delegation of Power is allowed
11.	BDS ITB 48.1	32	The Performance Security amount is 5 percent of Contract Amount, and the Standard Form of Performance Security acceptable to the Employer shall be a Bank Guarantee including FDR & E-Bank Guarantee. Security Deposit: A sum @ 10% of the gross amount of the bill shall be deducted from each running bill of the contractor till the sum will amount to security deposit of 5% of the contract value of work.	We request Waiver of Tender Fee, Bid Security and PBG to government organization as well as MSME registered organizations.	Tender conditions prevail.
12.	Section III - Evaluation and	33	The Employer shall use the criteria and methodologies listed in this Section to	We request you to evaluate the bids based on the QCBS (Quality cum	Tender Conditions Prevail.

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
	Qualification Criteria A. Award Criteria		evaluate Bids. By applying these criteria and methodologies, the Employer shall determine the lowest evaluated Bidder whose offer is substantially responsive to the Bidding Document, and is qualified to perform the Contract satisfactorily.	cost based selection) method. The SoW includes delivery of quality software products and other outputs. Hence, we request the department to provide atleast 60% weightage to the Technical evaluation criteria, to select a suitable bidder during overall Bid evaluation	
13.	Section III - Evaluation and Qualification Criteria: 2.4 Qualification Requirements - Experience	35	Definition of Similar Works In the tender document it is stated that "Experience in developing of Hydrographic / Marine / Navigation Mobile Application on Android/ iOS Platform during the last 07 (seven) years"	It is requested that we can amend the experience to building a nature of application that include entire platforms with navigational capability in other fields as well. In the current state, such nature of work is new for India and few players may be able to take part in this. Instead, we recommend that a requirement can be made for having a marine expert on bidder's end.	Tender Conditions Prevail.
14.	Section III - Evaluation and Qualification Criteria: 2.4 Qualification Requirements - Experience	35	The experience required to be demonstrated by the Bidder executed during the last 7 years, as per the following criteria: i) One similar work of value of Rs. 3.288 Cr Or ii) ii) Two similar works of value of Rs. 2.055 Cr Or	Qualification Requirement regarding the experience required to be demonstrated by the bidder, we understand the specified criteria for similar works executed during the last 7 years. However, we propose that the minimum work value be reduced to INR 1 crore for	Tender conditions prevail.

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
			iii) iii) Three similar works of value of Rs. 1.644 Cr. the bidder should provide documentary evidence (i.e. work order(s) and completion certificate issued by the client on their letterhead) to support his claim for the works mentioned above.	a single work order	
15.			For this purpose, the "Similar Works" means, "Experience in developing of Hydrographic / Marine / Navigation Mobile Application on Android/ iOS Platform during the last 07 (seven) years".	We request to department kindly also include Application & development experience for Govt projects for any Govt. department . We request to dept. kindly amend this clause as: The experience required to be demonstrated by the Bidder executed during the last 7 years, as per the following criteria: i) One similar work of value of Rs. 3 Cr Or ii) Two similar works of value of Rs. 1.50 Cr Or iii) Three similar works of value of Rs. 75 lakhs the bidder should provide documentary evidence (i.e. work	Tender conditions prevail.

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
				order(s) and completion certificate issued by the client on their letterhead) to support his claim for the works mentioned above. For this purpose, the "Similar Works" means, "Experience in developing of Hydrographic / Marine / Navigation Mobile Application on Android/ iOS Platform/Application Development & Support For Govt/Mobile Application on Android/iOS Platform for Govt during the last 07 (seven) years".	
16.	Section III - Evaluation and Qualification Criteria: 2.4 Qualification Requirements – Key Personnel	35-36	Software Technician	We must have defined criteria for demonstrating resources with experience of required technology experience as mentioned in the scope document	Tender Conditions Prevail.
17.	Section III: 2.5	35	The figures for each of the members of a joint venture shall be added together to determine the Bidder's compliance with the minimum qualifying criteria of (a), (b) and (e); however, for a joint venture to qualify the member in charge must meet at least 40 percent of those minimum criteria for an individual Bidder and other members at least 25% of the criteria.	Please confirm bidder can fulfil experience clause condition jointly or not?	Tender conditions prevail.

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
			Failure to comply with this requirement will result in rejection of the joint venture's Bid.		
18.	Section III - Evaluation and Qualification Criteria: B-2.7.1	37	The Bids shall be evaluated based on the eligibility & qualification criteria mentioned in above. In case a bidder fails to meet the above-mentioned eligibility & qualification criteria, their bids shall be treated as non- responsive and financial bids of such bidders shall not be opened.	Is there no Technical round? Only qualification criteria is mentioned.	Tender conditions prevail.
19.	Section VII, 1	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.	We request you to kindly enlist the source providers for weather, background maps, water level data?	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**

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
					data will be provided by IWAI/CWC."
20.	Section VII, 2 (a)	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.	This entire Application relies on the GSM network. The Application shall be used while the vessels are in the navigable river. Has any survey been undertaken to determine the quality of GSM network while the vessels are plying in the river channels, are there any blind spots where there is no GSM network? If in some areas where the GSM network is not very strong, how will this application work?	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**."
21.				Kindly confirm who will provide this communication	
22.	Section VII, 2 (a) iii	68	Geo-Fencing & Traffic Information: With the help of technologies like geo-fencing, proximity analysis & buffer analysis, users should be able to identify the deviation of	a. If location tracking is done via application, what happens when the user takes the cell phone on shore with him?	a,b,c.d. - replied at query 20. Tender Conditions Prevail.

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
			vessel from identified path or movement of any other vessel in the proximity. An alarm based solution will be required in this regard.	b. For the mobile devices on shore, if masking is done, how to control if a location is shown on shore due to inaccuracy of location services of GSM network? c. Can vessels see other vessels location while using the Application? d. Accuracy of location is limited when using GSM network, and usually there is an error of 25 to 50 meters. Due to this error of location, there are high chances of a Vessel being misguided and meeting with a collision or being grounded. Who will be responsible if any such mishaps happen?	
23. 24.	Section VII, 2 (a) iv	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	Please specify the duration/period of log data to be kept for previous tracks. Can IWAI provide vessel inventory (historical vessel track data)? Please confirm.	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.**"

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
25.	Section VII, 2 (a) v	68	Communication and Outreach: The application should be incorporated with a 24x7 alert system through which the service provider may convey any information of utmost importance/urgency.	Kindly confirm here who is the Service Provider	Clause amended and shall be read as: "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."
26.	Section VII, 2 (a) vii	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.	We request you to let us know the type of data user will upload through application for monitoring?	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."
27.	Section VII, 2 (a) x	69	**Advanced features**: Real Time Traffic and Vessel Tracking, Customized Contextual Alerts and Notifications, Sharing and Social integration, Offline Maps and Navigation, Hands Free Operation, Integration of AIS Data from IWAI RIS network, Collaborative Navigation, Electronic log Book, Emergency Response Features, Historic Data and Trends, Localized Points of	Elaboration is required for some advanced features required, i.e., Collaborative Navigation. Enhancement of features as per requirements makes the scope unlimited	Tender Conditions Prevail

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
			Interest, User Generated content, development, security and operations (DevSecOps) Updation / enhancement of features as per requirement.		
28.	Section VII, 2 (a) xi	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.	Requesting you to please elaborate on Cross Device Synch feature.	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."
29.	Section VII, 2 (a) xii	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.	Details of weather data should be provided.	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,**

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
					Temperature, Wind speed etc. that is made available by any authentic sources."
30.	Section VII, 2 (a) xiii	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 Monitoring Graph. Support Web Based/Android/iOS Application. Geofence and Landmarks functionalities.	SMS gateway will be provided by IWAI?	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.**"
31.	Section VII, 2 (b) i	69-70	**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,	Updating of Requisite data using web portal, what shall be the source of information. Kindly confirm the source of Information.	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

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
			Feedback Management, Data Validation and Quality Control, Multilingual Content, User Profiles and Monitoring, Collaborate with Authorities, App Updates and maintenance.		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."**
32.	Section VII, 2 (b) iv	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.	We request IWAI to provide IALA/IMO guidelines applicable for River Navigation and each of data. Please confirm.	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
33.				As per IALA/IMO guidelines, aids to navigation should be done using complete VTS/RIS System which includes Radars, AIS and other sensors data integrated into a VTS/RIS software which shows dynamic live feed in real time of the vessels plying in the VTS/RIS area. Moreover, the operations should be done by VTS/ RIS	

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
				Operators who are trained and certified as per IALA guidelines. VHF is also a must for two-way communication between the RIS/VTS station and the vessels. How does this Application follow IALA/IMO guidelines?	Education, Updates, Collaboration with Authorities. **All the Guidelines will be provided by IWAI at the time of implementation.**"
34.				If a particular vessel has its AIS data and it is also registered on the application, which static and dynamic data will be shown? AIS or the Application? What if the location as per AIS and as per the Application differs?	
35.	Section VII, 2 (b) v	70	**Graphical Reports**. Activity Report. Log History. Back up data storage capacity- minimum 90 days (Engine log hours, movement details, speed etc.)	We request IWAI to provide detail list of reports, content, format, data exchange for development and integration. Please confirm.	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.)"
36.				Log history and backup as per IALA guidelines should be 5 years and not 90 days, as specified in tender document.	
37.	Section VII, 2 (b) vi	70	The platform should be with all extensions and SDK's for further development of any application.	We request IWAI suggest programming language and interface for SDK's. Please confirm.	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.**"

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
38.	Section VII, 2 (b) vii	70	It should support the concept of Multi Tenancy so that the various department of IWAI can work in different tenants and store relevant data, configure various kinds of dashboards, analytical applications and user in their tenants. Department should also share data as service and application with other departments for collaboration. Multi-tenancy is a reference to the mode of operation of software where multiple independent instances of one or multiple applications operate in a shared environment. The instances (tenants) should be logically isolated, but physically integrated.	As this is centralized web based admin portal, Multi tenancy of the application is not required. Please clarify the use cases?	Tender Conditions Prevail.
39.	Section VII, 2 (b) xi	71	GIS application should support 64-bit Windows and 64-bit Linux platform in native mode.	Requesting you to modify this clause to: GIS application should support 64-bit Windows or 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."
40.				Kindly allow SI to choose best suited OS for deployment of solution without impacting the time line, functionalities and non-functional requirement. Hence we understand GIS application should support either 64-bit Windows or 64-bit Linux platform	
41.				We kindly request that this requirement be revised and specify	

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
			that the application can be built to support either of the operating systems.		
42.	Section VII, 2 (b) xiii	71	The GIS Server should provide freely available 2D and 3D Maps as base layers and also host the available map data with IWAI.	We understand that GIS application should support freely available 2D or 3D Maps as base layers and also host the available map data with IWAI. Kindly confirm	Tender Conditions Prevail.
43.	Section VII, 2 (b) xii	71	The GIS server should have in built map caching capability for enhanced performance.	Kindly explain the meaning of caching of map data on server, because map will be saved on server or do you intent to fetch maps from the third party server?	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.**"
44.	Section VII, 2 (b) xiii	71	The GIS Server should provide freely available 2D and 3D Maps as base layers and also host the available map data with IWAI.	We request IWAI to provide types of maps and data formats for integration with GIS application as background maps. Please confirm.	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.**"
45.	Section VII, 2 (b) xiv. b	71	Water level data along the river as and when available.	Can IWAI provide water level column data and format for updating DNC? is the DNC should	Clause amended and shall be read as:

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
				be updated in the same web admin portal? Please confirm? Please confirm.	"Water level data along the river **will be provided by IWAI** as and when available."
46.	Section VII, 2 (b) xiv. c	71	Development of the Digital Navigational Charts (DNC) based on the hydrography data made available from IWAI.	We request the department to provide the Digital Navigational Charts for integration with the Application.	Clause amended and shall be read as: "**Integration of** Digital Navigational Charts (DNC) based on the data made available from IWAI."
47.	Section VII, 2 (b) xiv.d	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.	We request you to kindly explain us the process and inputs for design waypoints and deploy virtual aids?	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.**"
48.	Section VII, 2 (b) xiv.e.iv	71	History of all past routes recorded duly taken for the knowledge of IWT operator and Admin.	Is standard route format. rtz sufficient for route management? Please confirm.	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**."
49.	Section VII, 3	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.	a. Do the hardware sensors need to be monitored by the command centre infrastructure as well? Please confirm.	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
50.				b. Is there a DR location for it?	

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
				Please confirm	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."**
51. **52.**	Section VII, 3.iii	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. c. All the hardware supplied shall have warranty for the tender period.	a. Does the hardware provided for CC have to be a certain brand? Please confirm. b. Whether data security will be protected by the excess warranty for HDD replacement? Please confirm.	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. d. **Any branded product which is compatible with the hardware is to be provided.**"
53.	Section VII, 4	72	**Hosted on Cloud Servers** The whole GIS should be hosted on cloud based servers and the bidder may choose their Cloud Service Provider.	a. Is there exist any restrictions on location within India for the data centre can host the application stack? Please confirm.	Tender Conditions Prevail.

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
54.				b. Is there a restriction on the CSP's ability to function as an Indian government agency? Please confirm.	Tender Conditions Prevail.
55.				c. Is there exist any software or platform limitations on the application's development that could affect cloud hosting? Please confirm.	Tender Conditions Prevail.
56.	Section VII, 4 (2)	72	The CSP should have at least 3 Data Centers empaneled with MEITY and STQC audited at the bid submission.	There are not many CSPs which have multiple DC empanelled with MeitY. https://www.meity.gov.in/content/gi-cloud-meghraj	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."
57.	Section VII, 4 (5)	73	CSP should have successfully implemented / commissioned at least two (02) projects of DC/DR with Cloud Deployment.	Disaster Recovery (DR): Please confirm is there any requirement of DR on cloud? If yes, should it be Active-Active mode or Active - Passive mode ?	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.**"
58.	Section VII, 4 (6)	73	CSP shall have published on its public facing website 1. Cloud services' rates for India 2. Service Level Agreements (SLAs) 3. Dashboard live-status of cloud	Any CSP will hardly publish its rates on its public website. Kindly reconsider this clause.	Tender Conditions Prevail.

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
			services' health across global data center and outage details (if any) with RCA		
59.	Section VII, 5.ii	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.	Is the dedicated command centre at the Noida location is identical to or distinct from the one mentioned above? Please confirm	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.
60.	Section VII, 5.iii	74	Providing of Cloud based application services.	Does the use of open-source software to create apps have any limitations? Please confirm.	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.**"
61.	Section VII, 5.iv	74	The employer may commercialize the app at any appropriate stage will be indicated separately	Is there a payment gateway compliance specification available for the mobile app to be sold commercially? Please confirm.	Tender Conditions Prevail.
62.	Section VII, 5, FRS: User Registration Module: Sl.No. 1	74	System shall provide single interface for registration to all the stakeholders involved (IWAI Officials (Contractual & Permanent), Marine users, Private Users.))	a. How will IWAI make sure that each vessel will download the application and register on it? Or what if the vessel turn off the application? How will IWAI regulate this? b. What if more than 1 user per vessel register on the	Tender Conditions Prevail

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
			application?		
63.	Section VII, 5, FRS: User Registration Module: Sl.No. 10	76	System shall be integrated to E-mail, whatsapp and SMS gateway for email, whatsapp and SMS notifications and alerts	Will IWAI provide mail server, WhatsApp API for integration, SMS gateway for integration?	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.**"
64.	Section VII FRS: System Software & Support Services : Sl.No. 45	83	The application should provide the users with adequate information regarding the privacy settings and implications with regards to the application.	Request to confirm 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.**"
65.	Section VII FRS: System Software & Support Services : Sl No. 56	84	The system shall allow process designers to define multiple automatic system defined stages, where no human intervention is required.	Request to confirm the multiple automatic system defined stages, where no human intervention is required? What is the meaning of stages in this context?	Tender Clause **Deleted**
66.	Section VII FRS: System Software & Support Services : Sl No.57	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.	Request to confirm business process meaning here as software can work only with the defined logic?	Clause amended and shall be read as: "The interface shall be easy to **use.**"

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
67.	Section VII FRS: System Software & Support Services : Sl No.58	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.	Request to confirm if this point applicable to web application or android application? What is meant by process and sub process here?	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**."
68.	Section VII FRS: System Software & Support Services : Sl No.59	84	The workflow management system development environment shall provide easy navigation to choose sub-processes as required to be invoked from within a process.	Is this point applicable to web application or android application? What is meant by process and sub process here? What is workflow management system in river navigation application regard?	Tender Clause **Deleted**
69.	Section VII FRS: System Software & Support Services : Sl No.60	84	Facility to copy and paste work stages along with all its properties.	Request to confirm the kind of data will be copied and paste in River navigation?	Tender Clause **Deleted**
70.	Section VII FRS: System Software & Support Services : Sl No.61	84	Facility to define documents viewed and to be attached at individual stages.	Request to confirm the kind of documents and where to attach, in web application or android application?	Tender Clause **Deleted**
71.	Section VII FRS: System Software & Support Services : Sl No.62	84	The Process designer shall support multiple Introduction stages for introducing different document types from different acquisition sources	Request to confirm if this regarding the surveyed data to be uploaded to the server for navigation?	Clause amended and shall be read as: "The **application** shall support multiple Introduction stages for **introducing different tools and**

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
					features types from different acquisition sources"
72.	Section VII FRS: System Software & Support Services : Sl No.**64.**	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.	Request to confirm What is meant by stage here? Is this relevant to android application or web application?	Tender Clause **Deleted**
73.	Section VII FRS: System Software & Support Services : Sl No.**65.**	84	The system shall allow process designers to design properties for each work stage like default document view, form view or Exception view etc.	Request to confirm What is meant by stage here?	Tender Clause **Deleted**
74.	Section VII FRS: System Software & Support Services : Sl No.**66.**	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.	Request to confirm if this different type of alarms from the admin to be sent to users using web portal?	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**."
75.	Section VII FRS: System Software & Support Services : Sl No.**67.**	85	The workflow management system shall support the definition of roles and allow many-to-many relationships between users and roles to be defined.	Request to confirm if this regarding identification of users available nearby or in certain radius range?	Tender Clause **Deleted**

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
76.	Section VII FRS: System Software & Support Services : Sl No.**68.**	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	Request to confirm What kind of development of business process model here apart from the developed web and android application?	Tender Clause **Deleted**
77.	Section VII FRS: System Software & Support Services : Sl No.**69.**	85	The system shall provide inbuilt facility to design Custom forms that can be attached at one or more stages of workflow.	Request to confirm What kind of forms and where it has to be created & attached?	Tender Clause **Deleted**
78.	Section VII FRS: System Software & Support Services : Sl No.**70.**	85	The Form designer interface shall support facility to define text boxes, Combo boxes, radio buttons, Drop down etc	Request to confirm What kind of forms and where it has to be created?	Tender Clause **Deleted**
79.	Section VII FRS: System Software & Support Services : Sl No.**71**	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	Request to confirm if this is relevant with web application or android application?	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."
80.	Section VII FRS: System Software & Support Services : Sl No.**80.**	86	The system shall provide facility to define exceptions at individual stages, which shall dynamically change the route on execution.	Request to confirm What is meant by stage here?	Tender Clause **Deleted**

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
81.	Section VII FRS: System Software & Support Services : Sl No.**81.**	86	The system shall facility to give rights to raise and clear exceptions at different stages of the process with user comments.	Request to confirm if this is regarding any finding from the user end and to be reported to admin for approval?	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."
82.	Section VII FRS: System Software & Support Services : Sl No.**82.**	86	Facility to raise triggers on the basis of exceptions.	Request to confirm if this is different kind of alarms?	Clause amended and shall be read as: "Facility to raise **alarms on the basis of navigational incidents/hazards.**"
83.	Section VII FRS: System Software & Support Services : Sl No.**83.**	86	Facility to raise automatic exceptions on the basis of pre-defined conditions.	Request to confirm if this is different kind of alarms?	Tender Clause **Deleted**
84.	Section VII FRS: System Software & Support Services : Sl No.**84.**	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.	Request to confirm this is regarding any finding from the user end?	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."
85.	Section VII FRS: System Software & Support Services : Sl No.**85.**	86	The system shall clearly differentiate process instances with and without exception	Request to brief we are Unable to understand this point	Clause amended and shall be read as: "The applications shall clearly differentiate various **incidents or accidents**."

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
86.	Section VII FRS: System Software & Support Services : Sl No.**86.**	86	The system shall provide facility to define tasks for individual or group of users with deadlines.	Request to confirm What kind of tasks in River navigation application apart fromnavigation?	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."
87.	Section VII FRS: System Software & Support Services : Sl No.**87.**	86	The system shall provide facility to define check lists for individual stage with option to make particular checklist items as mandatory.	Request to confirm In which application and where it is required?	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."
88.	Section VII FRS: System Software & Support Services : Sl No.**88.**	86	Facility to raise triggers on the basis of checklist.	Request to confirm if it means alarm here?	Tender Clause **Deleted.**
89.	Section VII FRS: System Software & Support Services : Sl No.**89.**	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 the email, the user shall be able to click on the attachment in the email to automatically launch the Workflow management system	Request to confirm if workflows management system means web application here?	Tender Clause **Deleted.**

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
			and present the user with the task to act on.		
90.	Section VII FRS: System Software & Support Services : Sl No.**90.**	86	Automatic reminders to concerned users for delegated tasks.	Request to confirm What kind of tasks in River navigation application apart fromnavigation?	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**."
91.	Section VII FRS: System Software & Support Services : Sl No.**91.**	86	The system shall allow definition of audit stages to audit work of new users. The users 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.	Request to confirm What kind of defined work to audit for users in River navigation application apart fromnavigation?	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**."
92.	Section VII FRS: System Software & Support Services : Sl No.**92.**	86	The workflow management system shall provide user-definable job filters and sorters for the outstanding tasks for viewing and work prioritization.	Request to confirm What kind of job filters in River navigation application apartfrom navigation?	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.**"
93.	Section VII FRS: System Software & Support Services : Sl No.**93.**	87	The workflow management system 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).	Request to brief as we are unable to understand this point in regard with River application	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

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
					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.**"
94.	Section VII FRS: System Software & Support Services : Sl No.**94.**	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).	Request to brief as we are unable to understand this point in regard with River application	Tender Clause **Deleted.**
95.	Section VII FRS: System Software & Support Services : Sl No.**95.**	87	The system shall provide facility to define custom triggers like Emails, Word template or launching executable etc. on predefined conditions	Request to brief as we are unable to understand this point	Tender Clause **Deleted.**
96.	Section VII FRS: System Software & Support Services : Sl No.**96.**	87	The system shall provide facility to define custom templates for the triggers with static and dynamic data.	Request to brief as we are unable to understand this point	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.**"
97.	Section VII FRS: System Software & Support Services : Sl No.**98.**	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 the email, the user shall be able to click on the	Request to confirm if workflows management system means web application here?	Tender Clause **Deleted.**

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
			URL in the email to automatically launchthe Workflow management system and present the user with the task to act on.		
98.	Section VII FRS: System Software & Support Services : Sl No.**99.**	87	The workflow management system shall be based on an N-tier, open, scalable architecture.	Request to confirm if workflows management system means web applicationhere?	Clause amended and shall be read as: "The **web application** shall be based on an N-tier, open, scalable architecture."
99.	Section VII FRS: System Software & Support Services : Sl No.**100.**	87	The workflow management system shall support thin client architecture.	Request to confirm if workflows management system means web applicationhere?	Clause amended and shall be read as: "The **web application** shall support thin client architecture."
100.	Section VII FRS: System Software & Support Services : Sl No.**101.**	87	The workflow management system shall support Web based interfaces.	Request to confirm if workflows management system means web applicationhere?	Clause amended and shall be read as: "The **web application** shall support Web based interfaces."
101.	Section VII FRS: System Software & Support Services : Sl No.**102.**	87	The workflow management system shall support XML messaging and SOA Architecture.	Request to confirm if workflows management system means web applicationhere?	Clause amended and shall be read as: "The **web application** shall support XML messaging and SOA Architecture."
102.	Section VII FRS: System Software & Support Services : Sl No.**103.**	87	The workflow management system shall have the ability to integrate through messaging.	Request to confirm if workflows management system means web applicationhere?	Clause amended and shall be read as: "The **web application** shall have the ability to integrate through messaging."
103.	Section VII FRS: System	87	The workflow management system shall have the ability to integrate through APIs.	Request to confirm if workflows management system means web	Clause amended and shall be read as:

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
	Software & Support Services : Sl No.**104.**			applicationhere?	"The **web application** shall have the ability to integrate through APIs."
104.	Section VII FRS: System Software & Support Services : Sl No.**106.**	88	The workflow management system shall run in a clustered environment.	Request to confirm if workflows management system means web applicationhere?	Clause amended and shall be read as: "the **web application** shall run in a clustered environment."
105.	Section VII FRS: System Software & Support Services : Sl No.**107.**	88	The workflow management system shall be scalable through both horizontal clustering (multiple channels) and vertical clustering (multiple Instances per machine).	Request to confirm if this mean, multiple instances of the application?	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**)".
106.	Section VII FRS: System Software & Support Services : Sl No.**126.**	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.	What kind of work will be assigned to the user by admin in River navigation application?	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."
107.	Section VII FRS: System Software & Support Services : Sl No.**144.**	91	The workflow management system shall support integration based on messaging.	Request to confirm if this is user registration?	Clause amended and shall be read as: "The **web application** shall support **registration** based on messaging."

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
108.	Section VII FRS: System Software & Support Services : Sl No.**145.**	91	The workflow management system shall support integration based on standards such as XML	Request to confirm if this is user registration?	Clause amended and shall be read as: "The **web application** shall support integration based on standards such as XML"
109.	Section VII FRS: System Software & Support Services : Sl No.**148.**	91	The workflow management system shall allow documents used in processes to come from inbuilt proposed Document Management System.	Request to brief as we are unable to understand about inbuilt proposed document management system	Tender Clause **Deleted**.
110.	Section VII FRS: System Software & Support Services : Sl No.**167.**	93	Requirement Description.	Request to brief as we are Unable to understand. Please elaborate	Tender Clause **Deleted.**
111.	Section VII FRS: System Software & Support Services : Sl No.**180.**	94	The system shall support consistent, globally unique naming and addressing scheme for data made centrally and automatically/systemically.	Request to Please elaborate this point	Tender Clause **Deleted.**
112.	Section VII FRS: System Software & Support Services : Sl No.**183.**	94	Online application shall be designed to permit user for easy insertion of new modules and new enhancements.	Request to confirm if user means **user with admin rights** to insert/update/delete data from the server here?	Clause amended and shall be read as: "Web application shall be designed to permit **IWAI** for easy insertion of new modules and new enhancements."
113.	Section VII FRS: System Software &	98	The system shall have ability to customize user menus and screens based on user access authority.	Request to confirm if this is regarding web application?	Clause amended and shall be read as: "**Both the applications** shall have ability to customize user menus

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
	Support Services : Sl No.**223.**				and screens approved by the authority."
114.	Section VII: Cloud Application and Platform Services	101	Request to include clause	Hyperscale CSPs can offer Infrastructure wherein customers can architect their applications for near-zero RPO and RTO that can be achieved through synchronous replication of data across the datacentre and disaster recovery sites. This is possible only when the data centres are close enough to allow high-speed low latency links for synchronous replication but at the same physically distinct and far apart so that even uncommon disasters such as fires, tornados, or flooding do not simultaneously impact both the facilities. In the latest DR guidelines released by MeitY accessible at : https://www.meity.gov.in/writereaddata/files/DR%20Best%20Practices.pdf there is a recommendation to use Hot Site DR strategy for business-critical applications. In this regard, we would request include clause for 'Bidder/CSP to	Clause included at Section VII, 4 (5). Refer Query no. 57.

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
				ensure Active-Active synchronous replication across multiple data centers to offer near zero RTO/RPO suitable for the applications.'	
115.	Section VII: Firewall Services	118	Firewall Services specifications	We request department to also allow CSP managed firewall solution as a service in the RFP. As the technical specifications mentioned are biased to a hardware appliance. Below (points 2.1 to 2.4) we have given some clauses of Firewall services specifications mentioned in the RFP for reference and pointing specific details limiting wider participation. Instead of mentioning the detailed technical specifications of hardware box, in the cloud based environment you should mention the functional requirements like High availability and automated scaling, Stateful firewall, Web filtering, Intrusion prevention, Central management and visibility, Inspection encrypted traffic, etc.	Clause added at Section VII: FRS: Firewall Services, Sr.No. 42: **"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."**

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
				Therefore we request you to delete the detailed technical specifications for Firewall services and/or allow CSP managed firewall for seamless integration with the cloud environment , scale and provide better elasticity and offer flexible pricing models based on usage, provide an SLA of up to 99.9%.	
116.	Section VII: Firewall Services: Sr.No.2:	119	The Firewall Appliance / solution / offering should have certifications like NDPP / ICSA / EAL4 or more	CSPs can also offer native Firewall services 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. Therefore request you to delete this clause for larger participations.	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."**
117.	Section VII: Firewall Services: Sr.No.3:	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	As a cloud offering we will be able to provide both firewall solution and VPN solution as a service. Therefore we request you to not limit this as a single applicance	Clause amended and shall be read as: "The Appliance / virtual /cloud offering based security platform should be capable of providing

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
				functionality. Please change this clause as -- The Appliance / virtual /cloud offering based security platform should be capable of providing firewall, IPS, and VPN (both IPSecand SSL) functionality	firewall, IPS, and VPN (both IPSecand SSL) **functionality.**"
118.	Section VII: Firewall Services: Sr.No.4:	119	The Appliance / virtual /cloud offering hardware should be a multicore CPU architecture with a hardened operating system to support higher memory	As a cloud offering we will be able to provide firewall as a service. Therefore we request you to not limit this with any vendor product. Please change this clause 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	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.**"
119.	Section VII: Firewall Services: Sr.No.5:	119	Proposed Firewall should be open architecture based on multi-core cpu's to protect & scale against dynamic latest security threats.	As a cloud offering we will be able to provide firewall as a service. Therefore we request you to not limit this with any vendor product. Please change this clause as -- 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.**"

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
				cloud service provider native firewall solution	
120.	Section VII FRS: Presentation Layer: Sl.No 44	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.	Kindly confirm here who will be Voice Based Users.	Clause Amended and Shall be read as "The system should be capable of displaying the previous interaction histories on email/**SMS**"
121.	Section VII FRS: API Management	131		We request department to also allow CSP managed API Gateway solution as a service in the RFP. As the technical specifications mentioned are biased to a vendor specific. Below (points 3.1 to 3.6) we have given some clauses of API management specifications mentioned in the RFP for reference and pointing specific details limiting wider participation. Instead of mentioning the detailed technical specifications of hardware box, in the cloud based environment you should mention the functional requirements like Support for RESTful APIs and WebSocket APIs, Easy API Creation and Deployment, API Operations Monitoring, API	Clause Added at Section VII: FRS: API Manager, Sr. No. 56. **"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."**

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
				Lifecycle Management, etc Therefore we request you to delete the detailed technical specifications for API Management and/or allow CSP managed firewall for seamless integration with the cloud environment , scale and provide better elasticity and pay-as-you-go pricing model, ,provide an SLA of up to 99.9%.	
122.	Section VII FRS: API Management, Sl. No. 9	131	API Manager-System should support clustered architecture to allow linear scalability across multiple instances with automatic failover	AWS API Gateway is a fully managed service, which means AWS handles the infrastructure provisioning, maintenance, and scaling of the service on behalf of the users. API Gateway automatically scales resources based on the incoming traffic and workload patterns without requiring user intervention. Therefore we request you to delete this clause	Tender Clause **Deleted.**
123.	Section VII FRS: API Management, Sl. No. 13	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	AWS API Gateway is a fully managed service, which means AWS handles the infrastructure provisioning, maintenance, and scaling of the service on behalf of	Tender Clause **Deleted.**

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
				the users. API Gateway automatically scales resources based on the incoming traffic and workload patterns without requiring user intervention. AWS API Gateway supports versioning of APIs, define stage variables, integrates with Amazon CloudWatch Logs to provide logging and monitoring capabilities for your APIs

Therefore we request you to delete this clause as this is vendor specific or allow different ways to achieve the functionality. | |
| 124. | Section VII FRS: API Management, Sl. No. 16 | 131 | System should support features to limit API access based on user, time of day and/or IP address | Please change this clause for larger participation--

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." |
| 125. | Section VII FRS: API Management, Sl. No. 17 | 131 | System should support route API traffic based on geography, IP address and/or backend response times | Please change this clause for larger participation--

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." |

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
126.	Section VII FRS: API Management, Sl. No. 22	132	Systems should have in-built features to handle composition, versioning, rollback and orchestration of API's	Please change this clause for larger participation-- Systems should have in-built features to handle composition/ versioning/ rollback / orchestration of API's	Clause Amended and Shall be read as "Systems should have in-built features to handle composition **/** versioning **/** rollback **/** **o**rchestration of API's."
127.	Section VII FRS: API Management, Sl. No. 28	132	System should be able to do threat detection and message content filtering	Please delete this clause for larger participation.	Tender Clause **Deleted.**
128.	Section VII: Compliance with latest security guidelines	137	The security of the solution developed, and cloud provisioning should be compliant with the latest National Critical Information Infrastructure Protection Centre (NCIIPC) guidelines	NCIIPC (National Critical Information Infrastructure Protection Centre) is responsible for identification and protection of Critical Information Infrastructure (CII) and Protected Systems that are notified under Section 70 of the IT Act. Entities that are CIIs and Protected System are required to ensure, amongst other things, timely reporting of cyber incidents to NCIIPC as per Information Technology (Information Security Practices and Procedures for Protected System) Rules, 2018. However, the NCIIPC guidelines may not be applicable to the CSP data centres. It may be noted that as	Tender Clause **Deleted.**

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
				a Meity empaneled CSP we comply with all laws that are applicable to it including the applicable provisions of the Information Technology Act, 2000. Request to change the clause to: The security of the solution developed, and cloud provisioning should be compliant with the latest MeitY guidelines.	
129.	Section VII, Deliverables Schedule for River Navigation Application	138	Go-Live of River Navigational Application: T+5 months	We understand that the VTS system can be delivered in 5 months and other functionality will be implemented later? Please confirm.	Tender Condition Prevails.
130.	Section VII, Deliverables Schedule for River Navigation Application	138	Timeline – 5 months	We request you to increase the existing timeline duration for the application development from 5 months to at least 12 months, due to vast complexity involved in the scope of work, along with 5 years for Upgradation Maintenance & Enhancement.	Tender Condition Prevails.
131.	SCC 6.4, Sl. No.9	166	Resource Persons at IWAI H.O Control Centre for five years: Payment will be made on Quarterly (3 Months) basis on BOQ Sl No. 3.	We request to dept. kindly amend this clause as : Resource Persons at IWAI H.O	Tender Condition Prevails.

S.no.	Clause &Sub-Clause	Ref. Page Number	Clause/ Content of Tender	Clarification Sought	IWAI response
				Control Centre for five years. Payment will be made on Monthly basis on BOQ Sl No. 3.	