

**PRASAR BHARATI
DIRECTORATE GENERAL: DOORDARSHAN
PURCHASE DIRECTORATE (ENGG.)
DOORDARSHAN BHAWAN
NEW DELHI – 110001**

Dated: 24/11/2023

Computer No:E 209870 & File No: RFP/03/2023-24EI(P)TV

Notice Inviting Open e-Tender (NIT-25/2023-24)

E-tenders are invited for and on behalf of Prasar Bharati, Doordarshan under two bids systems for Supply/SITC/SETC of following Equipment/spares from reputed Indian bidders as detailed below:

Open e-tender notice no.	Brief Description	Qty.	Estimated Value including applicable taxes in Lakhs (Rs.)	Date of Opening	Earnest Money (Rs.)	Delivery Period
File No: RFP/03/2023-24EI(P)TV	Selection of Master System Integrator for Design, Development, Implementation, Operations and Maintenance of OTT platform	One	Rs 1,66,00,00,000/- (Total: Rs 166 Cr over a period of 5 years)	08/12/2023 at 11:00 hours	6,64,00,000/-	As per RFP / Technical Specification No. OTT PB v 09

Note:-

1. The Tender Documents, Terms & Conditions and other details including amendments /changes can be viewed /downloaded from website <https://prasarbharati.eproc.in>
2. Notice inviting Open e-tender is also available on Doordarshan website <https://prasarbharati.gov.in/pbtenders> or from <https://eprocure.gov.in>

**Signed by Narendra Kumar
Choursiya
Date: 24-11-2023 21:56:30
For Director General, Doordarshan**



REQUEST FOR PROPOSAL FOR SELECTION OF MASTER SYSTEM INTEGRATOR FOR DESIGN, DEVELOPMENT, IMPLEMENTATION, OPERATIONS AND MAINTENANCE OF OTT PLATFORM

Prasar Bharati, Prasar Bharati House, Copernicus Marg, New Delhi – 110001



Abbreviations

Sr. No.	Abbreviation	Full Form
1	BDS	Bids Data Sheet
2	CPPP	Central Public Procurement Portal
3	CVC	Central Vigilance Commission
4	DP	Delivery Period
5	DSC	Digital Signature Certificate
6	EMD	Earnest Money Deposit
7	FOR	Free on Rail/Road
8	GST	Goods and Service Tax
9	GSTIN	Goods and Service Tax Identification Number
10	GTC	General Terms & Conditions
11	HSN/ SAC	Harmonized System Nomenclature / Service Accounting Code.
12	IEM	Independent External Monitor
13	IFB	Invitation for Bid
14	INR	Indian Rupees
15	IP	Integrity Pact
16	ITB	Instructions to Bidders
17	JV	Joint Venture
18	L-1	Lowest Tender

Sr. No.	Abbreviation	Full Form
19	LPP	Last Purchase Price
20	MSME	Micro, / Small & Medium Enterprise
21	NEFT	National Electronic Funds Transfer
22	OEM	Original Equipment Manufacture
23	PBG	Performance Bank Guarantee
24	RTGS	Real Time Gross Settlement
25	SITC	Supply, Installation, Testing &Commissioning.
26	SETC:	Supply, Erection, Testing &Commissioning.
27	FOC	Free of Charge
28	DC	Data Center
29	DR	Disaster Recovery Center
30	OTT	Over The Top
31	TPN	Trusted Party Network

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1. Invitation For Bid (IFB)

Ref No:

Dated :

To,

SUB: Selection of Master System Integrator for Design, Development, Implementation, Operations and Maintenance of OTT platform

Dear Sir/Madam,

1.1. On behalf of the Prasar Bharati (India's Public service Broadcaster), Doordarshan, Digitally signed E-tenders are invited from eligible bidders in the prescribed Bid Proforma under Two bid system for Selection of Master System Integrator for Design, Development, Implementation, Operations and Maintenance of OTT platform for the subject in complete accordance with the following details and enclosed Bid Documents, as prescribed at Annexure, Form No.1 to 15. The details of tender are given below:

1.2. Bids Data Sheet: The brief details of the tender are as under:

1.2.1. Tender Inviting Authority	Prasar Bharati (Broadcasting Corporation of India) Director General, Doordarshan
1.2.2. Tender for	Selection of Master System Integrator for Design, Development, Implementation, Operations and Maintenance of OTT platform
1.2.3. Tender Reference No.	
1.2.4. Place of availability of Tender Documents (RFPs)	Procurement Portal of Prasar Bharati http://prasarbharati.eproc.in Website of Prasar Bharati, https://prasarbharati.gov.in/ Central Public Procurement Portal (CPPP): http://www.eprocure.gov.in
1.2.5. Estimated Cost of the Tender	₹ 166 Crore
1.2.6. Tender Processing Fee	As per Para 2.1.8 of "Instructions to Bidder"

RFP for Selection of MSI for OTT platform for Prasar Bharati

1.2.7. Earnest Money Deposit (EMD)	₹ 6.64 Crore
1.2.8. Address to send bid Queries	Queries Email: <ddpurchase401@yahoo.co.in>
1.2.9. Nature of bid process	Two BID System Technical Bid Commercial Bid
1.2.10. Broad Scope of Work	As per RFP
1.2.11. Bid Validity up to:	90 (Ninety) days from the date of opening of Technical Bid.
1.2.12. Bid Bond/EMD Validity up to	135 days (Bid validity +45 days beyond bid validity.)
1.2.13. Date of publication of Bid	24/11/2023
1.2.14. Last Date & Time for Submission of Bid	08/12/2023 10: 00 Hrs
1.2.15. Date & Time of Pre- bid Conference	Not Applicable
1.2.16. Place for Pre-bid meeting (could also be processed through e-procurement portal)	Not Applicable
1.2.17. Opening of Technical bid	08/12/2023 11:00 Hrs
1.2.18. Opening of Commercial bids	To be informed after completing Technical Evaluation
1.2.19. Address for Communication	ASSISTANT DIRECTOR (ENGG.) ROOM NO. 403 DIRECTORATE GENERAL: DOORDARSHAN DOORDARSHAN BHAWAN, COPERNICUS MARG, NEW DELHI- 110001 (INDIA) TELEPHONE -011-23114403
1.2.20. Paying Authority	DDO, Prasar Bharati Secretariat

Note: In case the days specified above happen to be a holiday in Prasar Bharati, the next working day shall be implied

1.3. Instructions to Bidders: Clause 2

1.4. General Terms and Conditions:

1.5. Bid Evaluation Criteria : As per RFP

1.6. Delivery Period: As per RFP

1.7. Technical Specification: As per RFP

1.8. The Bid Security/Performance Security from any Indian scheduled Commercial Bank would be acceptable.

1.9. Warranty/Guarantee: As per RFP

1.10. Performance Security Deposit: As per Required as per Clause 3.8 of Appendix-B (General Terms and Conditions) and Annexure- 14 (Form -14).

1.10.1. Amount to be 5% of the value of the contract.

1.10.2. Performance security shall be valid up to twelve months after completion of Contract period.

1.11. Bids shall be submitted in electronic mode only as per the ITB. EMD/Bid Security have to be submitted in the format described under clause 2.1.14 by the bidder before the due date & time of the opening of the bid to the address mentioned in Bid Data Sheet (Please refer Clause 2.1.15). The copy of the EMD/Bid Security shall also be uploaded along with the Technical Bid (BDS).

1.12. Bidder(s) are advised to submit their bid strictly as per terms and conditions of the Tender Documents and not to stipulate any deviations.

1.13. A Nil deviation Certificate as mentioned in the Form-8 shall have to be essentially submitted by the Bidder along with the Technical Bid.

1.14. The Tender will be governed by the “Instruction to the Bidder”, “General Terms and Conditions” and “Technical Specifications” as per RFP. The contract will be governed by Indian laws including the Indian Contract Act, 1872; the Sale of Goods Act, 1930; Right to Information Act, 2005; The Micro, Small and Medium Enterprises Development Act, 2006; Prevention of Corruption Act, 1988; and Arbitration and Conciliation Act, 1996, etc, as amended from time to time. The contract will also be governed by General Financial Rules, 2017, Manual for procurement of goods and works 2017 and 2019, Delegation of Financial Power Rules and any other financial, vigilance, security, safety, counter- trade and other regulatory aspects, orders and guidelines of the Government on the subject of Public Procurement as amended from time to time in so far as they are applicable and not inconsistent with the conditions mentioned in the tender document.

- 1.15. Prasar Bharati will follow the reciprocal market access strategy of the Government of India, which describes on the Clause 10 (d) of Public Procurement Preference to Make in India, Order 2017. The Purchaser reserves the right to not consider any Bid and may restrict such Bidders from the bidding process who originate from those countries, where they do not allow market access for Indian companies; in such cases, the Clause 10(d) of Public Procurement Preference to Make in India, order 2017, shall be invoked wherever applicable, when it is relevant.
- 1.16. Single Stage Two Bid Systems shall be followed for this tender. Bidders should take due care to submit tenders in accordance with Bid requirements as specified in clause 2.1 of “Instruction to Bidders”. Bid evaluation Criteria shall be the basis for evaluation of tenders.
- 1.17. For Payment terms pertaining to this bid, please refer to clause 11 of the tender document and RFP.
- 1.18. As per clause 171(1) of CGST Act, 2017 which relates to anti-profiteering measure, any reduction in rate of tax on any supply of goods and or services or both, the benefit of input tax credit shall be passed on to the recipient by way of commensurate reduction in prices.
- 1.19. THE FOLLOWING SHOULD BE SUBMITTED ALONG WITH THE TENDER.
- 1.19.1. Original Equipment's Manufacturer's authorization for the services offered.
- 1.19.2. Documents as specified in Technical specifications as per RFP.
- 1.20. Paying Authority:

S. No.	Bill Processing Zone	Paying Authority
1	Director (IT), Prasar Bharati Secretariat	DDO, Prasar Bharati Secretariat

Note:-Supplier has to provide Tax Invoices to Bill Processing Authorities. The GST Compliant Invoices should have firm's GSTIN & Consignee GSTIN.

- 1.21. Prasar Bharati follows e-tendering Process; Bid shall be submitted only on <https://prsarbharati.eproc.in>. The responsive Bids shall be decided according to various aspects mentioned in ITB, GTC and Eligibility conditions mentioned in the Bid Document. Before the Bid submission, Bidders are advised to refer the help manuals and general FAQs provided in the E-procurement Portal regarding the e-tendering.
- 1.22. Clarification(s)/Corrigendum(s) if any shall also be available on referred above websites, Para 1.2.4. Any revision, clarification, addendum, corrigendum, time extension, etc. to the Tender Document will be hosted on the above mentioned website(s) only. Bidders are requested to visit the website regularly to keep themselves updated.
- 1.23. EVALUATION METHODOLOGY: Price evaluation shall be on the QCBS basis as detailed in the RFP. The “Schedule of Rates / Prices” quoted for complete scope of bid inclusive of GST shall be taken up for evaluation.
- 1.24. In case any cess on GST is applicable same shall also be considered in evaluation.
- 1.25. The Bidders shall quote on FOR destination basis only.

For & on behalf of Prasar Bharati,

Name:

Designation: Assistant Director (Engg.)

E-mail ID : ddpurchase401@yahoo.co.in

Contact No. : 011-23114403

2. Instruction To Bidders (ITB) and General Terms and Conditions (GTC)

- 2.1.1 Instructions To Bidders For Online Bid Submission:
- 2.1.2 The scope of bid to be tendered are available in the complete bid documents which can be viewed / downloaded free of cost from e-procurement portal of Prasar Bharati, <https://prasarbharati.eproc.in> , or from the website Prasar Bharati, www.prasarbharati.gov.in or CPP Portal <http://eprocure.gov.in> .
- 2.1.3 Both Technical Bid and Commercial Bid will be submitted concurrently duly digitally signed on the website <https://prasarbharati.eproc.in>
- 2.1.4 No claim shall be entertained on account of any Technical snag or disruption of internet service being used by bidders. Bidders are advised to upload their bids well in advance to avoid last minute technical snags.
- 2.1.5 All Corrigendum/Amendment/Corrections, if any, will be published on the website <https://prasarbharati.eproc.in>
- 2.1.6 All documents / papers uploaded / submitted by the bidder must be in English and legible.
- 2.1.7 It is mandatory for all the applicants to have Class-III Digital Signature Certificate, with both DSC Components i.e. signing & Encryption, (in the name of the person who will sign the bid document) from any of the licensed Certifying Agency. Bidder may contact the Service provider of e-procurement Portal, at mobile no. +91-8130606629 for DSC related queries or can email at vikas.kumar@c1india.com/prasarbharatisupport@c1india.com.
- 2.1.8 The Bidders/ Vendors shall be charged the Processing Fees in according with the Estimated Cost of respective Tenders. The following are the charges to be paid by the Bidders /Vendors on the e-procurement portal:

Estimated value of Tender	Processing fees	
	Per Tender Per Bidder	Total including GST
Less than or Equal to Rs. 10 Lakhs	₹ 475.00 + 18 % GST	₹560.50
More than 10 Lakhs but Less than or equals to 50 Lakhs	₹ 925.00 + 18 % GST	₹1091.50
More than 50 Lakhs	₹ 1150.00 + 18 % GST	₹1357.00
Annual charges for Online Bidder / Vendor for the Registration	₹ 450.00 + 18 % GST	₹531.00

- 2.1.9 To participate in the e-bid, it is mandatory for the Applicants to get themselves registered with the Prasar Bharati e-Tendering Portal (<https://prasarbharati.eproc.in>) to have a user ID & Password which has to be obtained by submitting a non-refundable annual registration charges of Rs. 450/- plus 18% GST through online mode (net banking/debit card/credit card). Validity of Registration is 1year.
- 2.1.10 Page No. shall be given on each and every paper/documents serially uploaded in the technical bid.
- 2.1.11 Bidders shall ensure to quote rate of each item. If any cell is left blank and no rate is quoted by the bidders, the rate of such item shall be treated as “0” (Zero).
- 2.1.12 To participate in bidding, bidders have to pay Tender Processing Fee as mentioned in the Para 2.1.7 through online mode (net banking/debit card/credit card).
- 2.1.13 The Bidder may modify or withdraw their bid after submission prior to the Bid Due Date. No Bid shall be modified or withdrawn by the Bidder after the Bid Due Date and Time.
- 2.1.14 The Bid Security/Earnest Money shall be in the form of Account Payee Demand Draft, NEFT/RTGS from any scheduled bank (s), Fixed Deposit Receipt) FDR, Insurance Surety Bonds, Bankers Cheque or Bank Guarantee from an India scheduled Commercial Bank (including e-bank Guarantee), in favour of PBBCI, DIRECTORATE GENERAL: DOORDARSHAN, NEW DELHI.(Please refer Clause 2.1.18 and 2.20.1)
- 2.1.15 Bid Security/EMD shall be placed in a single sealed envelope superscripted with tender reference no. and date of opening so as to reach <Asstt. Director Engg. (Purchase)/Assistant Engineer (Purchase) in Room No.403, Directorate General: Doordarshan, Doordarshan Bhawan, Copernicus Marg, New Delhi> before scheduled time on prescribed tender opening date. EMD received after Tender opening date shall be summarily rejected along with the corresponding Tender. Hard copy of any other tender document shall not be accepted. Soft copy of the EMD should be uploaded while submitting bids on e-tendering portal.
- 2.1.16 The successful bidders will be required to furnish Performance Security Deposit within 30 days of placement of contract at the rate of Five (5) % (three to ten per cent of the value of the contract, as specified in Rule 171(i) of GFR, 2017.) in one of the acceptable forms as per tender documents. (Ref Ministry of Finance, Department of Expenditure Order No. F.9/4/2020-PPD dated 30/12/2021 or (latest order). Performance Security shall be in the form of Account Payee Demand Draft, Insurance Surety Bonds, NEFT/RTGS from any scheduled bank (s) Fixed Deposit Receipt (FDR), Bankers Cheque or Bank Guarantee (including e-Bank Guarantee from an India scheduled Commercial Bank in an acceptable form.
- 2.1.17 Technical Bid must contain scanned copy of Unconditional Acceptance of Prasar Bharati's Tender Terms & Conditions, GST details and EMD etc.

- 2.1.18 In case of payment through net-banking the money will be immediately transferred to Prasar Bharati's designated Account through NEFT/RTGS from any scheduled bank(s), the bidder will have to furnish the UTR Remittance Number(s) before submission of bid, payment details shall also be uploaded on e-procurement portal along with Bid. The payment of EMD through NEFT /RTGS mode should be made well ahead of time to ensure that the EMD amount is transferred to Prasar Bharti account before submission of bid.
- 2.1.19 The financial Bid shall be opened only of those Bidder(s) found to be meeting the Technical qualifying requirements. In case of nonresponsive Bids, Financial Bids shall not be opened. The opening date of financial bid will be decided later on and same will be informed to eligible Bidders in advance.
- 2.1.20 Prasar Bharati reserves the right to accept or reject any or all applications without assigning any reasons. Prasar Bharati also reserves the right to annul the tender process at any stage without assigning any reason.
- 2.1.21 If any clarification is needed from the bidder about the deficiency in his uploaded documents, he will be asked to provide it through e-procurement portal of Prasar Bharati. The bidder shall upload the requisite clarification/documents within time specified by Prasar Bharati, failing which tender will be liable for rejection.
- 2.1.22 Prasar Bharati reserves the right to reject whose performance at ongoing Contract is below par and usually poor and has been issued letter of restrain/Temporary/Permanent debar by any office of Prasar Bharati, Government or Public sector. (Rule 151, GFR 2017) Prasar Bharati reserves the right to verify the credential submitted by the agency at any stage (before or after the award of the work). If at any stage, any information /documents submitted by the applicant is found to be incorrect/false or have some discrepancy which disqualifies the firm then Prasar Bharati shall take the following action:
- 2.1.22.1 Forfeit the entire amount of EMD submitted by the firm.
- 2.1.22.2 The agency shall be liable for debarment from tendering in Prasar Bharati, apart from any other appropriate contractual/legal action.
- 2.1.23 Bidders have to submit a GST Registration Certificate while uploading the tender.
- 2.1.24 Bidders shall separately indicate the HSN/SAC code, rate and amount of GST for each quoted item as applicable on the date of tendering in their offer, failing which the offer may be rejected.
- 2.1.25 IGST and Compensation Cess (wherever applicable) will be levied on imports.
- 2.1.26 Terms & Conditions given in Technical specifications will supersede for conflict with any terms & conditions given in Tender Document.

2.1.27 For Consortium / Joint Venture: :

- 2.1.28 In case of a Consortium/JV, Power of Attorney issued by Board of Directors/ Chairman/CEO / MD / Company Secretary of the Consortium Lead Member as well as Consortium Member(s) of the Consortium/ partners of JV, in favour of the authorised employee(s) of the Consortium /Lead member of JV, for signing the documents on behalf of the Bidder, in respect of this particular tender, to sign the Bid and all subsequent communications, agreements, documents etc. pertaining to the tender and act and take any and all decisions on behalf of the Consortium/JV, are to be submitted.
- 2.1.29 The authorized employee(s) of the Bidder shall be signing the Bid and any consequence resulting due to such signing shall be binding on the Bidder.
- 2.1.30 Bids from consortium/ JV of two or more members (maximum 3 nos. Including Leader) are acceptable provided that they jointly fulfill the qualification criteria and requirements stated in the Tender Documents. Participating Consortium/ JV shall submit the Agreement, clearly defining the scope and responsibility of each member. Members of consortium/ JV shall assume responsibility jointly & severally. The bid security shall be submitted by the Lead Bidder (Consortium/ JV). In case of award, payment shall be made to the Lead Bidder of the Consortium/JV.
- 2.1.31 The Consortium/ JV Agreement must clearly define the Consortium Leader/ Lead Partner of JV, who shall be responsible on behalf of the Consortium/JV during the period of evaluation of the bid as well as during the execution and timely completion of all the contractual obligations and shall receive/ send instructions for and on behalf of the Consortium/JV..
- 2.1.32 A Consortium/ JV once established at the time of submitting the Bid shall not be allowed to be altered with respect to constituting members of the Consortium/ JV or their respective roles/ scope of supply/work, except with prior written approval of PrasarBharati.If during the evaluation of bids,aConsortium/JV propose any alteration/ changes in the orientation of Consortium/JV or replacements or inclusions or exclusions of any partner(s)/ member(s) which had originally submitted the bid, bid from such Bidder shall be liable for rejection.
- 2.1.33 Any member of the Consortium/ JV shall not be eligible either in an individual capacity or be a part of any other Consortium/JV to participate in this tender. Further, no member of the Consortium/ JV should have been put on 'Holiday' or banned/ blacklisted by Prasar Bharati/ Government department/ Public Sector as on the due date of submission of bid. Offer submitted by such Consortium/ JV shall not be considered for opening/evaluation/Award.

2.2 ONE BID PER BIDDER

- 2.2.1 A Bidder shall submit only 'one [01] Bid' in the same Bidding Process. A Bidder who submits or participates in more than 'one [01] Bid', will cause all the Bids in which the Bidder has participated to be disqualified.
- 2.2.2 Alternative Bids shall not be considered.
- 2.2.3 Any Bidder having formed a JV/Consortium shall not be considered eligible to make JV/consortium with any other bidder or form part of any other JV/Consortium and submit a Bid for the same tender.

2.3 COST OF BIDDING

- 2.3.1 The Bidder shall bear all cost associated with the preparation and submission of the Bid including but not limited to Documentation Charges, Bank charges, all courier charges, translation charges, authentication charges and any associated charges including taxes & duties thereon. Further, Prasar Bharati will in no case be responsible or liable for these costs, regardless of the outcome of the bidding process.
- 2.3.2 The Bidder shall not be entitled to hold any claim against Prasar Bharati for non-compliance due to lack of any kind of pre-requisite information as it is the sole responsibility of the Bidder to obtain all the necessary information with regard to site, surrounding, working conditions, weather etc. on its own before submission of the Bid.
- 2.4 For more information regarding submission of Bid in the e-Procurement portal, Bidders may refer the help manuals and, General FAQs (Frequently Answered Questions) about the e-Tendering, which has been provided in the Portal.

2.5 LIST OF DOCUMENTS (to be uploaded with tender):

2.5.1 PART-I: "TECHNO-COMMERCIAL / UNPRICED BID"

- 2.5.1.1 'Covering Letter' on Bidder's 'Letter head' clearly specifying the enclosed contents.
- 2.5.1.2 'Bidder's General Information', as per 'Form-1' along with Copy of 'PAN' and 'GST' registration and 'Bid Form', as per 'Form-2'
- 2.5.1.3 Scanned copy of EMD along with Form-4
- 2.5.1.4 Copies of documents required as per 'Form -7 (May be modified, if required) and as mentioned elsewhere in the Tender Document.
- 2.5.1.5 Nil deviation Certificate as per 'Form-8'.
- 2.5.1.6 Declaration regarding Holiday/Banning, in 'Form-9
- 2.5.1.7 Letter of Authority' on the Letter Head, as per 'Form-2
- 2.5.1.8 DD's Tender Document along with Technical Specifications should be duly signed on each page.
- 2.5.1.9 Original Equipment's Manufacturers (OEM) Authorization for services offered like Cloud, CDN, MAM and any other.
- 2.5.1.10 Letter of authority to sign and upload bid documents.
- 2.5.1.11 Undertaking regarding Fall Clause
- 2.5.1.12 Enclosures as per Commercial requirement.
- 2.5.1.13 Enclosures as per Technical requirement
- 2.5.1.14 Integrity Pact as per Form 11 (if applicable)(for estimated contract value of Rs. Two Crores or more) duly filled and signed.
- 2.5.1.15 Certificates as mentioned on along with evidence of valid registration by the Competent Authority to be attached, if applicable.
- 2.5.1.16 Any other information/details required as per Tender Document

2.5.2 PART-II: Price Bid (APPENDIX-F - Schedule of Rate)

(As per the format under clause 10 But to be submitted online only in the commercial bid Appendix F)

- 2.6 All GTC attached with the “Invitation to Tender” are sacrosanct for considering any offer as a complete offer. It is therefore important that all documents duly completed and signed are returned with the Bidder’s offer.
- 2.7 Prasar Bharati shall have all right to ignore any offer which fails to comply with the above instructions.
- 2.8 The Bid shall be submitted online not later than the time specified in the tender document, or on the notified date of closing of the tender. Offers sent through any mode other than uploading on e-procurement portal of Prasar Bharati will not be accepted.
- 2.9 Any change in quotation after opening of tender will not be considered. Bidders must ensure that all the documents / files uploaded on e- procurement portal are in order and legible in all respect. Prasar Bharati will not be responsible for any documents / files illegible or corrupted due to any disruption/ technical snag of internet service being used by the bidders.

2.10 VAGUE AND INDEFINITE EXPRESSION

Tenders qualified by vague and indefinite expressions such as "subject to immediate acceptance" or "subject to prior sale" etc. will not be considered. Unconditional Bids shall only be considered.

2.10.1 VALIDITY PERIOD OF OFFER

2.10.1.1 The Tender shall be valid for acceptance for the period as indicated in the "Invitation to Bid" (hereinafter referred to as validity period) and shall not be withdrawn on or after the opening of tenders till the expiration of the validity period or any extension thereof.

2.10.1.2 The offers of these Bidders who have not kept the validity open till the period stipulated in the tender will be treated as unresponsive and will be ignored without making any back reference.

2.10.1.3 The Bidder will undertake not to vary/modify the tender during the validity period or any extension thereof.

2.11 OPENING OF TENDERS

2.11.1 The tender will be opened online on the e-tendering portal of PrasarBharati <https://prasarbharati.eproc.in> at the time specified in the tender document, on the date of opening indicated in the "Invitation to Bid.", in the presence of bidders' authorized representatives who choose to attend.

2.11.2 In case of unscheduled holiday on the closing/opening day of tender, the next working day will be treated as scheduled prescribed day of closing/opening of tender; the time notified remains the same.

2.11.3 PRICES FOR BIDDERS

Bidders are to quote in INR only on FOR Destination basis.

2.12 VARIATION OF QUANTITIES (Ref: PARA 7.5.3 MFP 2017)

At the time of awarding the contract, Prasar Bharati shall have right to re-judge the quantity to be procured based on the current data, since the ground situation may have very well changed. The tendered quantity can be increased or decreased by 25 (Twenty-Five) per cent for ordering, if so warranted (In this bid quantity refers to Contract Period).

2.13 OPTION CLAUSE:

Prasar Bharati reserves the right to increase/decrease the ordered quantity by up to 25 (Twenty Five) per cent at any time, till final delivery date (or the extended delivery date of the contract), by giving reasonable notice even though the quantity ordered initially has been supplied in full before the last date of the Contract period (In this bid quantity refers to Contract Period).

2.14 TAX LIABILITY

- 2.14.1 The Bidder shall be entirely responsible for all taxes, duties, license fees, etc., incurred till its final manufacture/ production up to the point of delivery. Further instruction, if any, shall be as provided in the Schedule of Requirements.
- 2.14.2 Payment of CGST/SGST/UTGST/IGST and all other applicable taxes (on ultimate products and Services) and custom duty, as applicable on the closing date of tender will be to supplier's /contractor's account. In the case of "Two Bid" system where revised price bids are permitted after technical discussions payment of these charges as applicable on closing day of revised price bids, will be to supplier's /contractor's account. Any increase over the rate existing on the last date of submission of Bid shall be reimbursed by the Organisation on production of documentary evidence in support of payment actually made to the concerned authorities. Similarly, if there is any decrease in such duties, taxes and levies the same shall become recoverable from the contractor. The details of such duties, taxes and other levies along with rates shall be declared by the bidder.
- 2.14.3 The bidder(s) will indicate in their bid the amount with exact rate of customs duty and the applicable item of custom tariff under which it is covered. Similarly, the amount of CGST/SGST/UTGST/IGST and all other applicable taxes on ultimate furnished product with HSN/SAC code, as applicable at tendering stage will be shown separately in the bid. In case the above information subsequently proves wrong incorrect or misleading
- (a) This Organization will have no liability to reimburse the excess in the difference in rates of the item under which the duty/ tax assessed finally
 - (b) This Organization will have the right to recover the difference in case the rate of duty/ tax finally assessed is on the lower side.
- 2.14.4 Contractor shall ensure timely submission of invoice(s) as per rules/ regulations of GST with all required supporting document(s) to enable Prasar Bharati to avail Input Tax Credit (ITC). Further, returns and details required to be filed under GST laws & rules should be timely filed by supplier with requisite details.

- 2.14.5 If input tax credit (ITC) with respect to GST (CGST & SGST/UTGST or IGST) which normally shall be available to Prasar Bharati, is not available, for any reason, which is not attributable to Prasar Bharati, then Prasar Bharati shall not be obliged or liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) charged in the invoice(s) and shall be entitled to/ deduct/ setoff/ recover the such GST (CGST & SGST/UTGST or IGST) thereupon together with all penalties and interest if any, against any amounts paid or payable by Prasar Bharati to Supplier/ Vendor.
- 2.14.6 The rates and prices quoted by the Bidder shall be fixed for the duration of the contract and shall not be subject to variations on any account except to the extent variations allowed as per the conditions of the contract of the bidding document.

2.15 TRADE/ VOLUME DISCOUNT

Bidders will not indicate a separate discount. Discount, if any, should be merged in the rates against the quoted items(s). Discount of any type indicated separately will not be taken into account for evaluation purposes.

2.16 ELIGIBILITY CRITERIA

- 2.16.1 Bids should preferably be from original manufacturers, however, Bids from sole selling agents/authorised distributors/authorised dealers can also be considered provided such bids are accompanied with necessary supporting documents/authority letter from concerned original manufacturer who authorised them to market their product, provided further, such an authority letter is valid at the time of bidding. Required Warranty Cover of the manufacturer for the product will be provided by such a supplier through OEM. The Bidder shall not be under a declaration of ineligibility by Purchaser for Corrupt/ Fraudulent/ Collusive/ Coercive practices,
- 2.16.2 The Bidder is not put on 'Holiday' by Prasar Bharati or any of the Government departments, Public Sector or banned/blacklisted by Government department/ Public Sector on the due date of submission of bid. If the Bid submitted by such Bidder shall not be considered for opening/ evaluation/ award and in case of Manual Tendering, such Bid along with the Bid Security, if any, will be returned immediately to the Bidder.
- 2.16.3 Bidder should meet experience and other criteria, as specified in Appendix-D and basic guidelines/ eligibility criteria as per the Pre-Qualification Criteria clause 7.

2.16.4 However nothing in this shall prevent Prasar Bharati from engaging new and emerging Technology start-ups in the areas of R&D and innovation from time to time. Relaxation for Start-ups as per Government guidelines would apply (GFR Rule 173(1) relaxes DPIIT recognised Start-ups from prior experience and prior turnover requirements subject to meeting of quality and technical specifications and making suitable provisions in the Bid document).

2.17 SCOPE OF RFP:

As per Technical Specifications mentioned under Appendix-D.

2.18 CONSIDERATION OF OFFER IN FULL OR IN PART

This Organisation may reject/accept or prefer any tender without having to assign any reason whatsoever. This Organisation also reserves to itself the right to accept any tender in part or split the order between two or more bidders.

2.19 SPECIFICATIONS

2.19.1 If this Organisation finds that services delivered are not according to required specifications or are not satisfactory owing to any reason of which the Organisation will be the sole judge, the Organisation will be entitled to cancel the contract and meet its requirements from the open market at the risk and cost of the supplier/contractor, reserving always to itself the right to forfeit the security deposit placed by the supplier/contractor for fulfillment of the contract.

2.20 BID SECURITY/ EARNEST MONEY/SECURITY DEPOSIT/PERFORMANCE BOND:

2.20.1 **Earnest Money/Bid Bond :** The bidders must submit Earnest Money/ Bid Bond on or before the last date & time of submission of bid in the form of FDR, Bank Draft or Bank Guarantee of any Scheduled Commercial Bank in India in case of Indian supplier or Bank Guarantee/Demand Draft in equivalent Indian currency from a Scheduled Commercial Bank in favour of “PBBCI, DIRECTORATE GENERAL: DOORDARSHAN, NEW DELHI” or in lieu thereof bid bond in the enclosed Proforma at Form - 4 from a Scheduled Indian Commercial Banks for the amount specified in Para 1.2.7 of “Invitation to Bid”. In case of Bank Guarantee obtained from the foreign Bank, it should be guaranteed by a Scheduled Indian Commercial Bank and must be governed by Indian Laws subject to jurisdiction of the court of New Delhi. The bid bond should initially be valid up to 45 days beyond the period of Bid validity (except for the Demand draft whose validity should be 90 days).

2.20.2 Offers without Earnest Money/Bid Security will be ignored.

2.20.3 The earnest money/bid bond of unsuccessful bidders will be returned on finalisation or after the award of the Tender. The earnest money/bid bond of the successful bidder will be returned on receipt of requisite security deposit/Performance Bond.

2.20.4 **FORFEITURE OF EMD:** The earnest money/Bid bond deposited by the Bidder shall be forfeited by this Organisation in the following events:

2.20.4.1 If tender is withdrawn during the validity period or any extension thereof;

- 2.20.4.2 If Bid is amended or modified unsolicited, during the validity period or any extension thereof;
- 2.20.4.3 If a Bidder, whose tender has been accepted, fails to furnish Security deposit, performance bank guarantee within 30 (Thirty) days of the receipt of order/ advance order/ letter of intent;
- 2.20.4.4 In case of tenders in which only a single bidder qualifies or in cases of procurement on PAC basis, if the Bidder decides at any stage not to participate further in the tender but in spite of withdrawing on his own, he deliberately delays the tendering process to let the validity period expire;
- 2.20.4.5 If, the bidder is not earnest about their bid, and withdraws it before the completion of Technical Evaluation against the accepted specification, at the time of bidding and before the validity period or any extension thereof;

2.21 SECURITY DEPOSIT/PERFORMANCE BOND.

The successful bidder, within 30 (Thirty) days of the receipt of order/advance order/letter of intent, will be required to send Security Deposit in the form of Account Payee Demand draft, from any scheduled bank(s), Fixed Deposit Receipt (FDR), Bankers Cheque or Bank Guarantee from an Indian scheduled Commercial Bank favour of PBBCI, DIRECTORATE GENERAL: DOORDARSHAN, NEW DELHI or in lieu thereof Performance Security/Bank Guarantee for the amount.

2.22 NAME OF MANUFACTURER AND CERTIFICATE OF ORIGIN

The name of the manufacturer / original service provider should be clearly mentioned wherever applicable, in the offer. The Bidder shall have to furnish information of country of origin of each offered item, wherever applicable

2.23 PAYMENT TERMS (As per RFP Clause 11)

2.24 UNSOLICITED POST TENDER MODIFICATION

- 2.24.1 In case certain clarifications are sought by this Organisation after opening of tenders, then the reply of the bidder should be restricted to the clarifications sought.
- 2.24.2 Any bidder who modifies his bid (including a modification which has the effect of altering the value of his offer) after the closing date without specific reference by this Organisation shall render the bid liable to be ignored and rejected without notice and without further reference to the bidder.
- 2.24.3 Canvassing in any form by the bidders shall also render the bid liable to be ignored and rejected without notice and without further reference to the bidder.

2.25 CLARIFICATION IN RESPECT OF INCOMPLETE OFFERS

- 2.25.1 This Organisation has to finalise its purchase within a limited time schedule. Therefore, it may not be feasible in all cases for this Organisation to seek clarifications in respect of incomplete offers. Prospective bidders are advised to ensure that their bids are complete in all respects and conform to our terms and conditions and Bid Evaluation Criteria of the tender. Bids not complying with this Organisation's requirements may be rejected without seeking any clarifications. However, during evaluation and comparison of bids, Prasar Bharati at its discretion, may ask the bidder for clarifications on the bid. The request for clarification shall be given in writing by registered email Id or through e-procurement Portal, asking the Bidder to respond by a specified date, and also mentioning therein that, if the Bidder does not comply or respond by the date, his Bid will be liable to be rejected. Depending on the outcome, such tenders will be ignored or considered further. No change in prices or substance of the bid shall be sought, offered or permitted. No post bid clarification at the initiative of the bidder shall be entertained.
- 2.25.2 The Bidder shall quote the prices in 'figures' & words. There should not be any discrepancy between the prices indicated in figures and the price indicated in words. In case of any discrepancy, the same shall be dealt as follows:
- 2.25.2.1 When there is a difference between the rates in figures and words, the rate which corresponds to the amount worked out by the Bidder (by multiplying the quantity and rate) shall be taken as correct.
 - 2.25.2.2 When the rate quoted by the Bidder in figures and words tallies but the amount is incorrect, the rate quoted by the contractor shall be taken as correct and not the amount and the amount corrected.
 - 2.25.2.3 When it is not possible to ascertain the correct rate, in the manner prescribed above, the rate as quoted in words shall be adopted and the amount worked

2.26 AFTER SALES SERVICE AND TRAINING (As per RFP)

2.27 REPLACEMENT/ RECTIFICATION

In the event the stores supplied or Services carried out against the contract are found to be defective or non compliant, the contractor will have to replace/rectify the defects free of charge without any loss of time at his own cost . The Contractor will not be entitled to dispose of the store/equipment/material given for replacement/rectification without the prior permission of this Organisation. All charges concerned with the rectification including freight charges will be borne by the supplier/contractor.

2.28 EVALUATION/ SCRUTINY OF BIDS.

In evaluation of the techno-commercial bid, conformity of the eligibility/qualification, technical and commercial conditions of the offered goods/services to those in the bid document is ascertained. Technical requirement, incorporated in the RFP documents will also be considered in the manner indicated therein. Evaluation will be based only on the conditions included in the tender document.

2.29 SIGNING OF AGREEMENT

- 2.29.1 Prasar Bharati will award the Contract to the successful Bidder, who, within 'fifteen [15] days' of receipt of the same, shall sign and return the acknowledged copy to Prasar Bharati.
- 2.29.2 The successful Bidder/Contractor shall be required to execute an 'Agreement' in a Performa on a 'non-judicial stamp paper' of appropriate value [cost of the 'stamp-paper' shall be borne by the successful Bidder/Contractor] and of 'state' specified only, within 'fifteen [15] days' of receipt of the "Letter of Acceptance [LOA]" of the Tender by the successful Bidder/Contractor failure on the part of the successful Bidder/Contractor to sign the 'Agreement' within the above stipulated period, shall constitute sufficient grounds for appropriate action per tender provisions.
- 2.29.3 If the Bidder or any employee of the Bidder or any person acting on behalf of the Bidder, either directly or indirectly, is a relative of any of the employee of Prasar Bharati, or alternatively, if any relative of an employee of Prasar Bharati has financial interest/stake in the Bidder's firm, the same shall be disclosed by the Bidder at the time of filing of tender. The term 'relative' for this purpose would be as defined in Section 6 of the Companies Act 1956.
- 2.29.4 The Bidder shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of Prasar Bharati

2.30 EMPLOYMENT BY FIRMS TO OFFICIALS OF THIS ORGANISATION.

Firms/companies who have or had business relations with the Organisation are advised not to employ serving employees of this Organisation without its prior permission or within the initial one year period after the retirement/resignation/severance from the service without specific permission of this Organisation. This Organisation may decide not to deal with such firms who failed to comply with the above advice.

2.31 CANCELLATION / RESCISSION:

The Bidder shall be liable to pay compensation for any loss or damage to Prasar Bharati resulting from any cancellation/rescission due to the reasons attributable to the Bidder and the Prasar Bharati shall be entitled to deduct the amount so payable from the amount due to the Bidder.

2.32 FOR THE BIDDER FROM A COUNTRY WHICH SHARES A LAND BORDER WITH INDIA

- 2.32.1 Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. The Competent Authority for the purpose of registration under this Order shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).
- 2.32.2 "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- 2.32.3 "Bidder from a country which shares a land border with India" for the purpose of this Order means; -
- 2.32.3.1. An entity incorporated, established or registered in such a country; or

- 2.32.3.2. A subsidiary of an entity incorporated, established or registered in such a country; or
- 2.32.3.3. An entity substantially controlled through entities incorporated, established or registered in such a country; or
- 2.32.3.4. An entity whose beneficial owner is situated in such a country; or
- 2.32.3.5. An Indian (or other) agent of such an entity; or
- 2.32.3.6. A natural person who is a citizen of such a country; or
- 2.32.3.7. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

2.32.4 The beneficial owner for the purpose of Para 2.33.3 above will be as under:

2.32.3.8. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.
Explanation—

2.32.3.9. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company;

2.32.3.10. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;

2.32.3.11. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

2.32.3.12. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

2.32.3.13. Where no natural person is identified under Para 2.33.4.1 or Para 2.33.4.2 or Para 2.33.4.3 above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

2.32.5 In case of a trust the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

2.32.6 An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

2.32.7 The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority. (In case of Tenders for Works contracts, including Turnkey contracts)

2.32.8 The following Certificate shall be submitted by the Bidder appending to the Technical Bid—

Certificate to be filled by the Bidder:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Certificate for Tenders for Works involving possibility of sub-contracting:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; / certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered, [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

3. Background and objective

- 3.1. Prasar Bharati, the public service broadcaster of India, is a statutory autonomous body set up by an Act of parliament. The objectives of public service are fulfilled through its radio and television broadcast operations by Akashvani and Doordarshan. The major objectives of the Prasar Bharati Corporation as laid out in the Prasar Bharati Act, 1990 are as follows:
- 3.1.1. To uphold the unity and integrity of the country and the values enshrined in the Constitution.
 - 3.1.2. To safeguard the citizen's right to be informed freely, truthfully and objectively on all matters of public interest, national or international, and to present a fair and balanced flow of information including contrasting views without advocating any opinion or ideology of its own.
 - 3.1.3. To promote national integration.
 - 3.1.4. To pay special attention to the fields of education and spread of literacy, agriculture, rural development, environment, health & family welfare and science & technology.
 - 3.1.5. To create awareness about women's issues and take special steps to protect the interests of children, aged and other vulnerable sections of the society.
 - 3.1.6. To provide adequate coverage to diverse cultures, sports and games and youth affairs.
 - 3.1.7. To promote social justice, safeguarding the rights of working classes, minorities and tribal communities.
 - 3.1.8. To promote research and expand broadcasting faculties & development in broadcast technology.
- 3.2. Digital revolution has impacted all the spheres of our lives and broadcasting is not an exception. Consumption of media through digital platforms is the recent trend and it appears to grow significantly in future. Today, digital footprint of Prasar Bharati services include live streaming through mobile application NewsOnAir as well as streaming and on-demand content through third party platforms like YouTube and other popular social media applications.
- 3.3. In order to widen its footprints in digital domain, Prasar Bharati intends to set up a state-of-art Over The Top (OTT) platform so as to ensure the delivery of broadcast services/content not only to the citizens in India but also to the global audience. The intended OTT platform shall function in a lag and buffer free environment giving all set of users an excellent, user friendly and quality viewing experience.
- 3.4. Accordingly, this Request for Proposal (RFP) is being issued towards Selection of Master System Integrator for Design, Development, Implementation, Operations and Maintenance of Prasar Bharati OTT platform.

APPENDIX D |

Scope of Work, Background, Technical Specification

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4. Scope of Work and Services

- 4.1. The scope of work and services earmarked for this project shall be for Design, development, commissioning, hosting, testing, operations and maintenance of an OTT platform for Prasar Bharati. All materials, assets created, deliverables, platform etc. provided by the Bidder would become the property of Prasar Bharati. The scope covers the following broad four areas:
- 4.2. **Area 1:** Making the Content Ready for Ingestion, Setting up of Media Ingestion Room, Media Asset Management System, etc.
- 4.3. **Area 2:** Development of OTT Platform, Content Management, / customization | User Management, Analytics, DRM etc.
- 4.4. **Area 3:** Hosting of the Data and Application DC and DR on cloud, Setting up of CDN, etc.
- 4.5. **Area 4:** Operation, Maintenance and Management of the OTT platform, Media Ingestion Room Operations, User Support etc.
- 4.6. For further detailed technical requirement and other terms & conditions of the RFP, subsequent paragraphs of the bid document may be referred to. It is to noted that Prasar Bharati shall provide necessary content for the OTT platform unless explicitly mentioned in the scope of the work. Bidder shall be responsible for providing end to end OTT solution for design, development, operation, maintenance and service support for the entire duration of the contract.
- 4.7. The OTT Platform shall be designed, developed, deployed, and operated to serve Live TV Channels, FAST TV Channels, On-Demand Video Content, Live Radio Content, On-Demand Audio Content, etc. Media services as per prevailing industry standards.
- 4.8. For further detailed technical requirements and other terms and conditions of the RFP, subsequent paragraphs of the bid document may be referred to.

5. Technical Specifications and Features

5.1. Area 1: Making the Content Ready for Ingestion, Setting up of Media Ingestion Room, Media Asset Management System, etc.

- 5.1.1. Prasar Bharati will provide content required for video on demand service/OTT. The programme content is required to be ingested on cloud MAM/ OTT platform by the Master System Integrator for efficient management and distribution.
- 5.1.2. Prasar Bharti will make available the content in media HDD (MXF / DV / MOV / MP4), Professional Disks (XDCAM HD422, 50Mbps with 8 bit quantization data) and DVC Tapes (for SD: DVCPRO 25/50 (8-bit, 4:2:2). The content will be made ready by bidder for the OTT platform. The Bidder is required to:
 - 5.1.2.1. Perform compatibility check for uploading to cloud any digital content received from external source.
 - 5.1.2.2. Provide the equipment and resources to carry out the ingest services from the media at Media Ingestion Room.
 - 5.1.2.3. Transcode the source file for uploading on to the OTT platform/cloud portal.
 - 5.1.2.4. Update the metadata for the media assets to be carried out.
 - 5.1.2.5. Local backup of data/content for restoration, in case of system failure.
- 5.1.3. Media Ingestion Room:
 - 5.1.3.1. Prasar Bharati will provide 250 Sq.Ft space at New Delhi along with adequate power supply and air conditioning for setting up of Media ingestion room. All other technical facilities are required to be set up by the bidder.
 - 5.1.3.2. The Bidder shall design and develop a Media Ingestion room at Prasar Bharati premises to facilitate the Local Central Storage, required computing resources, editing and QC workstations along with the required network and network security for secured connectivity.
 - 5.1.3.3. The Bidder shall provide on-premise central storage -1PB to be utilized for storing postproduction data and should also facilitate one-time bulk transfer of data from Media Ingestion Room to Cloud. The storage shall have adequate redundancy in terms of power supply, controller, Hard Drive, etc. Details of the proposed system and the infrastructure, its architecture to be given in the proposed solution.
 - 5.1.3.4. Bidder to provide a dedicated 1 Gbps point-to-point Leased Line (1:1) from Media Ingestion Room in Prasar Bharati, New Delhi to On-Cloud Data Centre.
 - 5.1.3.5. It should have provision and architecture should support private point to point and public Internet connectivity.
 - 5.1.3.6. It should support the future expandability and business variable demand as per customer requirements.

- 5.1.3.7. The Bidder should ensure that adequate workstations in working condition are made available at the media ingestion room for editing the meta data, ingestion of content and other related operations for making the content OTT ready. Details of the proposed workstation and the infrastructure, its architecture to be given in the proposed solution
- 5.1.3.8. Bidder shall provide adequate equipment/infrastructure for security of data/media assets at Media Ingestion Room. The bidder shall ensure following:
- 5.1.3.8.1. Installation & configuration of firewall & IPS
- 5.1.3.8.2. Security policy for firewall & periodic review of the firewall configuration are defined and approved by Prasar Bharati
- 5.1.3.8.3. Incident management structure for firewall & IDS/IPS shall be defined by is defined which would capture log generation, Analysis & Report for Firewall system & IDS/IPS
- 5.1.3.8.4. Reports for firewall & IDS/IPS shall be submitted by Bidder on monthly basis for information and monitoring of Prasar Bharati
- 5.1.3.8.5. Configure the Anti-Virus Solution according to requirements and ensure that the solution is up to date with the latest patches and upgrades.
- 5.1.3.8.6. The secure data transfer from Media Ingestion Room to OTT platform hosted on Cloud.
- 5.1.3.8.7. The Bidder to ensure that the data transfer to cloud to happens securely & seamlessly and at all times the data remains encrypted.
- 5.1.3.8.8. That all security (physical and digital specified in line with MeiTy Standards) measures should be in place in the Media Ingestion Room to avoid the data leakages.
- 5.1.3.9. Prasar Bharati reserves the rights to audit the provided infrastructure either itself or through third party to ensure performance, security as per the scope of the tender. In such case, MSI is to cooperate and share necessary credentials with Prasar Bharati to enable the same.
- 5.1.3.10. 2 months before the completion / termination of contract period, the complete data to be handed over to Prasar Bharati in Open standard format in same / some other cloud / on-premises Storage. Also the select users at Prasar Bharati needs to be thoroughly trained on the same and a signoff from Prasar Bharati needs to be obtained after successful training of the officials.
- 5.1.3.10.1. The Cloud Service provider shall provide all support required for migration and consolidate the existing application and database to the new CSP's cloud from the current cloud hosting at the time of closing of the contract
- 5.1.3.10.2. The following activities are to be undertaken for migrating to new cloud upon closure of contract:
- o Migration planning
 - o Acceptance before execution
 - o Rollback plan
 - o Final closure and acceptance
 - o Handover to Operation as part of continuous support

5.1.3.11. Assets/infrastructure created at Media Ingestion Room shall be the property of Prasar Bharati and need to be handed over on expiry of the contract.

5.1.3.12. As part of the Media Ingestion Room operations, the Bidder is also required to:

5.1.3.12.1. Multiplex multi-language audios, multi-channel audios and multi-language subtitling to final delivery formats.

5.1.3.12.2. Process corresponding meta-data

5.1.3.12.3. Transcode the content for OTT delivery

5.1.3.12.4. Proposed Subsystem mentioned above of the OTT solution shall allow manual ingestion of new content via a GUI based interface.

5.1.3.12.5. Proposed OTT solution shall provide the ability for service provider to Encode/Transcode VOD source contents to format suitable for the delivery over network and consumed by end devices.

5.1.3.12.6. File Based Transcoding

5.1.4. Media Asset Management (MAM)

- 5.1.4.1. The MAM system shall be able to manage all the media assets like Audio, videos, images, graphics, and documents, and lets users easily find, use, organize, manage, and share digital assets in a Web UI.
- 5.1.4.2. The MAM system shall be integrated to the OTT platform in order to push the media assets for OTT services.
- 5.1.4.3. The MAM solution shall be poly-cloud, must support all major cloud platforms and be cloud-ready or cloud-enabled.
- 5.1.4.4. The MAM system shall be based on client-server architecture capable of scaling up without any system restart.
- 5.1.4.5. The MAM system shall be based on micro services cloud native model.
- 5.1.4.6. The MAM system shall be redundant in order to achieve high availability; the bidder shall submit supporting documents under technical bid explaining how their system will achieve redundancy on all levels of the solution starting from storage, database, servers to infrastructure.
- 5.1.4.7. The MAM shall have a way to configure collaborative workflow between multiple user accounts, clouds and databases when configured in multitenant environment.
- 5.1.4.8. The MAM solution shall rely on 'Generic storage' technology
- 5.1.4.9. The MAM solution shall provide comprehensive web based administration module.
- 5.1.4.10. The MAM should be able to centrally upload content with permission level access.
- 5.1.4.11. The proposed MAM should provide automated AI tagging of video content with learning capabilities and provide search pattern analysis .
- 5.1.4.12. The MAM shall support API-based integrations with media applications like:
 - 5.1.4.12.1. Enterprise NLE suites
 - 5.1.4.12.2. Audio watermarking
 - 5.1.4.12.3. Video Watermarking
 - 5.1.4.12.4. Video Restoration applications
 - 5.1.4.12.5. Scheduling & Playout applications
- 5.1.4.13. The proposed MAM system shall integrate with directory services like Active Directory, LDAP etc. for users and group management.
- 5.1.4.14. The MAM shall have facility to import and export content and metadata through .xml and the content file.
- 5.1.4.15. The MAM system shall have a dedicated search engine based on the metadata schema. It shall provide a search window interface with advanced search options. The window should seamlessly search across the data inventory across different catalogues and provide search results in a user-friendly interface.

- 5.1.4.16. The MAM shall support dynamic workflow creation based on various criteria.
- 5.1.4.17. The MAM should create an asset repository that can automate the delivery of approved, brand compliant content, allowing brands to create an extensive catalogue for digital assets, consisting of video, images, text and metadata.
- 5.1.4.18. The proposed MAM should provide for multiple storages configurable along with archival mechanisms in place to shift data to lower storage tiers automatically.
- 5.1.4.19. The proposed MAM should support for high availability playback; with ability to support multiple audio tracks, captions, or subtitles during playback.
- 5.1.4.20. The proposed MAM should support multiple broadcast quality codecs and MXF wrappers.
- 5.1.4.21. The proposed MAM should be able to work as a standalone application. However, should be seamlessly integrated with Portals, Web Sites, Mobile App, OTT App using open standard frameworks, APIs.
- 5.1.4.22. The proposed MAM should be able to seamlessly synchronize with the Metadata, meeting or exceeding the cataloguing standard is EN 15907 compliant and OAIS compliant.
- 5.1.4.23. It should have intuitive web-based GUI for admin and users.
- 5.1.4.24. Users' activities shall be recorded as logs.
- 5.1.4.25. Users can search for assets via a multitude of options with easy identification of assets through metadata cataloguing.
- 5.1.4.26. The system shall be able to send email and text messages notifications as SMS and PopUp notifications
- 5.1.4.27. The above features are required but does not limit you to specify any other further capabilities.
- 5.1.4.28. Capable of automatic ingest from on premise or Cloud storage.
- 5.1.4.29. Provide a web-based interface to upload asset (Video/Audio/ Images) along with metadata
- 5.1.4.30. Ingested material shall be automatically transcoded to low resolution browse quality files.
- 5.1.4.31. All ingested material (high resolution, browse quality etc.) is stored in a centralized cloud storage that is available to all users simultaneously.
- 5.1.4.32. Movement of data between high performance storage and cold archive should be seamless.
- 5.1.4.33. To avoid multiplicity of the assets on the system, it must have inherent notification and alert system.
- 5.1.4.34. Provide web access tool UI for retrieval, preview, annotate, edit and select shots of asset-based metadata.
- 5.1.4.35. Ability to search time-based and asset-based metadata.
- 5.1.4.36. Ability to run a full-text search over all the metadata fields thus supporting global search.

- 5.1.4.37. Each user-defined field must have a unique identifier, a display name and a specific type that determines both the type of data stored in the field and the user interface for entering that data. The following type must be supported: Plain text, Multi line text and Picklist.
- 5.1.4.38. Must use full-text indexing to provide "Search hints". "Search hints" provide as-you-type hints to the words or phrases that a user might want to search for using knowledge of the words and phrases that are present in the database
- 5.1.4.39. Provide web-based rough-cut editing of media files.
- 5.1.4.40. The MAM system shall allow triggering to transcode the media files from the web-based interface to the Prasar Bharti's chosen file-based transcoding format or craft editing tools.
- 5.1.4.41. User shall be able to define the formats and technical parameters for rendering the media.
- 5.1.4.42. Provide back-office rendering, allowing the users to execute other operations, while the system is rendering the rough cuts.
- 5.1.4.43. Support panel integration and extensions to integrate and interface with standard broadcast editing software, e.g., Final Cut Pro, Premiere Pro, Resolve, Avid, etc.
- 5.1.4.44. The MAM system must be capable of providing integration support with 3rd party social media platforms
- 5.1.4.45. Provide means to run all media related operation in such a way that it does not disrupt user operations.
- 5.1.4.46. Ability to set specific purge policy to automatically delete assets and set specific purge rights, applied to the users.
- 5.1.4.47. Provide a REST API, B2B based on well-known standards that third party applications will be able to consume.
- 5.1.4.48. The API documentation shall be available online
- 5.1.4.49. Patches and all upgrades shall be available without any additional cost.
- 5.1.4.50. User Management
- 5.1.4.51. There shall be a dedicated module for user management in the MAM System. The system shall support multiple users, user groups as per their rights, categories, libraries, etc.
- 5.1.4.52. The administrator shall be able to define various categories, user groups as per the requirement. The rights/roles on media assets in respect of various users, groups shall be administered by the system administrator.
- 5.1.4.53. The system should provision for Single Sign on facility for the users
- 5.1.4.54. The user account must support Two Factor Authentication
- 5.1.4.55. The user management console shall be able to provide information like User Profile, Access rights, on media/group of media in respect of users. The offered system should be capable of adding more users as per instant requirement of Prasar Bharati.
- 5.1.4.56. Users at different locations shall be able to share assets with others.

- 5.1.4.57. The solution shall be able to deploy and configure password policy as decided by Prasar Bharati.
- 5.1.4.58. The application shall support role-based access control to enforce separation of duties.
- 5.1.4.59. The application shall not store authentication credentials on client computers after a session terminates.
- 5.1.4.60. Users' activities shall be recorded as logs and shall be available as users wise report.
- 5.1.4.61. Any information stored within cookies must not be disseminated to third parties without the users' consent.
- 5.1.4.62. Workflow management with priorities set against each workflow.
- 5.1.4.63. Users can search for assets via a multitude of options as well as product codes and smart search capabilities, which allow for easy identification of assets through extensive metadata cataloguing.
- 5.1.4.64. Users can gain precision access to video, images and supporting documentation.
- 5.1.4.65. The system shall be able to define transcode, email notifications, and quality control using 3rd party tools.
- 5.1.4.66. The solution shall have user authentication mechanism to ensure only users with appropriate rights can access the workflow manager.
- 5.1.4.67. The solution shall have the option to manage workflows that have already been triggered (stop, start, retry, cancel, etc.) and monitor the progress via a web interface.
- 5.1.4.68. The system shall have the ability to troubleshoot a workflow.
- 5.1.4.69. The system shall be able to send email and text messages notifications as SMS and POPUP notifications.
- 5.1.5. Metadata: The MAM system shall have following standards/features:**
 - 5.1.5.1. The system shall support flexible metadata schemas. Additional metadata field's creation shall be possible and there shall be no restrictions on the number of metadata fields.
 - 5.1.5.2. The system shall support addition of the following metadata field types dynamically: Date field, Text-field, text area, select list, select button, multiple select buttons, text auto suggests, hierarchical list, multiple select hierarchical lists, linked lists.
 - 5.1.5.3. The metadata schema for the MAM system must be approved by Prasar Bharati before implementing on the cloud hosted system.
 - 5.1.5.4. Shall be able to generate unique accession no for each of the ingested assets. The accession number shall be based on user defined basic metadata in the standard format like IBTNS.
 - 5.1.5.5. The update of metadata shall be transparent to the users and shall not mandate system restart.
 - 5.1.5.6. Metadata can be exported and imported to and from external systems using open formats like XML/JSON/CSV in configurable schemas.

- 5.1.5.7. Users shall be able to add metadata to an asset regardless of the status of the asset (pre-ingest, post-ingest etc.). The system shall allow for metadata tagging for Video, Audio, documents, Office documents, stills, subtitling files, PDF, Image and graphics etc.
- 5.1.5.8. The system shall be capable of storing not only media files (such as Video and Audio) but also other kinds of documents as standard assets; these documents shall include at least office documents, stills, subtitling files, PDF, Image and graphics etc.
- 5.1.5.9. Timecode based metadata tagging shall be possible and the option to retrieve a region of interest from an audio and video file shall be possible.
 - 5.1.5.9.1. Mark a point (single timecode)
 - 5.1.5.9.2. Timecode based metadata tagging shall be possible and the option to mark a region of interest from an audio and video file shall be possible.
 - 5.1.5.9.3. Timecode tags shall have their own configurable metadata, separate from the main asset metadata.
 - 5.1.5.9.4. Time code ranges shall be convertible to sub-clips, that can be treated as assets in their own right. Sub-clips will not cause new media to be rendered and will relate to the original media.
- 5.1.5.10. Ability to make metadata fields mandatory to ensure data integrity of each ingested file.
- 5.1.5.11. Control the media to ingest as well as the metadata to import, schemas can be customized on the basis of different types of content which can be generated manually, automatically or imported via API or sidecar .XML.
- 5.1.5.12. Extensive metadata generation comprising of ingest, technical and descriptive metadata — allowing for easy cataloguing and retrieval of media
- 5.1.5.13. The system shall allow documents in formats like PDF, JPEG, PNG etc. as one more metadata fields.
- 5.1.5.14. Time code based metadata tagging shall be possible and option to retrieve a region of interest from a audio and video file shall be possible
- 5.1.5.15. In cases the data is not available and has to be digitized from the existing records, the data entry and validation exercise needs to be carried out. The Bidder would need to:
 - 5.1.5.15.1. Create Data Entry Templates based on the requirements
 - 5.1.5.15.2. Train the end users in data entry
 - 5.1.5.15.3. Migrate the data from data entry templates
 - 5.1.5.15.4. Data Validation of entered data by running scripts

5.1.6. Subtitling and Language Support:

- 5.1.6.1. The content available with Prasar Bharati may or may not have the subtitles. The Bidder shall provide for the subtitling of the content in various languages for both recorded and live streaming with accuracy as per prevailing standards.

- 5.1.6.2. On the fly language selection option supporting major Indian languages viz. English, Hindi, Tamil, Telugu, Kannda, Malayalam, Marathi, Bengali, Punjabi, Gujarati etc. in India should be made available from day 1.
- 5.1.6.3. Wherever required use of Artificial Intelligence should be made to transliterate the language in any of the Indian languages to begin with which may be further expanded to majorly spoken foreign languages.

5.2. Area 2: Development of OTT Platform, Content Management System, User Management, Analytics, DRM etc

The bidder is to design, develop and implement OTT platform with complete eco-system fully integrated with standard cloud, CDN, MAM, DRM etc. As per the industry standards. The platform shall conform to Open-Source without any vendor locking. The OTT platform should be designed and made available across 7 platforms viz. Andriod, iOS, Google, MI, Apple TV, Samsung, LG, any other TV OS in Release 1. The platform shall be able to serve Live Radio, Live Television, Video on Demand, Audio on Demand, etc. media services as per the industry standards.

5.2.1. OTT application

5.2.1.1. Core Platform

- 5.2.1.1.1. **The scope shall be the designing, development, hosting, testing, and commissioning of the OTT solution for Prasar Bharti.**
- 5.2.1.1.2. **The scope includes broadly the following components:**
- 5.2.1.1.3. **Cloud based OTT platform, setting up 24*7 operations support with the OTT Middleware for Prasar Bharti which includes, robust Content Management System (CMS), User Management & Authentication, Content Discovery and Recommendation Engine, which will support API integrations to 3rd party application and support for content delivery to multi OS Devices like Smartphones, Tablets, Web browsers and Smart TVs.**
- 5.2.1.1.4. **Public Cloud / Data Centre services: The solution (including the primary and DR sites of the proposed OTT platform) shall be hosted at Tier III / IV and / or SOC 3 / 4 Data centers such that Primary Site (DC) and DR site should be as per MEITY guidelines.**

5.2.1.2. Architecture requirements

- 5.2.1.2.1. The proposed solution shall deliver Over the Top (OTT) services with a 100% no lag and buffer free environment from Day 1.
- 5.2.1.2.2. The Bidder shall develop, manage, operate and maintain the OTT Platform for total of 5 years from Go-Live of Release 1.
- 5.2.1.2.3. The OTT application thus created shall be property of Prasar Bharati and shall be handed over to Prasar Bharti team or the agency appointed along with all credentials, associated source-code, documentation, training, tools, etc.
- 5.2.1.2.4. The solution should have Elastic resources to automatically scale up/down as per the requirement.
- 5.2.1.2.5. The proposed solution shall enable the delivery of OTT services over different access networks (e.g., optical, xDSL, wireless)
- 5.2.1.2.6. The proposed solution shall consist of main subsystems, but not limited to;
- 5.2.1.2.7. Middleware
- 5.2.1.2.8. OTT Live transcoding system, software based to reduce Opex costs.
- 5.2.1.2.9. Integration with several leading Content Delivery Networks (CDN)
 - 5.2.1.2.10. Digital Rights Management (CA/DRM) system
 - 5.2.1.2.11. Support for different levels of High-bandwidth Digital Content Protection (HDCP 1.x, 2.x, 2.2)
 - 5.2.1.2.12. Integration with SSAI /Ad insertion solution
 - 5.2.1.2.12.1. Ad serving solution can plug into multiple SSP's, programmatic markets and allow for trafficking of direct campaigns
 - 5.2.1.2.12.2. Ad server should allow running of public service messages,
 - 5.2.1.2.12.3. Ad server allows for creation of "waterfall" to prioritize ad fills based on percentage of ads, price-based ads or rotation of ads.
 - 5.2.1.2.13. Video/Audio Quality Monitoring system
 - 5.2.1.2.14. Network infrastructure including Firewall infrastructure (to be provided by the Bidder)
 - 5.2.1.2.15. Network management solution
 - 5.2.1.2.16. Comprehensive development/staging environment covering entire solution to test products, packages and services before the commercial launch & simulate customer problems
 - 5.2.1.2.17. The proposed solution shall support ABR streaming technologies including, but not limited to;
 - 5.2.1.2.17.1. Common Encryption Scheme (CENC) which provides standard encryption and key mapping methods to use with one or more digital rights and key management systems
 - 5.2.1.2.17.2. Just in Time Packaging to optimize network efficiency and caching

- 5.2.1.2.18. The proposed solution shall provide the features, functionalities, capacity, performance, and security requirements stated in this RFP.
- 5.2.1.2.19. The proposed solution shall provide rich Application Programming Interfaces (API) which enable third-party application developments accessing platform services.
- 5.2.1.2.20. The proposed solution shall be designed as a dual site active-active deployment to handle load sharing.
- 5.2.1.2.21. Bidder shall manage the capacity requirement as per the load at any given point in time
- 5.2.1.2.22. Bidder shall provide the backup site architecture with the capability of linear channel delivery to the active subscriber capacity of the primary site.

5.2.1.3. Standard requirements

- 5.2.1.3.1. The proposed solution shall be open (i.e., no proprietary interfaces, etc.), standard based and future proof solution which enable interoperability between third party vendor solutions (API interfaces, etc.) and evolve with latest industry trends and standards.
- 5.2.1.3.2. This subsection specifies standard compliance requirements of the proposed solution. In case the system has not implemented any requirement(s) stated in the standard, Bidder shall clearly state the justifications for not implementing particular requirement(s).
- 5.2.1.3.3. The proposed solution shall support ABR streaming technologies, but not limited to;
 - 5.2.1.3.3.1. MPEG-DASH 2nd Edition Specification as per ISO/IEC 23009)
 - 5.2.1.3.3.2. Apple HTTP Live Streaming (HLS)
 - 5.2.1.3.3.3. Common Media Application Format (CMAF)
- 5.2.1.3.4. The proposed solution shall be able to support at least five profiles starting from 128kbps for resolution from 128k to 4K resolution with configurable size of 64kbps granularity for a single video stream.
- 5.2.1.3.5. The proposed solution shall support,
 - 5.2.1.3.5.1. H.264 aka MPEG-4 Part 10 ‘Advanced Video Coding’ (AVC) as per ITU-T H.264 and ISO/IEC 14496-10
 - 5.2.1.3.5.2. H.265 aka HEVC as per ITU-T H.265 and ISO/IEC 23008-2
 - 5.2.1.3.5.3. AOMedia Video 1 (AV1)
 - 5.2.1.3.5.4. Seamless adoption of future audio-video coding techniques
- 5.2.1.3.6. The proposed solution shall support Video Multi-Ad Playlist (VMAP) for the integration with 3rd party Ad server.

5.2.1.4. Feature requirements

- 5.2.1.4.1. Select features and functionalities as decided by Prasar Bharti, and mentioned in this RFP and the supported list of the proposed solution shall be provisionable and chargeable as an individual product/service to the subscriber or product/service bundle to the subscriber.

- 5.2.1.4.2. The proposed solution shall be able to provide OTT services for,
 - 5.2.1.4.2.1. Guest user with only 1 profile
 - 5.2.1.4.2.2. Registered User and subject to max 5 profiles. Appropriate filter and parameters for Child profile needs to be created
 - 5.2.1.4.3. The proposed solution shall uniquely identify the customers using either an Account Number or a unique username.
 - 5.2.1.4.4. All subscribers shall have a defined life cycle for below status (but not limited to) with validity period where service will be terminated with the expiration of the validity period,
 - 5.2.1.4.4.1. Idle
 - 5.2.1.4.4.2. Active
 - 5.2.1.4.4.3. Suspended
 - 5.2.1.4.4.4. Terminated
 - 5.2.1.4.4.5. Cancelled
 - 5.2.1.4.5. The proposed solution shall facilitate the subscriber to activate/deactivate product/service via the user interface and self-care portal subjected to conditions imposed by Prasar Bharati from time to time.
 - 5.2.1.4.6. All media content of the proposed solution shall support up to:
 - 5.2.1.4.6.1. Radio Streaming 96K,128K etc.
 - 5.2.1.4.6.2. Standard Definition (SD) 576i/50
 - 5.2.1.4.6.3. High Definition (HD) 1080p/60
 - 5.2.1.4.6.4. Ultra HD/4K p60
 - 5.2.1.4.7. Bidder shall propose any other services/features which are available as Out-of-the-Box with the proposed solution.
 - 5.2.1.4.8. Bidder shall provide a list of services and features available in the solution road map.
 - 5.2.1.4.9. The proposed solution shall deliver below features for OTT service requirements
 - 5.2.1.4.9.1. The proposed solution shall support A-la-carte feature so that subscriber can self-purchase channels, packages and contents via the UI/Self-care portal/Client App. Subscription changes shall accordingly reflect on middleware and back-office systems (OSS/BSS).
 - 5.2.1.4.9.2. Linear/Live TV
 - 5.2.1.4.9.2.1. Integration of 50 Live TV Channels shall be in the scope of work of the Bidder and Prasar Bharati will provide the live stream link available for integration
 - 5.2.1.4.9.2.2. Channel numbering can be configurable based on the customer segment or category

- 5.2.1.4.9.2.3. Same channel with different resolution (SD/HD/4K) shall be able to configure as same channel number based on the customer segment or category
- 5.2.1.4.10. Time-Shift TV (TSTV) to be kept for 24 hours
- 5.2.1.4.11. Integration of 30 FAST OTT Channels shall be in the scope of work of the Bidder and Prasar Bharati will provide the live stream link available for integration
- 5.2.1.4.12. Catch-Up TV
- 5.2.1.4.13. Delayed TV (Applying trick play controls on live content)
- 5.2.1.4.13.1. Time-Shifted content shall be accessible via EPG for play back and play back shall be stopped at the end of the EPG event
- 5.2.1.4.14. Video on Demand (VoD)
- 5.2.1.4.14.1. Support purchasing of VoD assets through the client application and self-care portal.
- 5.2.1.4.14.2. VoD libraries shall be configured based on the customer segment or category.
- 5.2.1.4.14.3. Same VoD asset with different resolution (SD/HD/4K) shall be configured based on the customer segment or category
- 5.2.1.4.14.4. VoD assets shall be configured as Transaction VoD (TVoD) as well as Subscription VoD (SVoD)
- 5.2.1.4.14.5. Categorize VoD content into multiple categories, Movies on demand, TV Series, including support of Seasons and Episodes, Educational, Documentary, etc.
- 5.2.1.4.14.6. Trick play options, Play, Pause, Fast-forward (.5x, 2x, 4x, etc.), Rewind (.5x, 2x, 4x, etc.)
- 5.2.1.4.14.7. Support HTML5 or other latest web technologies for the user interface
- 5.2.1.4.15. Audio Services
- 5.2.1.4.15.1. Live Radio Streaming
- 5.2.1.4.15.2. On Demand Audio Content
- 5.2.1.4.16. The proposed solution shall be able to categorize VoD content into multiple categories, but not limited to;
- 5.2.1.4.16.1. Movies on demand
- 5.2.1.4.16.2. Educational
- 5.2.1.4.16.3. TV Series, including support of Seasons and Episodes
- 5.2.1.4.16.4. Documentary
- 5.2.1.4.17. The proposed solution shall provide trick play options, not limited to:
- 5.2.1.4.17.1. Play
- 5.2.1.4.17.2. Pause
- 5.2.1.4.17.3. Fast-forward (different options - .5x, 2x, 4x, etc.)
- 5.2.1.4.17.4. Rewind (different options - .5x, 2x, 4x, etc.)

- 5.2.1.4.18. The proposed solution shall support HTML5 or other latest web technologies for the user interface.
- 5.2.1.4.19. The proposed solutions shall provide
 - 5.2.1.4.19.1. Multiple user profiles (multiple OTT clients) shall be given to a single Prasar Bharati customer where billing will be done to the customer.
 - 5.2.1.4.19.2. Multiple user profiles shall be identified uniquely within the solution and authenticated by a single authentication credential or multiple credentials which shall be configurable per customer.
 - 5.2.1.4.19.3. The proposed solution shall be able to limit the number of devices per customer and limit shall be defined for each customer or customer segment.
 - 5.2.1.4.19.4. The proposed solution shall be capable of accessing the user profiles across the authenticated customer devices.
 - 5.2.1.4.19.5. capable of accessing the user profiles across authenticated customer devices.
- 5.2.1.4.20. Multiscreen
 - 5.2.1.4.20.1. The proposed solution shall provide multi-screen service to end-user where Prasar Bharati customer will be able to enjoy services from anywhere using multiple devices.
 - 5.2.1.4.20.2. The proposed solution shall allow customer to begin viewing on one device, then continue viewing on another device
 - 5.2.1.4.20.3. The proposed solution shall be able to maintain,
 - 5.2.1.4.20.4. Common subscription among primary and secondary devices
 - 5.2.1.4.20.5. Individual subscriptions among primary and secondary devices
 - 5.2.1.4.20.6. The proposed solution shall enable simultaneous access of services from primary and secondary devices provided with required subscriptions.
 - 5.2.1.4.20.7. User shall be able to use mobile/tablet devices to search, discover, and research content and then open and watch it on another screen (i.e., TV or OTT client).
- 5.2.1.4.21. On-screen messaging
 - 5.2.1.4.21.1. The proposed solution shall provide capability to send emergency alerts, App updates, and credit control messages to the OTT client based on the subscriber group.
 - 5.2.1.4.21.2. The proposed onscreen messaging, notification capability shall be available to use for content and channel promotions.
- 5.2.1.4.22. Advertisement supported functionality
 - 5.2.1.4.22.1. The proposed solution shall provide advertisement insertion solution(s) for OTT subscribers by inserting or replacing video advertisements in a fully automated manner for:
 - 5.2.1.4.22.1.1. Linear content (Live TV)

- 5.2.1.4.22.1.2. On demand content (VoD, SVoD, TSTV, etc.)
- 5.2.1.4.22.1.3. Premium Offerings
- 5.2.1.4.22.1.4. Live Radio / On-Demand Audio Services
- 5.2.1.4.23. The proposed solution shall provide Pre-Roll and Mid-Roll advertisements based on their position or placement in the video playback.
- 5.2.1.4.24. The proposed solution shall support below triggering mechanisms;
 - 5.2.1.4.24.1.1. SCTE-35
 - 5.2.1.4.24.1.2. Time based – every 20 mins, 1 hour, etc.
- 5.2.1.4.25. The proposed solution shall provide an end-to-end solution for server-side ad insertion (Video Ad Server / Server Side as Insertion; SSAI).
- 5.2.1.4.26. The proposed solution shall enable SSAI to deliver dynamic ad insertion, allowing the targeting of users by IP address and device.
- 5.2.1.4.27. The proposed solution shall support personalized and targeted advertisements based on;
 - 5.2.1.4.27.1. User profiles/preferences
 - 5.2.1.4.27.2. Content types and metadata info
 - 5.2.1.4.27.3. Geography or Demographics
 - 5.2.1.4.27.4. Device capabilities and types
- 5.2.1.4.28. The proposed solution shall provide comprehensive reporting which allows for;
 - 5.2.1.4.28.1. Real-time analytics on ad usage and statistics
 - 5.2.1.4.28.2. Understanding and monitoring of ad sales performance, at both macro and micro levels
 - 5.2.1.4.28.3. Insights that inform real-time decision-making and yield optimization
 - 5.2.1.4.28.4. Campaign/Promotion information
- 5.2.1.4.29. The proposed solution shall be able to extend ad usage and statistics via standard API for advertisers.
- 5.2.1.4.30. The proposed solution supports VAST and VMAP as defined by the Interactive Advertising Bureau (aka IAB).
- 5.2.1.4.31. The proposed solution shall utilize a video ad server that;
 - 5.2.1.4.31.1. accesses a suite of industry-leading tools from a single real-time dashboard
 - 5.2.1.4.31.2. enables trafficking
 - 5.2.1.4.31.3. prioritizes campaigns based on multiple simultaneous criteria
 - 5.2.1.4.31.4. monetizes ad inventory
 - 5.2.1.4.31.5. maximizes revenues

- 5.2.1.4.32. The proposed solution shall utilize optimization algorithms and yield management engines to achieve;
 - 5.2.1.4.32.1. optimal fill / sell-thru rates
 - 5.2.1.4.32.2. maximum results for all advertising campaigns
- 5.2.1.4.33. The proposed solution shall enable the creation of a waterfall to sell inventory and optimize yields via;
 - 5.2.1.4.33.1. direct sales efforts
 - 5.2.1.4.33.2. programmatic advertising
 - 5.2.1.4.33.3. supply-side platforms (SSPs)
 - 5.2.1.4.33.4. ad marketplaces
- 5.2.1.4.34. The proposed solution shall allow unsold / 'remnant' inventory to be filled by:
 - 5.2.1.4.34.1. Promotional messages for Prasar Bharati's content and services
 - 5.2.1.4.34.2. Public Service messages
- 5.2.1.5. Subscriber management
 - 5.2.1.5.1. The proposed solution shall provide features in terms of subscriber management, but not limited to;
 - 5.2.1.5.1.1. Basic provisioning (Subscriber/Product provisioning)
 - 5.2.1.5.1.2. Mass provisioning (Subscriber/Product provisioning)
 - 5.2.1.5.1.3. Capable of disabling services in the Main Menu by customer category.
 - 5.2.1.5.1.4. Billing policy /subscriber charging management:
 - 5.2.1.5.1.5. Basic service billing (Event/Time Based)
 - 5.2.1.5.1.6. Online transactions
 - 5.2.1.5.1.7. Provide multiple packages allocating any number of channels and any type of channel.
 - 5.2.1.5.1.8. Configure packages by restricting selected contents (Channels, VoD, SVoD) and
 - 5.2.1.5.2. Services & Feature management
 - 5.2.1.5.2.1. The proposed solution shall be capable of enabling/disabling services in the Main Menu by customer category.
 - 5.2.1.5.3. Billing policy /subscriber charging management
 - 5.2.1.5.3.1. The proposed solution shall provide features in terms of charging management, but not limited to;
 - 5.2.1.5.3.1.1. Basic service billing (Event/Time Based)
 - 5.2.1.5.3.1.2. Online transactions with integration with leading payment gateways
 - 5.2.1.5.3.1.3. Bundled service with any or all of the leading telecom service providers

- 5.2.1.6. Product and packaging features
 - 5.2.1.6.1. The proposed solution shall be able to provide multiple packages allocating any number of channels and any type of channel.
 - 5.2.1.6.2. The proposed solution shall be able to configure packages by restricting selected contents (Channels, VoD, SVoD) and subscribers shall be able to view only the allocated contents.
 - 5.2.1.6.3. It shall be possible to define additional channels for a given package by allocating single or multiple channels selecting from the remaining channels.
 - 5.2.1.6.4. The proposed solution shall be able to provide cross product validation. Ex: To subscribe to SVoD package X it is mandatory to have a subscription for al-a-carte channel package Y.
 - 5.2.1.6.5. The proposed solution shall be able to configure products associating multiple titles / assets.
 - 5.2.1.6.6. The proposed solution shall be able to associate a single content title to multiple products.
 - 5.2.1.6.7. The proposed solution shall provide product bundling of different types of products and service provision-ability.
 - 5.2.1.6.8. The proposed solution shall provide both transaction and subscription purchase options for the same content.
 - 5.2.1.6.9. The proposed solution shall provide business rule configuration upon product and packages.
 - 5.2.1.6.10. The proposed solution shall provide promotional vouchers (not at present but will be decided by Prasar Bharati in due time) on products and packages.
 - 5.2.1.6.11. The proposed solution shall support online and offline charging options (as decided by Prasar Bharati from time to time)
- 5.2.1.7. Business rule configuration
 - 5.2.1.7.1. The subscriber / active user should not be able to download any video or content from the OTT platform in any devices through which the OTT platform is being accessed
 - 5.2.1.7.2. The proposed solution shall provide the below dynamic business models which is configurable and testable within the click of a button,
 - 5.2.1.7.2.1. Cross selling and Up selling
 - 5.2.1.7.2.2. Bundle offers
 - 5.2.1.7.2.3. Subscription based offers (Ex: SVoD)
 - 5.2.1.7.2.4. One-time sales
 - 5.2.1.7.2.5. Trial entry programs
 - 5.2.1.7.2.6. Daily, weekly, monthly, quarterly, annual and seasonal subscriptions
 - 5.2.1.7.2.7. Product mix offers

5.2.1.7.3. Provide below functions:

5.2.1.7.3.1. Subscription management - inquiries service, order service, modify service, and cancel service .

5.2.1.7.3.2. Reporting - viewing, creating operator allowed reports.

5.2.1.7.3.3. New subscriber registration for OTT with simplified steps (e.g.: Mobile number-based self-care profile creations)

5.2.1.7.3.4. Able to add new TV packages/products to the portal where new and existing subscribers can order, upgrade etc.

5.2.1.7.3.5. Provide zero touch OTT user sign up where new subscribers shall be provisioned automatically via web portal without operator intervention.

5.2.1.7.3.6. Existing subscribers can change their subscription level and have it updated in the

5.2.1.7.3.7. back- end automatically without provider assistance.

5.2.1.7.3.8. API integration with 7 platforms such as Andriod, iOS, Google, MI, Apple TV, Samsung, LG, any other TV OS.

5.2.1.7.3.9. Support below end user devices, but not limited to;

5.2.1.7.3.10. Mobile phones (Operating Systems with Android and IOS)

5.2.1.7.3.11. Browser Based Video for Apple, Window or Linux based Browsers.

5.2.1.7.3.12. Digital Media Players such as Amazon Fire TV Stick, Roku, etc....

5.2.1.7.3.13. Support different types of operating systems of the end user devices:

5.2.1.7.3.14. Downloadable App for Android

5.2.1.7.3.15. Downloadable App for iOS or any other

5.2.1.7.3.16. Connected/smart TV App/web application

5.2.1.7.3.17. Web based application for Windows/ Mac/ Unix flavors

5.2.1.7.3.18. Apple TV, Amazon Fire, Roku, Android TV

5.2.1.7.3.19. Provide a list of devices which are supported by the proposed solution, including browser/operating system version details.

5.2.1.8. Network management solution

5.2.1.8.1. Smartphone/Tablets with any version of Android, iOS and Windows via compatible App. As a business rule, the OTT platform / app should be able to seamlessly play on the OS version which is one version above the last supported version by Android, iOS and Windows or similar

5.2.1.8.2. Desktop/Laptop PC with any version of Chrome, Firefox, Safari and Microsoft IE 11 or above and Edge via web-based GUI

5.2.1.8.3. The proposed solution shall provide below functions, but not limited to;

- 5.2.1.8.3.1. Subscription management - inquiries service, order service, modify service, and cancel service
- 5.2.1.8.3.2. Reporting – viewing, creating operator allowed reports
- 5.2.1.8.3.3. New subscriber registration for OTT with simplified steps (e.g.: Mobile number-based self-care profile creations)
- 5.2.1.8.4. The proposed solution shall be able to add new TV packages/products (linear TV) to the portal where new and existing subscribers can order, upgrade etc.
- 5.2.1.8.5. The proposed solution shall provide zero touch OTT user sign up where new subscribers shall be provisioned automatically via web portal without operator intervention.
- 5.2.1.8.6. Existing subscribers can change their subscription level and have it updated in the back-end automatically without provider assistance.
- 5.2.1.9. End User Device Requirements
 - 5.2.1.9.1. The proposed solution shall support below end user devices, but not limited to;
 - 5.2.1.9.2. Mobile phones (Operating Systems with Android and IOS). As a business rule, the OTT platform / app should be able to seamlessly play on the OS version which is one version above the last supported version by Android, iOS and Windows or similar
 - 5.2.1.9.2.1. Browser Based Video for Apple, Window or Linux based Browsers.
 - 5.2.1.9.2.2. Digital Media Players such as Amazon Fire TV Stick, Roku, etc....
 - 5.2.1.9.2.3. The proposed solution shall support different types of operating systems of the end user devices.
 - 5.2.1.9.2.4. Downloadable App for Android
 - 5.2.1.9.2.5. Downloadable App for iOS
 - 5.2.1.9.2.6. Downloadable App for any other TV or Mobile OS stores
 - 5.2.1.9.2.7. Connected/smart TV App/web application
 - 5.2.1.9.2.8. Web based application for Windows/Mac/Unix flavors
 - 5.2.1.9.2.9. Apple TV, Amazon Fire, Roku, Android TV
 - 5.2.1.9.3. The Bidder shall provide a list of devices which are supported by the proposed solution, including browser/operating system version details.
 - 5.2.1.9.4. All upgrades and versions of the client App shall be provided at no cost to Prasar Bharati during active support contract
 - 5.2.1.9.5. The proposed solution shall provide,
 - 5.2.1.9.5.1. Application downloads from native App stores (such as Apple store, Google Play Store, Windows store etc.)
 - 5.2.1.9.5.2. Upgrade services
 - 5.2.1.9.5.3. Push notification services

- 5.2.1.9.6. The proposed solution shall support remote software/firmware update/upgrade
- 5.2.1.9.7. The proposed solution shall support below (but not limited to) for App based clients,
- 5.2.1.9.8. User shall be able to download the video client App from a relevant App Store.
- 5.2.1.9.9. User registration & provisioning shall be done via Prasar Bharati client App.
- 5.2.1.9.10. User registration & provisioning shall be done automatically via one time password which shall be received via E-mail and SMS.
- 5.2.1.9.11. One-time password received to the device shall be read automatically by provisioning process to avoid manual intervention of the user.
- 5.2.1.9.12. All upgrades and versions of the client App shall be provided at no cost to Prasar Bharti during active support contract
- 5.2.1.9.13. Application downloads from native App stores (such as Apple store, Google Play Store)
- 5.2.1.9.14. Upgrade services
- 5.2.1.9.15. Push notification services
- 5.2.1.9.16. Support remote software/firmware update/upgrade
- 5.2.1.9.17. Support below for App based clients:
- 5.2.1.9.18. Able to download the video client App from a relevant App Store.
- 5.2.1.9.19. User registration & provisioning shall be done via Prasar Bharti client App.
- 5.2.1.9.20. User registration & provisioning shall be done automatically via one time password which shall be received via E-mail and SMS.
- 5.2.1.9.21. One-time password received to the device shall be read automatically by provisioning process to avoid manual intervention of the user.
- 5.2.1.9.22. In case the user wants to use a secondary device (e.g., Multiscreen) to access services, QR code, primary device
- 5.2.1.9.23. In case the user wants to use a secondary device (e.g., Multiscreen) to access services, QR code, primary device authorization mechanisms should be available
- 5.2.1.9.24. Capability to play back multiple audio and video formats Multiple audio tracks/subtitles supportability and selection supportability with the language descriptor according to ISO 639-2
- 5.2.1.9.25. Customized App support
- 5.2.1.10. UI/UX requirement - The proposed solution shall provide easily navigable user-friendly UI/UX for OTT clients
- 5.2.1.10.1. The proposed solution shall provide SD UI, HD UI, 4K UI etc
- 5.2.1.10.2. The proposed solution shall be built with latest UI/UX technologies
- 5.2.1.10.3. The proposed solution shall provide the navigation capability to any feature or setting within five levels or clicks.

- 5.2.1.10.4. The proposed solution shall provide channel memorizing capability where last viewed channel shall be displayed upon client reboot.
- 5.2.1.10.5. The proposed solution shall provide multilingual support where multiple languages can be used for the subscriber User Interface.
- 5.2.1.10.6. The proposed solution shall provide content related controls for Password settings, by the customer and the service provider
- 5.2.1.10.7. The proposed solution shall provide listing of favorite channels/content for quick navigation using UI and single click in App.
- 5.2.1.10.8. Updates and bug fixes shall be carried out timely to ensure smooth functioning of services.
- 5.2.1.10.9. Subscriber management:
 - 5.2.1.10.9.1. Preference and profile management
 - 5.2.1.10.9.2. Products & billing management
 - 5.2.1.10.9.3. Content fulfilment & delivery
 - 5.2.1.10.9.4. EPG publishing
 - 5.2.1.10.9.5. Customer self-care management
 - 5.2.1.10.9.6. Content recommendation engine
- 5.2.1.10.10. UI/UX upgrades, design changes and additional features shall be provided as and when required during the concurrency of contract. to Prasar Bharati.
- 5.2.1.10.11. Provide a subsystem incorporating tools for content acquisition, processing and distribution. Content refers to media assets, meta-data, and associated supplementary items such as trailers, movie posters, music-clips etc. that need to be streamed to the end devices.
- 5.2.1.10.12. Provide a subsystem incorporating tools for content acquisition, processing and distribution. Content refers to media assets, meta-data, and associated supplementary items such as trailers, movie posters, music-clips etc. that need to be streamed to the end devices.
- 5.2.1.10.13. Provide the ability for service provider to perform the following general content acquisition, processing and distribution functionalities:
- 5.2.1.10.14. Multiplex multi-language audios, multi-channel audios and multi-language subtitling to final delivery formats.
- 5.2.1.10.15. Process corresponding meta-data
- 5.2.1.10.16. Transcode the content to codec suitable for OTT delivery
- 5.2.1.10.17. Proposed Subsystem mentioned above of the OTT solution shall allow manual ingestion of new content via a GUI based interface.

5.2.1.10.18. Proposed OTT solution shall provide the ability for service provider to Encode/Transcode VOD source contents to format suitable for the delivery over network and consumed by end devices.

5.2.1.10.19. File Based Transcoding

5.2.1.11. Capacity, scalability and performance requirements

5.2.1.11.1. The proposed solution shall be scalable up to 10 Crores Subscribers.

5.2.1.11.2. The proposed solution shall be highly scalable in terms of subscriber capacity, number of linear and non-linear channels, concurrent sessions, and feature additions.

5.2.1.11.3. The proposed solution shall be able to expand without affecting the services and operation.

5.2.1.11.4. Bidder shall propose adequate hardware capacity which shall be scalable as per requirements.

5.2.1.11.5. The proposed solution shall ensure below listed performance parameters (but not limited to) irrespective of any load of the system inclusive of network delays for OTT service delivery.

5.2.1.11.5.1. Page loading (opening quick menu pages, grid menu, page traversing from one page to another, etc.) shall be less than 1 sec.

5.2.1.11.5.2. Changes to the published metadata shall be within 30 (thirty) minutes.

5.2.1.11.5.3. Last minute program schedule changes shall be accommodated immediately for channels with linear and TSTV enabled

5.2.1.12. Security requirements

5.2.1.12.1. The proposed solution shall ensure comprehensive security to provide Confidentiality, Integrity & Availability.

5.2.1.12.2. The proposed solution shall conduct vulnerability assessment on all the system components during the implementation phase to ensure secure implementation.

5.2.1.12.3. Bidder shall conduct vulnerability assessments on system components semi-annually or during system upgrades or system component changes.

5.2.1.12.4. Bidder shall rectify all the identified vulnerabilities during internal and external vulnerability assessments.

5.2.1.12.5. The proposed solution shall provide

5.2.1.12.6. Subscriber authentication including device authentication

5.2.1.12.6.1.1. Content security using robust DRM, ACP or any other format

5.2.1.12.6.1.2. Password security policies

5.2.1.12.6.1.3. Protocol security using secure protocol for communications

5.2.1.12.6.1.4. Session management security

- 5.2.1.12.6.1.5. Attacks (DDOS, MiM, etc.) prevention
- 5.2.1.12.6.1.6. Protection of sensitive data storage and transmission
- 5.2.1.12.6.1.7. Security measures in Operating System and Database
- 5.2.1.12.6.1.8. System user management
- 5.2.1.12.6.1.9. Log management
- 5.2.1.12.6.2. App security including prevention of App hacking, hijacking, etc.
- 5.2.1.12.6.3. Mobile clients shall be able to detect rooted or jailbroken devices and restrict content playback/download which is not allowed to be played on such devices or limit the resolution to 320 x 240 at a bit rate not exceeding 300 kbps.
- 5.2.1.12.6.4. Anti-fraud automation (Real Time Fraud Detection and Prevention system)
- 5.2.1.12.6.5. Any other security provisions as entrusted by MeiTY from time to time
- 5.2.1.12.7. The proposed solution shall support enabling of encryption (AES 128 or above) for all or selected channels and other media contents.
- 5.2.1.12.8. The proposed solution shall adapt secure communication between,
 - 5.2.1.12.8.1. OTT client and Platform
 - 5.2.1.12.8.2. Platform and External systems (such as OSS, BSS, SMSC, etc.)
- 5.2.1.12.9. The proposed solution shall provide role-based access control for management interfaces
- 5.2.1.12.10. The proposed solution shall provide enforcing password policies (mixed character enforcement, password expiration etc.) on all the management interfaces.
- 5.2.1.12.11. The management interfaces and all the external interfaces shall be secured with SSL certificate authentication system.
- 5.2.1.12.12. The proposed solution shall consist with proper security mechanism (perimeter security, web filtering, IDS, IPS etc.) when interfacing third party systems. Bidder shall clearly describe the security mechanism deployed within the proposed solution.
- 5.2.1.12.13. The proposed solution shall include security mechanism for inter server / service communications (i.e., Internal firewall).
- 5.2.1.12.14. The proposed solution shall maintain proper log management function that records and stores all logs for at least three (3) months to capture all actions carried out by the users (Internal & External).
- 5.2.1.12.15. The log management of the proposed solution shall have the capability to integrate to a higher level SIEM application and/or third-party log management solution for further security analysis.
- 5.2.1.12.16. The proposed solution shall comply the security aspects and following standard specifications but not limited to

5.2.1.12.16.1. Proposed solution should protect from OWASP most critical (top 10) web and mobile application security risks

5.2.1.13. Reporting requirements

5.2.1.13.1. The proposed solution shall provide an extensive monitoring and reporting solution for OTT platforms which proactively collects/extracts statistics on operational data, health, performance data, service subscriptions and usage information.

5.2.1.13.2. The proposed solution shall fulfill reporting requirements for all the OTT clients across all the user devices with relevant segregations.

5.2.1.13.3. The proposed solution shall provide

5.2.1.13.3.1. Real-time monitoring on resource and service performance KPIs

5.2.1.13.3.2. Dashboards view of resource and service performance KPIs

5.2.1.13.3.3. Offline reports – scheduled and customized report generation

5.2.1.13.3.4. Capability of analyzing trends and generating forecast reports

5.2.1.13.3.5. Role-based access for the reporting module

5.2.1.13.4. The proposed solution shall have the capability of

5.2.1.13.4.1. Grouping

5.2.1.13.4.2. Filtering

5.2.1.13.4.3. Scheduling

5.2.1.13.4.4. Backdating

5.2.1.13.4.5. Getting summary or detail reports, if applicable

5.2.1.13.5. Service provider end reporting

5.2.1.13.5.1. The proposed solution shall have a web-based GUI that supports generation of reports accessing real-time and past data for OTT service deliveries to make informed decisions about user base, content and monetization ways.

5.2.1.13.5.2. The report module shall have customizable dashboard views and reports, which shall be available in numerical and graphical user configurable formats.

5.2.1.13.5.3. Bidder shall provide the list of reports that are currently available with the solution.

5.2.1.13.5.4. The proposed solution shall have the capability to download and save reports in PDF, HTML, MS Doc/excel, csv, etc. formats.

5.2.1.13.5.5. The proposed solution shall provide reports for national PoPs which shall be visualized in geographical maps.

5.2.1.13.5.6. The proposed solution shall be able to provide raw data (subscribers, statistics, etc.) to a 3rd party analytic solution.

5.2.1.13.5.7. The proposed solution shall provide below types of reports (but not limited to),

5.2.1.13.5.8. Customer detail reports with the attributes of name, username, address, connected devices, purchased services, etc.

5.2.1.13.5.9. Customer Purchase information

5.2.1.13.5.10. Snapshot of total billable subscriptions (Basic/Channel/SVOD Packages)

5.2.1.13.5.11. Total subscriber base including terminations

5.2.1.13.5.11.1. Customer wise viewership history – For a particular customer, viewership history of Live TV, TSTV, VOD and SVOD

5.2.1.13.5.11.2. Content wise viewership reports capturing total minutes viewed on a daily basis, aggregated to defined periods. Aim is to define revenue share percentages for content providers based on watched minutes.

5.2.1.13.6. Daily content streaming reports

5.2.1.14. System requirements

5.2.1.14.1. Availability Requirements

5.2.1.14.1.1. The proposed solution shall ensure 99.95% availability.

5.2.1.14.1.2. The proposed solution shall be designed in such a way that there is no single point of failure.

5.2.1.14.1.3. The proposed solution at the production site shall provide a highly available architecture with load sharing.

5.2.1.14.1.4. The proposed solution shall ensure service availability during site disasters.

5.2.1.14.1.5. Bidder shall clearly detail the architecture and design of the solution to be a highly available, fully redundant, fault tolerant solution

5.2.1.14.2. Content management

5.2.1.14.2.1. Assets and rights management

5.2.1.14.2.2. Geo-blocking: ability to whitelist or blacklist content on an asset-by-asset basis or package basis by IP Address, country

5.2.1.14.2.3. Subscriber management

5.2.1.14.2.4. Preference and profile management

5.2.1.14.2.5. Products & billing management

5.2.1.14.2.6. Content fulfilment & delivery

5.2.1.14.2.7. EPG publishing

5.2.1.14.2.8. Customer self-care management

5.2.1.14.2.9. Content recommendation engine

5.2.1.14.3. OTT Live Transcoding system

- 5.2.1.14.3.1. The proposed solution shall provide real time software based transcoding system for OTT delivery
- 5.2.1.14.3.2. Proposed transcoding solution shall support bandwidth efficient content compression for delivery to managed network, Mobile and Internet.
- 5.2.1.14.3.3. The proposed transcoding system shall support the following input streams (but not limited to);
 - 5.2.1.14.3.3.1. SDI/HDMI/IP
 - 5.2.1.14.3.3.2. Unicast/Multicast
 - 5.2.1.14.3.3.3. HLS
 - 5.2.1.14.3.3.4. SRT
 - 5.2.1.14.3.3.5. RTMP
- 5.2.1.14.4. Proposed transcoding solution shall provide following Video processing;
 - 5.2.1.14.4.1. Key frame alignment
 - 5.2.1.14.4.2. Resolution changes
 - 5.2.1.14.4.3. De-interlacing. (Motion Adaptive Interpolation and Blend)
 - 5.2.1.14.4.4. Static Graphic/Logo Overlay (Multiple image overlays)
 - 5.2.1.14.4.5. Adaptive / fixed GOP structure & size
 - 5.2.1.14.4.6. Scene change detection
- 5.2.1.14.5. The proposed transcoder shall support following output Video specifications;
 - 5.2.1.14.5.1. H.265 / HEVC
 - 5.2.1.14.5.2. H.264 / MPEG-4 AVC
 - 5.2.1.14.5.3. AV1
 - 5.2.1.14.5.4. HD / SD / LD video resolutions.
 - 5.2.1.14.5.5. Multi profile video resolutions for 4K, HD and SD sources
 - 5.2.1.14.5.6. Up to High Profile Level 4.1 for HD & SD sources
 - 5.2.1.14.5.7. Main 10 Level 5.1 for 4K sources
 - 5.2.1.14.5.8. Support for 4:2:0 video sampling
 - 5.2.1.14.5.9. PAL video format support
 - 5.2.1.14.5.10. 4:3 and 16:9 video aspect ratio
 - 5.2.1.14.5.11. 150kbps to 25 Mbps video encoding bitrate for profiles
 - 5.2.1.14.5.12. CBR, Capped VBR, VBR encoding rate control support
- 5.2.1.14.6. The proposed transcoder shall support the following output Audio specifications;

- 5.2.1.14.6.1. Multi-bitrate transcoding based on the output profile
- 5.2.1.14.6.2. Up to 4 stereo audio channels for single profile (Multi audio output) 32, 48, 64, 80, 96, 112, 128, 160, 192, 224, 256, 384, 512 Kbps
- 5.2.1.14.7. Audio encoding Formats;
 - 5.2.1.14.7.1. AAC-LC
 - 5.2.1.14.7.2. HE-AAC
 - 5.2.1.14.7.3. Opus
 - 5.2.1.14.7.4. Dolby Digital (AC-3) Pass-through
 - 5.2.1.14.7.5. Dolby Digital Plus (EAC-3) Pass-through
 - 5.2.1.14.7.6. Dolby Digital E Pass-through
- 5.2.1.14.8. Proposed transcoding solution shall provide the following Audio Output Codecs as purchasable options;
 - 5.2.1.14.8.1. Dolby Digital (AC-3)
 - 5.2.1.14.8.2. Dolby Digital Plus (EAC-3)
- 5.2.1.14.9. Proposed transcoding solution shall provide the following caption/subtitle outputs;
 - 5.2.1.14.9.1. TTML
 - 5.2.1.14.9.2. WebVTT
- 5.2.1.14.10. Proposed transcoding solution shall provide the following output container formats (but limited to);
 - 5.2.1.14.10.1. MPEG2 transport stream encapsulation.
 - 5.2.1.14.10.2. Fragmented MP4 (fMP4) stream encapsulation
- 5.2.1.14.11. Proposed transcoding solution shall be able to output compliant with following technologies;
 - 5.2.1.14.11.1. Common Media Application Format (CMAF)
 - 5.2.1.14.11.2. Apple HTTP Adaptive Streaming (HLS)
 - 5.2.1.14.11.3. MPEG DASH (ISOBMFF) for Dynamic Adaptive Streaming over HTTP
 - 5.2.1.14.11.4. MPEG-2 Transport Streams (MPEG-TS)
- 5.2.1.14.12. Proposed transcoding solution shall provide the following system control interface;
- 5.2.1.14.13. Web-based user interface
- 5.2.1.14.14. Transcoders shall have built in I/O modules AV INPUT / OUTPUT interfaces within the equipment.
- 5.2.1.14.15. The proposed transcoder shall offer high availability, reliability and robustness.
- 5.2.1.14.16. The maximum delay of proposed transcoding solution less than 5 Seconds.

- 5.2.1.14.17. The Real-time transcoder shall be set up in high availability environment with automatic / manual failover
- 5.2.1.14.18. The Real-time encoder shall have redundant Gigabit Ethernet ports.
- 5.2.1.14.19. The Real-time transcoder shall have a configurable NIC output configuration:
- 5.2.1.14.20. The proposed transcoder shall support internal test pattern generation.
- 5.2.1.14.21. Proposed transcoding solution shall provide following Features;
- 5.2.1.14.22. Audio Level Adjustment
- 5.2.1.14.23. Burned-In Timecode and Captions
- 5.2.1.14.24. Caption Extraction and Pass-through
- 5.2.1.14.25. SCTE-35 Support
- 5.2.1.14.26. All media content of the proposed solution shall support up to:
- 5.2.1.14.27. Radio Streaming 128K
- 5.2.1.14.28. Standard Definition (SD) 576i/50
- 5.2.1.14.29. High Definition (HD) 1080p/60
- 5.2.1.14.30. Ultra HD/4K p60
- 5.2.1.14.31. Solution shall be designed in such a way that there is no single point of failure.
- 5.2.1.14.32. Encoding/transcoding solution shall support bandwidth efficient content compression for delivery to Television, Mobile and Internet.
- 5.2.1.14.33. Transcoding solution shall be based on reliable architecture creating highly available transcoding farm with automatic failover and redundant job schedulers.
- 5.2.1.14.34. Proposed transcoding solution shall provide following configuration and management features:
- 5.2.1.14.35. Batch encoding manager
- 5.2.1.14.36. One-click encoding with presets
- 5.2.1.14.37. Watch folder drop-in directory for tasks such as workflow integration, job queuing, scheduling, and prioritization.
- 5.2.1.14.38. Transcoding solution shall provide the following system control interfaces;
- 5.2.1.14.39. Web-based user interface
- 5.2.1.14.40. System resource and statistics monitoring
- 5.2.1.14.41. Multi-tiered User Authentication
- 5.2.1.14.42. Integrated CDN support: Basic PUT, POST
- 5.2.1.14.43. Transcoding solution shall provide support for following source media containers:

- 5.2.1.14.44. .MP4, .TS, .3GP, .AVI, .M2TS, .MKV, .MOV, .MPEG (.MPG), .VOB, .WEBM, .WMV, .MXF, .HLS, .DASH, SRT, .RTMP
- 5.2.1.14.45. Discrete audio and caption inputs, .WAV, .AIFF, MP4, AC3/EAC3
- 5.2.1.14.46. Transcoding solution shall provide support for following source video codecs: HEVC / H.265, AVC / H.264, AV1, VP9, MPEG-2
- 5.2.1.14.47. Transcoding solution shall provide support for following source audio codecs but not limited to: AC-3 (Dolby Digital), AAC (LC, LD, HEv1, HEv2), MPEG-1 L2, MPEG-1 L3, MPEG-2 L2
- 5.2.1.14.48. Transcoding solution shall provide following input features:
 - 5.2.1.14.49. Audio only processing
 - 5.2.1.14.50. Audio PID tracking
 - 5.2.1.14.51. Audio language tracking
 - 5.2.1.14.52. Static image overlays
- 5.2.1.14.53. Transcoding solution shall provide following multichannel audio input capabilities;
 - 5.2.1.14.54. Unlimited audio tracks
 - 5.2.1.14.55. Multichannel track assignments and gains per input
- 5.2.1.14.56. Transcoding solution shall provide following Video processing features:
 - 5.2.1.14.57. Adaptive Quantization
 - 5.2.1.14.58. Anti-Aliasing Scaling for reducing distortion artifacts when downscaling
 - 5.2.1.14.59. ABR, CBR, CQ, VBR, Quality-Defined Variable Bitrate (QVBR), Two-Pass Encoding Modes
 - 5.2.1.14.60. Colour Correction
 - 5.2.1.14.61. Cropping (per input and output)
 - 5.2.1.14.62. Deblocking
 - 5.2.1.14.63. Deinterlacing (Motion Adaptive Interpolation and Blend)
 - 5.2.1.14.64. Dithering (Pseudo-random dynamic rounding) for 16-bit Down-Conversions
 - 5.2.1.14.65. Frame Rate Interpolation
 - 5.2.1.14.66. HDR 10 Support
 - 5.2.1.14.67. Lanczos Scaling
 - 5.2.1.14.68. Linear Scaling
 - 5.2.1.14.69. Look Ahead Rate Control
 - 5.2.1.14.70. Minimum I-frame Interval

- 5.2.1.14.71. Static Graphics Overlay (Multiple image overlays (BMP, PNG or TGA format), SDR or HDR, Image overlay application to a single input, a single output, or globally, z-order and opacity control)
- 5.2.1.14.72. Rec.2020 Colour
- 5.2.1.14.73. Noise Reduction (Bilateral, Mean, Gaussian, Lanczos, Sharpen, Conserve)
- 5.2.1.14.74. RGB to YUV Conversion
- 5.2.1.14.75. Scene Change Detection
- 5.2.1.14.76. Variable GOP Support
- 5.2.1.14.77. Transcoding solution shall provide following File output containers:
- 5.2.1.14.78. MPEG-4 Part 10 (MP4)
- 5.2.1.14.79. Fragmented MP4 (fMP4)
- 5.2.1.14.80. MPEG Transport Stream (TS)
- 5.2.1.14.81. Audio only files for audio applications
- 5.2.1.14.82. Transcoding solution shall provide following Streaming Output Formats:
- 5.2.1.14.83. Common Media Application Format (CMAF)
- 5.2.1.14.84. Apple HTTP Adaptive Streaming (HLS)
- 5.2.1.14.85. MPEG DASH (ISOBMFF) for Dynamic Adaptive Streaming over HTTP
- 5.2.1.14.86. Single Program Transport Streams (SPTS)
- 5.2.1.14.87. Transcoding solution shall provide caption/subtitle processing features.
- 5.2.1.14.88. Transcoding solution shall provide following Video Output Codecs;
- 5.2.1.14.89. HEVC / H.265 (Main, Main 10 up to 4:4:4, Main 12 up to 4:4:4)
- 5.2.1.14.90. AVC / H.264 (Baseline, Main up to 4:4:4, High up to 4:4:4)
- 5.2.1.14.91. Transcoding solution shall provide following Audio Output Codecs:
- 5.2.1.14.92. AAC-LC
- 5.2.1.14.93. Dolby Digital (AC-3) Pass-through
- 5.2.1.14.94. Dolby Digital Plus (EAC-3) Pass-through
- 5.2.1.14.95. Audio only support
- 5.2.1.14.96. Transcoding solution shall provide following Audio Output Codecs as purchasable options:
- 5.2.1.14.97. Dolby Digital (AC-3)
- 5.2.1.14.98. Dolby Digital Plus (EAC-3)
- 5.2.1.14.99. Transcoding solution shall provide Multichannel Audio Output capabilities with Unlimited audio tracks.

- 5.2.1.14.100. Transcoding solution shall provide following features:
- 5.2.1.14.101. 4K Ultra HD Output
- 5.2.1.14.102. Audio Level Adjustment
- 5.2.1.14.103. Audio Only Encoding
- 5.2.1.14.104. Multiple Audio Tracks (SAP)
- 5.2.1.14.105. SCTE-35 Support

5.2.1.15. Content protection & conditional access system / Digital Right Management

- 5.2.1.15.1. The proposed OTT solution shall include Digital Right Management (DRM) which shall be a highly scalable and reliable solution.
- 5.2.1.15.2. The proposed solution for DRM, shall be globally accepted by known content providers such as HBO, SONY, CNN, ESPN, Discovery, STAR India, NGC, etc. without any hesitation.
- 5.2.1.15.3. The proposed solution shall be providing DRM and content consumption transparency across all networks and all devices.
- 5.2.1.15.4. The proposed solution shall be an agnostic approach to streaming formats.
- 5.2.1.15.5. The proposed solution shall provide Multi DRM support for device specific DRMs such as FairPlay, Widevine, and PlayReady.
- 5.2.1.15.6. Platform shall be able to integrate with new DRM providers and technologies.
- 5.2.1.15.7. The proposed solution shall provide device authentication and streaming encryption.
- 5.2.1.15.8. The proposed DRM solution shall be delivered from a cloud-based solution.
- 5.2.1.15.9. The analytics of DRM Licensing server is to be shared with Prasar Bharati.
- 5.2.1.15.10. Provides interface to all leading live, on-demand and dynamic content packaging tools
- 5.2.1.15.11. Provides seamless Multi-DRM sing CMAF encrypted format with industry grade protection of audio and video
- 5.2.1.15.12. 100% standards-based multi-DRM security
- 5.2.1.15.13. The Digital Right Management (DRM) solution shall be a highly scalable and reliable solution.
- 5.2.1.15.14. Fully enables CMAF & HESP
- 5.2.1.15.15. Native CBCS encryption approach
- 5.2.1.15.16. Common Media Application Format (CMAF; officially MPEG-A Part 19 or ISO/IEC 23000-19)
- 5.2.1.15.17. HESP (High Efficiency Stream Protocol) is an adaptive HTTP based video streaming protocol for video streaming with ultra-low latency and optimizing costs
- 5.2.1.15.18. Compatibility across all modern manifest types

- 5.2.1.15.19. Platforms Supported
- 5.2.1.15.20. IE11 or above and Edge browsers on Windows
- 5.2.1.15.21. Chrome and Firefox browsers on Windows and ChromeOS
- 5.2.1.15.22. Browser and apps on Android phones and tablets
- 5.2.1.15.23. Browsers and apps on Android TV STBs
- 5.2.1.15.24. Chromecast/Google Cast devices
- 5.2.1.15.25. Browsers and apps on Apple devices
- 5.2.1.15.26. Solution shall ensure comprehensive security to provide Confidentiality, Integrity & Availability.
- 5.2.1.15.27. Solution shall conduct vulnerability assessment on all the system components during the implementation phase to ensure secure implementation.
- 5.2.1.15.28. Bidder shall conduct vulnerability assessments on system components semi-annually or during system upgrades or system component changes.
- 5.2.1.15.29. Bidder shall rectify all the identified vulnerabilities during internal and external vulnerability assessments.
- 5.2.1.15.30. The proposed solution shall provide
- 5.2.1.15.31. Subscriber authentication including device authentication
- 5.2.1.15.32. Content security using robust DRM, ACP and DCP
- 5.2.1.15.33. Password security policies
- 5.2.1.15.34. Protocol security using secure protocol for communications
- 5.2.1.15.35. Session management security
- 5.2.1.15.36. Attacks (DDOS, MiM, etc.) prevention
- 5.2.1.15.37. Protection of sensitive data storage and transmission
- 5.2.1.15.38. Security measures in Operating System and Database
- 5.2.1.15.39. System user management
- 5.2.1.15.40. Log management
- 5.2.1.15.41. App security including prevention of App hacking, hijacking, etc.
- 5.2.1.15.42. Mobile clients shall be able to detect rooted or jailbroken devices and restrict content playback/download which is not allowed to be played on such devices or limit the resolution to 320 x 240 at a bit rate not exceeding 300 kbps.
- 5.2.1.15.43. Anti-fraud automation
- 5.2.1.15.44. Support enabling of encryption for all or selected channels and other media contents.
- 5.2.1.15.45. Adapt secure communication between:

- 5.2.1.15.46. OTT client and Platform
- 5.2.1.15.47. Platform and External systems (such as OSS, BSS, SMSC, etc.)
- 5.2.1.15.48. Provide role-based access control for management interfaces.
- 5.2.1.15.49. Provide enforcing password policies (mixed character enforcement, password expiration etc.) on all the management interfaces.
- 5.2.1.15.50. The management interfaces and all the external interfaces shall be secured with SSL certificate authentication system.
- 5.2.1.15.51. Solution shall consist with proper security mechanism (perimeter security, web filtering, IDS, IPS etc.) when interfacing third party systems. Bidder shall clearly describe the security mechanism deployed within the proposed solution.
- 5.2.1.15.52. Solution shall include security mechanism for inter server / service communications (i.e., Internal firewall).
- 5.2.1.15.53. Solution shall maintain proper log management function that records and stores all logs for at least three (3) months to capture all actions carried out by the users (Internal & External).
- 5.2.1.15.54. The log management of the proposed solution shall have the capability to integrate to a higher level SIEM application and/or third-party log management solution for further security analysis.
- 5.2.1.15.55. Solution shall comply the security aspects and minimum standard specifications to protect from OWASP most critical (top 10) web and mobile application security risks
- 5.2.1.16. Integration and Interoperability**
 - 5.2.1.16.1. The scope shall also include to make available various Application Programming Interfaces (APIs) to enable integration with third-party services such as Payment gateways, games, educational series in universities, etc and devices, such as smart TVs, mobile apps, and content recommendation engines.
 - 5.2.1.16.2. Payment gateway integration allows users to make secure online payments, manage auto subscription fee payments, and handle billing-related processes. Depending upon the subscription model identified by Prasar Bharti, this payment gateway would enable the users to pay the subscription fees. Managing the subscription and payments made by the user, a secure and robust payment gateway platform needs to be developed.
 - 5.2.1.16.3. OTT platform shall allow 3rd party developers to securely build applications that can access and interact with platform features and content.
 - 5.2.1.16.4. The proposed solution shall facilitate prepaid scenarios:
 - 5.2.1.16.4.1. Integration with the payment gateways, such as Razor Pay, etc.
 - 5.2.1.16.4.2. Support both account level and product level prepaid scenarios.
 - 5.2.1.16.4.3. Support voucher-based payment scenarios.
 - 5.2.1.16.4.4. Support online payments via UPI, Debit and Credit cards & online payment modes

- 5.2.1.16.4.5. Provide strong audit trails for prepaid payment scenarios referring to the relevant transactions (Ex: Online transactions).
- 5.2.1.16.5. Integrate with the below to facilitate push notifications,
 - 5.2.1.16.5.1. Apple Push Notification
 - 5.2.1.16.5.2. Google Push Notification
 - 5.2.1.16.5.3. Browser Push Notification
- 5.2.1.16.6. The proposed solution shall provide provision for the integration with Prasar Bharti self-care portal / apps (e.g.: subscriber provisioning and product purchasing).
- 5.2.1.16.7. The system shall provide a REST API, B2B based on well-known standards that third party applications will be able to consume.
- 5.2.1.16.8. Access to the API shall be based on user / login.
- 5.2.1.16.9. The API documentation shall be available online.
- 5.2.1.16.10. The solution shall be open standard based and future proof solution which enable interoperability between third party vendor solutions (API interfaces, etc.) and evolve with latest industry trends and standards.
- 5.2.1.17. Security Audit and certifications**
 - 5.2.1.17.1. Bidder must undertake regular third-party application security audits and must share those results with Prasar Bharati. Security Audits to be performed by valid CERTIn empanelled vendors only.
 - 5.2.1.17.2. The Successful Bidder needs to obtain a valid TPN certification of the Prasar Bharati OTT platform within 90 days of go-live of the Release 1.
- 5.2.1.18. Content Management System (CMS)**
 - 5.2.1.18.1. Proposed solution shall provide a subsystem of MAM, incorporating tools for content acquisition, processing and distribution. Content refers to media assets, meta-data, and associated supplementary items such as trailers, movie posters, music-clips etc. that need to be streamed to the end devices.
 - 5.2.1.18.2. CMS mentioned above shall be integrated with all the delivery platforms as a part of total end- to-end OTT solution
 - 5.2.1.18.3. Asset Management Interface shall provide management of asset metadata and associated content
 - 5.2.1.18.4. Proposed CMS mentioned above of the OTT solution shall provide the ability for service provider to perform the following general content acquisition, processing and distribution functionalities;
 - 5.2.1.18.4.1. Multiplex multi-language audios, multi-channel audios and multi-language subtitling to final delivery formats.
 - 5.2.1.18.4.2. Process corresponding meta-data

5.2.1.18.4.3. Transcode the content to codec suitable for OTT delivery

5.2.1.18.4.4. Proposed Subsystem mentioned above of the OTT solution shall allow manual ingestion of new content via a GUI based interface.

5.2.1.18.4.5. Proposed OTT solution shall provide the ability for service provider to Encode/Transcode VOD source contents to format suitable for the delivery over network and consumed by end devices.

5.2.1.18.4.6. File Based Transcoding

5.2.1.18.5. Advance Analytics

5.2.1.18.6. Users, user activities, events, resources utilization, content events are to be captured and analysed. The process information is to be shared through a Dashboard to enable insight visibility and further automatic actions to provide customized services and improve performance and take corrective measures.

5.2.1.18.7. The Bidder shall be responsible for building a robust analytics platform for Prasar Bharati OTT platform that will

5.2.1.18.8. Provide users with personalized movie and TV show recommendations

5.2.1.18.8.1. Provide users with personalized audio content listening recommendations

5.2.1.18.8.2. Predict the popularity of original content

5.2.1.18.8.3. Personalize marketing content such as trailers and thumbnail images

5.2.1.18.8.4. Optimize production planning

5.2.1.18.8.5. User and resource-based data

5.2.1.18.9. The Bidder is required to build a robust and personalized recommendation engine that will capture following details for the users:

5.2.1.18.9.1. Viewing day, time, location and device

5.2.1.18.9.2. Platform searches (key words and number of searches)

5.2.1.18.9.3. Whether content was paused, rewound, rewatched or fast forwarded. (It even saves screenshots of when the show was paused, when the user left the show, and when the user watches a scene more than once)

5.2.1.18.9.4. Content abandonment times and rates

5.2.1.18.9.5. Browsing and scrolling behaviour

5.2.1.18.10. The solution shall provide an extensive monitoring and reporting solution for OTT platforms which proactively collects/extracts statistics on operational data, health, performance data, service subscriptions and usage information.

5.2.1.18.11. The solution shall fulfill reporting requirements for all the OTT clients across all the user devices with relevant segregations.

5.2.1.18.12. The proposed solution shall provide

- 5.2.1.18.12.1. Real-time monitoring on resource and service performance KPIs
- 5.2.1.18.12.2. Dashboards view of resource and service performance KPIs
- 5.2.1.18.12.3. Offline reports – scheduled and customized report generation
- 5.2.1.18.12.4. Capability of analyzing trends and generating forecast reports
- 5.2.1.18.12.5. Role-based access for the reporting module
- 5.2.1.18.13. The proposed solution shall have the capability of
 - 5.2.1.18.13.1. Grouping
 - 5.2.1.18.13.2. Filtering
 - 5.2.1.18.13.3. Scheduling
 - 5.2.1.18.13.4. Backdating
 - 5.2.1.18.13.5. Getting summary or detail reports, if applicable
- 5.2.1.18.14. Solution shall have a web-based GUI that supports generation of reports accessing real-time and past data for OTT service deliveries to make informed decisions about user base, content and monetization ways.
- 5.2.1.18.15. The report module shall have customizable dashboard views and reports, which shall be available in numerical and graphical user configurable formats.
- 5.2.1.18.16. The solution shall have the capability to download and save reports in PDF, HTML, MS Doc/excel, csv, etc. formats.
- 5.2.1.18.17. The solution shall provide reports for national PoPs which shall be visualized in geographical maps.
- 5.2.1.18.18. The solution shall be able to provide raw data (subscribers, statistics, etc.) to a 3rd party analytic solution.
- 5.2.1.18.19. The solution shall provide Customer detail reports:
 - 5.2.1.18.19.1. With the attributes of name, username, address, connected devices, purchased services, etc.
 - 5.2.1.18.19.2. Customer Purchase information
 - 5.2.1.18.19.3. Snapshot of total billable subscriptions (Basic/Channel/SVOD Packages)
 - 5.2.1.18.19.4. The solution shall provide other detail reports:
 - 5.2.1.18.19.5. Total subscriber base including terminations
 - 5.2.1.18.19.6. Customer wise viewership history – For a particular customer, viewership history of FAST Channels, Live TV, TSTV, VOD and SVOD, live radio, audio on demand etc.
 - 5.2.1.18.19.7. Content wise viewership reports capturing total minutes viewed on a daily basis, aggregated to defined periods. Aim is to define revenue share percentages for content providers based on watched minutes.

- 5.2.1.18.20. Analyze the most important Quality of Service KPIs with real time visibility
- 5.2.1.18.21. Detect and diagnose errors and users affected and troubleshoot issues or weak points in real-time
- 5.2.1.18.22. Automated alerting system to detect service issues and pinpoint root causes
- 5.2.1.18.23. Create custom reports based on your needs and set up the frequency, format and preferred notification channel
- 5.2.1.18.24. Specialized tools to isolate issues and correlate multiple data sets
- 5.2.1.18.25. Daily content streaming reports
- 5.2.1.18.26. The Analytics Engine would be required to not only predict what users are likely to watch next, but arrange selections into rows based on an individual's viewing preferences
- 5.2.1.18.27. The Advanced Analytics should be able to analyse visual data such as composition metadata (aesthetic, heuristic characteristics etc) and contextual metadata (tones, facial and body language / expressions, objects, certain scenes where cautionary statements needs to be ingested etc.) to drive image selection for the generating thumbnails for the users and share the credible data with Prasar Bharati for decision making.
- 5.2.1.18.28. The Robust analytics platform should also be able to suggest relevant advertisements based on the user age groups, watch history, preferences, languages chosen etc. which will help in providing relevant information to the users and increase the revenue stream for Prasar Bharati.
- 5.2.1.18.29. Targeted advertisements should be made available to both subscribed and non subscribed based on the relevance of the advertisements to the users.
- 5.2.1.18.30. To the extent possible, Artificial Intelligence and Machine Learning algorithms should be used to refine and reuse the data that is generated out of analytics.
- 5.2.1.18.31. All the data be it user specific or otherwise shall always 100% adhere to The Digital Personal Data Protection Act, 2023 / relevant data protection rules and regulations/act in India and there should be 0% deviation from the legalities prescribed.
- 5.2.1.18.32. KPIs, Measures related to Descriptive Analytics (e.g. Usage Statistics, content performance) should be available from Day 1. For Predictive Analytics certain gestation period can be expected. However, any leading Predictive Analytics platform should ideally be trained by Training Data Sets so that predictions can be made immediately after implementation. Bidder can showcase the solution and mention the gestation period for the same, which will indicate maturity/capability of the Analytics Solution.
- 5.2.1.18.33. Bidder is required to provide all the Advance Analytics features which are useful for Prasar Bharti in adequately capturing the details and accordingly monetizing the platform. Policy on Adoption of Open Source Software for Government of India as per MeitY should be adhered to while developing any application or app.
- 5.2.1.18.34. Gain contextualized visibility on user interaction with app components before and after video playback

- 5.2.1.18.35. Create funnels to understand user journey between touch points
- 5.2.1.18.36. Identify in-app errors and quality issues occurrence by device
- 5.2.1.18.37. Pinpoint errors generating app-crashes and poor loading times
- 5.2.1.18.38. Deep dive into users individual sessions by user ID or IP

5.3. Area 3: Hosting of the Data and Application, DC and DR on cloud, integration with CDN, etc.

5.3.1. Data Centre hosted on Cloud

- 5.3.1.1. The complete computing services, applications, database and other interfaces that are required for smooth functioning of OTT platform is to be hosted on MeitY empanelled cloud with adequate resilience. The bidder is to provide required VMs, storage and other cloud services, API hosting etc. to deliver the satisfactory services as per SLA.
- 5.3.1.2. The Bidder is required to ensure a smooth experience to meet the requirement given in the Service Level Agreement. Cloud resources shall be optimally deployed and scaled up and scaled down based on the load. The Bidder shall provide the complete solution and fill all the gaps which are not explicitly mentioned in this RFP. The bidder is to ensure following:
- 5.3.1.3. System Integration Services
- 5.3.1.4. Design, Procure, implement, integrate and commission all cloud based services in respect of the OTT platform including active and passive components required to deliver a complete solution.
- 5.3.1.5. System Maintenance Services
- 5.3.1.6. Undertake maintenance services of all the components to ensure that overall uptime commitment as defined in SLA section (Service Level Agreement) of the RFP.
- 5.3.1.7. Database support services
- 5.3.1.8. Provide administration, patch upgrade and update management services for Database for optimal and tuned services.
- 5.3.1.9. Computing, Storage, Bandwidth, Security services, authentication and any other cloud service optimally design and provided.
- 5.3.1.10. Performance Monitoring and Capacity Management Services
- 5.3.1.11. Procure, operate, and maintain the monitoring components and provide performance monitoring and capacity management services for the solution by creating a dedicated setup of a Dashboard system which will provide realtime data to Prasar Bharati officials related to utilization of cloud resources. but not limited to, media ingested, users, advertisements, bugs, buffering issues, screen freeze etc.
- 5.3.1.12. Messaging Services
- 5.3.1.13. Provide Unified Messaging Services to the all the users of Prasar Bharati
- 5.3.1.14. Application Related Services
- 5.3.1.15. Provide OTT Application related services like Application Maintenance Enhancement / Migration.
- 5.3.1.16. The DC and DR of Cloud based solution should be hosted in India. No data sharing/replication to any Data Centre outside the boundaries of India country
- 5.3.1.17. The data centers should be able to support long term scalability for Prasar Bharti setup to expand to cover the entire Indian population as its subscribers.

- 5.3.1.18. Data Centres should be certified for valid ISO 27001, 27701 etc.
- 5.3.1.19. This cloud infrastructure should be isolated and secured in nature
- 5.3.1.20. Cloud infrastructure shall be designed for high availability with dual redundancy for all solution components to enable reliable auto recovery workflows.
- 5.3.1.21. Cloud platform should support cloud native Infrastructure services, API, and tools to work seamlessly.
- 5.3.1.22. Cloud platform should support and be available to build secure and compliant hybrid cloud architectures.
- 5.3.1.23. Cloud platform should provide the functionality to protect data from accidental deletion as per Meity Guidelines
- 5.3.1.24. Cloud platform should provide completely managed computer service
- 5.3.1.25. Capability to provision virtual machines/container workload over API calls without any manual intervention.
- 5.3.1.26. Service shall allow users to load applications and data securely and remotely onto the computing or virtual machine instance from the SSL VPN clients only as against the public internet.
- 5.3.1.27. Configuration and management of the virtual machine shall be enabled via a Web browser over SSL VPN/Secure tunnel as against the public internet.
- 5.3.1.28. Cloud service architecture should be in such a way that it avoids VM outages or downtime when the provider is performing any kind of hardware or service maintenance at the host level.
- 5.3.1.29.

5.3.2. Disaster Recovery Centre on Cloud

- 5.3.2.1. Disaster Recovery Centre shall be hosted on MeitY empanelled cloud.
- 5.3.2.2. Disaster Recovery centre shall be arranged as per RTO and RPO. In the event of a disaster at DC site, activation of services from the DR site (or from different physical locations) with RPO \leq 15 Minutes and RTO \leq 1 Hour. In case of DR Solution having Active-Active arrangement or Multisite site solution then applicable RPO and RTO shall be \leq 15 Minutes).
- 5.3.2.3. It shall be responsibility of the Bidder to ensure uninterrupted operation of Prasar Bharati OTT platform solution at all times to all the users.
- 5.3.2.4. The SLA defined shall be rigorously followed to ensure a smooth and best performance to the end users.
- 5.3.2.5. In case of a disaster, when the on-cloud data center's services get affected, it shall be the responsibility of the bidder to ensure uninterrupted services to the user, meeting all the SLA requirements defined in the RFP.

5.3.3. Hosting requirements

- 5.3.3.1. The Cloud service provider should be MeitY empanelled.

- 5.3.3.2. The solution (including the primary and DR sites of the proposed OTT / MAM / CMS platform) shall be hosted at Tier III / IV and / or SOC 3 / 4 Data centers such that Primary Site (DC) and DR site should be as per MEITY guidelines.
- 5.3.3.3. The cloud should be able to offer the solution on a public cloud.
- 5.3.3.4. The Bidder has to ensure that adequate Internet bandwidth, shall be allocated to the application for accessing, browsing and download and should automatically scale up.
- 5.3.3.5. Computing power (CPU/RAM) shall have adequate elasticity to accommodate load as per the requirement.
- 5.3.3.6. The OTT system shall be a fully secure web-based solution. The solution shall facilitate multi-OS access to the solution.
- 5.3.3.7. The system shall be accessible from different web browsers including chrome, Firefox, Safari, Edge etc.
- 5.3.3.8. Platform responsibilities such as disaster recovery drills, data replication, backups, system maintenance, security, hardware refresh, power management, network connectivity, cyber security etc. shall be managed as per requirement.
- 5.3.3.9. Bidder shall provide the information of parameters viz time, bitrate etc. for migration of content in a multi-tier storage.
- 5.3.3.10. The Cloud service provider shall follow the MeitY guidelines for service conditions as indicated below:
 - 5.3.3.10.1. Availability
 - 5.3.3.10.2. Performance
 - 5.3.3.10.3. Security
 - 5.3.3.10.4. Audit and Monitoring
 - 5.3.3.10.5. Measurement and Monitoring
 - 5.3.3.10.6. Runtime
 - 5.3.3.10.7. Up-time etc.
- 5.3.3.11. The bidder shall provide expertise, services, technologies that help Prasar Bharati to keep their vital system secure, available, reliable and recoverable.
- 5.3.3.12. The cloud Infrastructure/service provisioned by the Bidder must be scalable and flexible. Prasar Bharati should be able to add/reduce cloud infrastructure / services on demand basis.
- 5.3.3.13. The Cloud service shall be available online, on-demand scalable up or down per request for service from the Prasar Bharati.
- 5.3.3.14. The CSP should have adequate elasticity to provide additional resources as and when required on auto-scale (up and down both). The complete cloud solution should work in full capacity on auto-scale environment.

- 5.3.3.15. The solution should have necessary provisions to enable and define the various parameters like triggers/events to achieve the said auto-scale environment without any human intervention based on the criteria/rules decided by Prasar Bharati
- 5.3.3.16. Cloud infrastructure shall be designed for high availability with adequate redundancy for all solution components to enable reliable auto recovery workflows.
- 5.3.3.17. Cloud platform should support cloud native Infrastructure services, API, and tools to work seamlessly.
- 5.3.3.18. Cloud platform should provide the functionality to protect data from accidental deletion as per Meity Guidelines
- 5.3.3.19. Service shall allow users to load applications and data securely and remotely onto the computing or virtual machine instance from the SSL VPN clients only as against the public internet.
- 5.3.3.20. Configuration and management of the virtual machine shall be enabled via a Web browser over SSL VPN/Secure tunnel as against the public internet.
- 5.3.3.21. Cloud service architecture should be in such a way that it avoids VM outages or downtime when the provider is performing any kind of hardware or service maintenance at the host level.
- 5.3.3.22. CSP should have the below services to support content and its management but not limited to:
 - 5.3.3.22.1. Compute as a Service (VM / containers service)
 - 5.3.3.22.2. File, Block and object Storage
 - 5.3.3.22.3. Database service
 - 5.3.3.22.4. Backup & Recovery as a Service
 - 5.3.3.22.5. Network and security
 - 5.3.3.22.5.1. Next gen Firewall, Intelligent threat protection and remediation
 - 5.3.3.22.5.2. DRM & Zero Trust should be built into the solution.
- 5.3.3.23. Media asset management
- 5.3.3.24. CDN or Multi CDN
- 5.3.3.25. Migration as a Service
- 5.3.3.26. Continuous monitoring & IT Management service

5.3.4. Cloud Provisioning, Deployment and management

5.3.4.1. General Requirements:

- 5.3.4.1.1. The Bidder shall be responsible for providing 24*7*365 days support for Prasar Bharati Cloud infrastructure during the contract period. The maintenance and support will include following activities -
- 5.3.4.1.2. Compliance to the defined international standards and security guidelines such as PCI DSS 3.2 Level 1 certified CSP. ISO 27001 (ISMS), 27017 and 27018 certified for maintaining operations of cloud and ensuring privacy of Prasar Bharati data.
- 5.3.4.1.3. Ensuring Uptime and utilization of the cloud resources as per SLA's defined in this RFP.
- 5.3.4.1.4. The Bidder shall develop appropriate policy, checklists in line with ISO 27001 & ISO 20000 framework for failover and fall back to the appropriate DR site. DR drills needs to be performed by the Bidder as and when required by Prasar Bharati or every 6 months to check disaster preparedness.
- 5.3.4.1.5. The Bidder shall conduct vulnerability and penetration test (from a third party testing agency which may be CERT-IN empanelled) on the Cloud facility every 6 months and reports should be shared with Prasar Bharati. The Bidder needs to update the system in response to any adverse findings in the report, without any additional cost to Prasar Bharati.
- 5.3.4.1.6. The Bidder shall conduct ISMS audit & PCI-DSS audit. Internal audit every 6 month and Third Party Certification Audit every Year.
- 5.3.4.1.7. Upgrades - Any required version/Software /Hardware upgrades, patch management etc. at the Cloud Site will be supported by the Bidder for the entire contract period at no extra cost to Prasar Bharati.
- 5.3.4.1.8. Bidder is required to provision additional VM's automatically when the utilization exceeds 80%.
- 5.3.4.1.9. On expiration / termination of the contract, Bidder to handover completes data in the desired format to Prasar Bharati which can be easily accessible and retrievable.
- 5.3.4.1.10. Bidder should manage the Asset Inventory including the license inventory ,monthly report should be generated on the Asset and license inventory and its usage
- 5.3.4.1.11. MIS Reports - Bidder shall submit the reports on a regular basis in a mutually decided format. The Bidder shall workout the formats for the MIS reports and get these approved by the Prasar Bharati after award of the contract.

5.3.5. Patch & Configuration Management

- 5.3.5.1. Bidder shall provide managed service for system patch and configuration management. Critical security patches are applied as needed, or when updates or patches are released from OS vendors. Bidder must ensure patch and updates applies in a timely and consistent manner to minimize the impact on business.

5.3.6. Cloud User Administration

- 5.3.6.1. Implement Identity and Access Management (IAM) that properly separates users by their identified roles and responsibilities, thereby establishing least privilege and ensuring that users have only the permissions necessary to perform their assigned tasks.
- 5.3.6.2. Administration of users, identities and authorizations, properly managing the root account, as well as any Identity and Access Management (IAM) users, groups and roles they associated with the user account
- 5.3.6.3. Offer fine-grained access controls including, conditions like time of the day, originating IP address, use of SSL certificates, or authentication with a multi-factor authentication device.
- 5.3.6.4. Provide a mechanism to test the effects of access control policies that are attached to users, groups, and roles before committing the policies into production. Support a policy validator to automatically examine non-compliant access control policies.
- 5.3.6.5. Implement multi-factor authentication (MFA) for the root account, as well as any privileged Identity and Access Management accounts associated with it.

5.3.7. Content Delivery Network (CDN)

- 5.3.7.1. Content Delivery Network (CDN) offered with the solution shall be designed, configured, and operated for media delivery like live video, on demand video, live radio, on demand audio as per industry standards
- 5.3.7.2. Provider should support a Multi CDN solution to optimize multiple networks.
- 5.3.7.3. CDN should support HLS and MPEG Dash Push or Pull to ingest live channels Push or Pull to ingest live channels.
- 5.3.7.4. CDN should have a Global footprint with Global edge caching and peering across multiple networks.
- 5.3.7.5. CDN should support token authentication of streams.
- 5.3.7.6. CDN should Scale rapidly for large audiences, planned or unexpected by leveraging the distributed network's ability to distribute load dynamically and intelligently.
- 5.3.7.7. CDN shall support segment pre-fetch.
- 5.3.7.8. CDN should allow Manifest Personalization
- 5.3.7.9. CDN should support Advanced caching including Intelligently cache content close to viewers, offloading traffic from origin.
- 5.3.7.10. CDN Content protection
 - 5.3.7.10.1. Protect content with encryption, watermarking, access revocation, and enhanced proxy detection.
 - 5.3.7.10.2. The CDN solution securely delivers prepared, pre-segmented, HTTP-based live and on-demand streaming media, including support for the following video formats:
 - 5.3.7.10.3. HTTP live streaming (HLS)

- 5.3.7.10.4. Dynamic adaptive streaming over HTTP (MPEG-DASH)
- 5.3.7.10.5. Common media application format (CMAF)
- 5.3.7.10.6. Should support TLS 1.2 or above to viewers
- 5.3.7.11. CDN should have provision for reports and log for delivery of media.
- 5.3.7.12. The CDN solution should support Adaptive Media Delivery optimized for adaptive bitrate (ABR) streaming to provide a consistent, high-quality viewing experience across the broad variety of network types fixed or mobile at varying connection speeds.
- 5.3.7.13. The CDN should be designed in such a manner that there should be no lag or buffering of the content when watched on any device and on any internet network.
- 5.3.7.14. The Bidder shall facilitate the lag free or buffer free experience by coordinating with the leading CDN providers where there are spikes in the users access the OTT platform.
- 5.3.7.15. At no given time, the Bidder has to ensure that user experience is compromised due to lags, content buffering or otherwise due to the spike in the users logging into the platform.
- 5.3.7.16. The Bidder in consultation with Prasar Bharati committee, as far as possible, would identify and prepare the Calander of events which may have high user spikes / numbers joining the OTT platform, especially the Live streaming programs.
- 5.3.7.17. For unplanned events, the Bidder has to facilitate the lag and buffer free experience by coordinating with leading CDN providers to manage the spikes.
- 5.3.7.18. Payment for the CDN will be made on actual consumption / download by end user. The origin of the content will be on the cloud storage. The CDN provider needs to make arrangement for making an adequate centralized CDN storage along with distribution of the same to different edge servers or similar distribution devices. The experience to the user should be buffer free, necessary syncing of the content to the edge server or similar distribution devices in cache form is the responsibility of the bidder and no additional charges will be payable to the Bidder.
- 5.3.7.19. The bidder needs to send / share by email to Prasar Bharati officials, the daily usage report of the CDN containing HTTP status, number of hits, data download by the end users / subscribers.
- 5.3.7.20. Common Encryption Scheme (CENC) which provides standard encryption and key mapping methods to use with one or more digital rights and key management systems.
- 5.3.7.21. Just in Time Packaging to optimize network efficiency and caching.
- 5.3.7.22. Support HTTP 2 & 3, IPv6
- 5.3.7.23. Support Token & Cloud Authentication
- 5.3.8. Media Transcoding**
 - 5.3.8.1. Proposed encoding/transcoding solution shall support bandwidth efficient content compression for delivery to Television, Mobile and Internet.
 - 5.3.8.2. Proposed transcoding solution shall be based on reliable architecture creating highly available transcoding farm with automatic failover and redundant job schedulers

- 5.3.8.3. Proposed transcoding solution shall provide following configuration and management features;
 - 5.3.8.3.1. Batch encoding manager
 - 5.3.8.3.2. One-click encoding with presets
 - 5.3.8.3.3. Watch folder drop-in directory for tasks such as workflow integration, job queuing, scheduling, and prioritization
- 5.3.8.4. Proposed transcoding solution shall provide the following system control interfaces;
 - 5.3.8.4.1. Web-based user interface
 - 5.3.8.4.2. System resource and statistics monitoring
 - 5.3.8.4.3. Multi-tiered User Authentication
 - 5.3.8.4.4. Integrated CDN support: Basic PUT, POST
- 5.3.8.5. Proposed transcoding solution shall provide support for following source media containers but not limited to;
 - 5.3.8.5.1. .MP4, .TS, .3GP, .AVI, .M2TS, .MKV, .MOV, .MPEG (.MPG), .VOB, .WEBM, .WMV, .MXF, .HLS, .DASH, SRT, .RTMP
 - 5.3.8.5.2. Discrete audio and caption inputs, .WAV, .AIFF, MP4, AC3/EAC3
- 5.3.8.6. Proposed transcoding solution shall provide support for following source video codecs but not limited to;
 - 5.3.8.6.1. HEVC / H.265, AVC / H.264, AV1, VP9, MPEG-2
- 5.3.8.7. Proposed transcoding solution shall provide support for following source audio codecs but not limited to;
 - 5.3.8.7.1. AC-3 (Dolby Digital), AAC (LC, LD, HEv1, HEv2), MPEG-1 L2, MPEG-1 L3, MPEG-2 L2
- 5.3.8.8. Proposed transcoding solution shall provide following input features
 - 5.3.8.8.1. Audio only processing
 - 5.3.8.8.2. Audio PID tracking
 - 5.3.8.8.3. Audio language tracking
 - 5.3.8.8.4. Static image overlays
- 5.3.8.9. Proposed transcoding solution shall provide following multichannel audio input capabilities;
 - 5.3.8.9.1. Unlimited audio tracks (Covering all languages as per Schedule 8 of Indian Constitution)
 - 5.3.8.9.2. Multichannel track assignments and gains per input
- 5.3.8.10. Proposed transcoding solution shall provide following Video processing features;
 - 5.3.8.10.1. Adaptive Quantization
 - 5.3.8.10.2. Anti-Aliasing Scaling for reducing distortion artifacts when downscaling
 - 5.3.8.10.3. ABR, CBR, CQ, VBR, Quality-Defined Variable Bitrate (QVBR), Two-Pass Encoding Modes

- 5.3.8.10.4. Colour Correction
- 5.3.8.10.5. Cropping (per input and output)
- 5.3.8.10.6. Deblocking
- 5.3.8.10.7. Deinterlacing (Motion Adaptive Interpolation and Blend)
- 5.3.8.10.8. Dithering (Pseudo-random dynamic rounding) for 16-bit Down-Conversions
- 5.3.8.10.9. Frame Rate Interpolation
- 5.3.8.10.10. HDR 10 Support
- 5.3.8.10.11. Lanczos Scaling
- 5.3.8.10.12. Linear Scaling
- 5.3.8.10.13. Look Ahead Rate Control
- 5.3.8.10.14. Minimum I-frame Interval
- 5.3.8.10.15. Static Graphics Overlay (Multiple image overlays (BMP, PNG or TGA format), SDR or HDR, Image overlay application to a single input, a single output, or globally, z-order and opacity control)
- 5.3.8.10.16. Rec.2020 Colour
- 5.3.8.10.17. Noise Reduction (Bilateral, Mean, Gaussian, Lanczos, Sharpen, Conserve)
- 5.3.8.10.18. RGB to YUV Conversion
- 5.3.8.10.19. Scene Change Detection
- 5.3.8.10.20. Variable GOP Support
- 5.3.8.11. Proposed transcoding solution shall provide following File output containers
 - 5.3.8.11.1. MPEG-4 Part 10 (MP4)
 - 5.3.8.11.2. Fragmented MP4 (fMP4)
 - 5.3.8.11.3. MPEG Transport Stream (TS)
 - 5.3.8.11.4. Audio only files for audio applications
- 5.3.8.12. Proposed transcoding solution shall provide following Streaming Output Formats;
 - 5.3.8.12.1. Common Media Application Format (CMAF)
 - 5.3.8.12.2. Apple HTTP Adaptive Streaming (HLS)
 - 5.3.8.12.3. MPEG DASH (ISO BMFF) for Dynamic Adaptive Streaming over HTTP
 - 5.3.8.12.4. Single Program Transport Streams (SPTS)
- 5.3.8.13. Proposed transcoding solution shall provide caption/subtitle processing features
- 5.3.8.14. Proposed encoding/transcoding solution shall provide following Video Output Codecs;
 - 5.3.8.14.1. HEVC / H.265 (Main, Main 10 up to 4:4:4, Main 12 up to 4:4:4)

5.3.8.14.2. AVC / H.264 (Baseline, Main up to 4:4:4, High up to 4:4:4)

5.3.8.15. Proposed transcoding solution shall provide following Audio Output Codecs

5.3.8.15.1. AAC-LC

5.3.8.15.2. Dolby Digital (AC-3) Pass-through

5.3.8.15.3. Dolby Digital Plus (EAC-3) Pass-through

5.3.8.15.4. Audio only support

5.3.8.16. Proposed transcoding solution shall provide following Audio Output Codecs as purchasable options;

5.3.8.16.1. Dolby Digital (AC-3)

5.3.8.16.2. Dolby Digital Plus (EAC-3)

5.3.8.17. Proposed transcoding solution shall provide following Multichannel Audio Output capabilities;

5.3.8.17.1. Unlimited audio tracks

5.3.8.18. Proposed transcoding solution shall provide following Multi Language features

5.3.8.18.1. Follow language code

5.3.8.18.2. Proposed transcoding solution shall provide following Features

5.3.8.18.3. 4K Ultra HD Output

5.3.8.18.4. Audio Level Adjustment

5.3.8.18.5. Audio Only Encoding

5.3.8.18.6. Multiple Audio Tracks (SAP)

5.3.8.18.7. SCTE-35 Support

5.4. Area 4: Operations, Maintenance and Management of OTT platform, Media Ingestion Room Operations, User helpdesk, etc

5.4.1. All associated operations, maintenance and support services required for smooth functioning of the OTT platform i.e. Enterprise Service Support, Operation and maintenance of OTT Platform and all functionalities and upgrades as per the scope of work including but not limited to maintenance and operations of Hardware, Middleware, Integration, Support, Cloud, DC hosting, Cyber Security, Content Security or any other item to complete the solution as per scope of work shall be responsibility of the Bidder. The services shall include but not limited to:

5.4.2. Media Ingestion Room Operations

- 5.4.2.1. The bidder shall be responsible for the complete operations of Media Ingestion Room. He will provide the necessary manpower and other resources as per the requirement envisaged to ensure smooth Media Ingestion Room operations like ingestion of media, updation of metadata, transcoding etc.
- 5.4.2.2. The Bidder shall provide comprehensive onsite support on official working hours of the weekdays and if required on holidays by Prasar Bharati basis to ensure an uptime of 99.95% for the OTT Platform application hosted on cloud, the cloud infrastructure, and the IT infrastructure solution at the Media Ingestion Room in accordance with the Service Level Agreement.
- 5.4.2.3. The Bidder shall commit to provide all necessary manpower resources onsite to resolve any issues/incidents and carry out required changes, optimizations, and modification. To make necessary manpower available as per the release schedule and therefore, for Release 1 (launch) would be 5,000 hours of content to make it OTT ready and ingested in the platform
- 5.4.2.4. The Bidder shall assign onsite manpower resources on official working hours of the weekdays (i.e., 9:30am to 6.30 pm) and if required on holidays by Prasar Bharati to diagnose, troubleshoot, and resolve issues related to the Media Ingestion Room services and Enterprise solution. The onsite support staff should possess capability for supporting the equipment and components proposed, but not limited to undertaking preventive and break-fix maintenance, troubleshooting, resolving problems, tuning, etc. The Bidder shall also provision for necessary offsite support to ensure continuity of operations for OTT Platform.
- 5.4.2.5. The Bidder shall provide comprehensive technical support services for all the hardware and software proposed for the entire period of the contract. The technical support should include all the upgrades, updates and patches that are released by the respective OEMs during the period of contract.
- 5.4.2.6. The Uptime and runtime of the necessary infrastructure at the Media Ingestion Room shall be the responsibility of the Bidder and he has to ensure that the same is available and running 24x7x365 for entire duration of the contract
- 5.4.2.7. All the activities undertaken in the Media Ingestion Room like media ingestion etc. shall be submitted to Prasar Bharati in form of a comprehensive report

5.4.3. Cloud and CDN Management Operations

- 5.4.3.1. The Bidder shall be responsible for providing 24x7x365 days support for Prasar Bharati Enterprise Solution on Cloud infrastructure for 5 years from Go-Live of Release 1. It shall include but not limited to:
- 5.4.3.2. Compliance process to the defined international standards and security guidelines such as ISO 27001, ISO 20000:1, for maintaining operations of cloud and ensuring privacy of Prasar Bharati data and content.
- 5.4.3.3. Ensuring Uptime and utilization of the cloud resources as per SLA's defined in this RFP
- 5.4.3.4. In the event of a disaster at cloud DC site, activation of services from the cloud DR site is the responsibility of The Bidder. The Bidder shall develop appropriate policy, checklists in line with SOC 3 / 4, ISO 27001 & ISO 20000 framework for failover and fall back to the appropriate cloud DR site. Cloud DR drills needs to be performed by the Bidder half yearly to check disaster preparedness.
- 5.4.3.5. The Bidder shall conduct vulnerability and penetration test at their cost (from a third-party testing agency which should be CERT-IN empanelled and approved by Prasar Bharati) on the OTT application developed in every 6 months and reports should be shared with Prasar Bharati. The Bidder needs to update the system in response to any adverse findings in the report, without any additional cost to Prasar Bharati. All such activities shall be reported to Prasar Bharati in form of a monthly report the format of which shall be provided by Prasar Bharti subsequently.
- 5.4.3.6. Vulnerability Assessment (VA) of the hosting environment to be carried out every six months and report in this regard to be submitted to Prasar Bharati. Necessary hardening of the server is required to be done on the basis of this VA report to mitigate the issue.
- 5.4.3.7. Upgrades - Any required version/Software / patch management etc. on the Cloud will be supported by the Bidder for the entire contract period at no extra cost to Prasar Bharati
- 5.4.3.8. The Bidder is required to provision additional VMs when the utilization exceeds 80% automatically.
- 5.4.3.9. The bidder is to manage all the services of the Cloud. However, Prasar Bharati will have access to the dashboard with viewing rights for the Cloud resources.
- 5.4.3.10. Backup of the data
 - 5.4.3.10.1. The Bidder shall provide for backup management services (conduct regular backups and content corrections , if required), of critical data and systems for data of the Prasar Bharati. The activities cover the following areas but not limited to:
 - 5.4.3.10.2. Backup of operating system, database, and application as per stipulated policies.
 - 5.4.3.10.3. Monitoring and enhancement of the performance of scheduled backups, schedule regular testing of backups and ensure adherence to related retention policies.
 - 5.4.3.10.4. Ensuring prompt execution of on-demand backups of volumes, files and database applications whenever required by Prasar Bharati or in case of upgrades and configuration changes to the system.
 - 5.4.3.10.5. Real-time monitoring, log maintenance and reporting of backup status on a regular basis.

5.4.3.10.6. Prompt problem resolution in case of failures in the backup processes.

5.4.3.10.7. On-going support for file and Folder restoration requests.

5.4.3.10.8. The Bidder should define and indicate the preventive maintenance schedule and procedure. Any special tools/ instruments/ equipment's required carrying out the preventive and break down maintenance of the system offered should be clearly indicated and offered at no extra cost.

5.4.4. OTT platform Support and Operations

- 5.4.4.1. The Bidder shall maintain and Support the OTT platform and Webportal for a period of 5 years after the successful GoLive of Prasar Bharati website. It shall include but not limited to:
- 5.4.4.2. Upgrades, which would include version releases made by the Bidder to incorporate technological changes, consolidating all bug fixes, consolidating all enhancement requests made by Prasar Bharati
- 5.4.4.3. Required modifications, bug fixes, error resolutions and enhancements that are incidental to proper and complete working of Prasar Bharati webportal and OTT platform. Any UI / UX change shall be considered as part of the maintenance activity. However, in case the application goes under a service layer / business layer change, then the same may be considered as part of the Change Request.
- 5.4.4.4. Enhancements would include changes in the software due to Statutory and Regulatory changes and changes required due to changes in industry and other Governance practices in India.
- 5.4.4.5. Any changes required on the design / placement of the elements or the contents on the home page or any internal page/s of the website.
- 5.4.4.6. Any change request would be mutually agreed between the Bidder and Prasar Bharati as per the change request.
- 5.4.4.7. Maintenance and up keeping of any upgrades of the solution.
- 5.4.4.8. Providing all software updates and patches released by the OEM (if applicable), update and patch management, resolution of any issues / problems with the solution etc.
- 5.4.4.9. Resolution of errors / bugs (if any), software updates, changes in the software that may be necessary due to legal/statutory changes etc.
- 5.4.4.10. Troubleshooting of any incidents, issues, bugs, errors etc. reported with regards to any application and rectification of same within time of issue logged as per timelines of SLA.
- 5.4.4.11. Provide handholding support and training services as part of the post implementation services, on a scheduled basis as well as on a need basis.
- 5.4.4.12. Perform system administration tasks such as managing the user access, creating, and managing users, preparing MIS reports etc.
- 5.4.4.13. Performance tuning of the Prasar Bharati websites to ensure adherence to SLAs and performance requirements as indicated in the RFP.
- 5.4.4.14. User support in case of technical difficulties in use of the software solution, answering procedural questions, providing recovery and backup information, and any other requirement that may be incidental.
- 5.4.4.15. Prompt receipt, analysis and reporting of reported deficiencies in the operation of the website solution and supply of information and advice on such deficiencies.
- 5.4.4.16. Unscheduled, on call, corrective and remedial maintenance, and support services.

5.4.4.17. Integration of existing and envisaged 3rd party, software modules, API's, web-views as per the requirement of Prasar Bharati

5.4.4.18. At the end of term of 5 years, Prasar Bharati may continue services and extend the term of the contract depending upon the performance of the Agency. However, in case Prasar Bharati wishes to engage a new Agency for support / maintenance or any other enhancements, The Bidder shall be responsible for handover to new Agency appointed by Prasar Bharati within a period of 2 months with all necessary documentation, source code, credentials etc.

5.4.5. Helpdesk/User Support

5.4.5.1. The Bidder shall provide a fully functional helpdesk with at least trained manpower fluent in 8 languages viz. English, Hindi, Tamil, Telugu, Kanada, Malayalam, Marathi, Bengali, etc.

5.4.5.2. The help desk should be 24X7X365 available for the entire duration of the contract. The Helpdesk is required to solve the user queries and should have mechanism of escalation matrix for unresolved queries.

5.4.5.3. All the queries should be resolved with a Turn Around Time (TAT) of 5 working days and the report of the same should be made available to Prasar Bharati through online portal. The reports also to be submitted to Prasar Bharati on Monthly basis.

5.4.6. Application Testing and User Acceptance Testing (UAT)

5.4.6.1. Application Testing Once the application development / customization have been completed by the MSI, the MSI will thoroughly test the application at their end. Detailed test plans, test cases and test reports will be prepared by the MSI and then submitted to the Department for approval. The MSI must carry out Unit Testing, Integration Testing and System Testing as per the Department approved plans and the SI must submit all Test completion reports to the Department after the end of each testing phase. Only after the entire functionality, performance and quality-of-service requirements of the solution as mentioned in this RFP or as later approved by the Department during design phase have been tested satisfactorily by the MSI, will the solution be handed over to the Department for User Acceptance Testing. The MSI will also have to create a Regression Test Suit for the Department. This will consist of end to end test cases across all the modules of the Prasar Bharati Application. This Regression Test suit needs to be executed following any changes in the system throughout the duration of the contract and its test results are to be submitted to the Department. The MSI will have to also periodically update and refresh the Regression Suit throughout the duration of the contract.

5.4.7. User Acceptance Testing

5.4.7.1. MSI shall submit a thorough Testing plan for implementation, go-live and upgrades for the Integrated Solution.

5.4.7.2. Test plans will be reviewed and approved by Prasar Bharati.

5.4.7.3. MSI shall demonstrate the agreed acceptance testing plan prior to acceptance of the solution as well as during project operations phase, in respect of scalability and performance etc.

5.4.7.4. In case required, parameters might be revised by Concerned department in mutual agreement with bidder and the revised parameters shall be considered for acceptance criteria.

5.4.7.5. A comprehensive system should be set up that would have the capability to log & track the testing results, upload & maintain the test cases and log & track issues/bugs identified.

5.4.7.6. Prasar Bharati may appoint a third party auditor to perform User Acceptance Testing

5.4.7.7. MSI to prepare User Acceptance Testing test cases.

5.4.7.8. UAT to be carried out in the exact same environment/architecture that would be set up for production. MSI should fix bugs and issues raised during UAT and get approval on the fixes from Prasar Bharati /auditor before production deployment.

5.4.7.9. Changes in the application as an outcome of UAT shall not be considered as Change Request.

5.4.7.10. The MSI will develop the UAT Test plan and a detailed User acceptance procedure. The same would be reviewed and agreed by the Department. A high-level approach to be followed by the selected SI for the acceptance testing is mentioned below:

5.4.7.11. UAT would be applicable once the entire Prasar Bharati OTT Platform is completely ready and all the modules under the Contract are ready and linked.

5.4.7.12. UAT would involve:

5.4.7.12.1. Development of Test cases and their approval from the Department

- 5.4.7.12.2. Application functional testing and testing of other Quality-of-Service requirements
- 5.4.7.12.3. For all tests performed by the Department, the selected SI will prepare the test reports and submit them to the Department for approval. Defects identified in any round of UAT by the Department would be communicated to the SI. The SI will do the needful to troubleshoot or resolve the defects and resubmit the application to Department for UAT. This iterative process for UAT will be performed till zero defects are shown by the selected SI for the test cases developed
- 5.4.7.12.4. The selected SI would ensure that errors detected in previous round of tests do not get repeated in successive tests. g. The software application and test environments required to conduct UAT by the Department would be provided by the selected MSI along with all the information necessary on-site to complete the UAT. The test environment would be maintained by the selected SI and transferred to the Department at the End of the Contract
- 5.4.7.12.5. Performance and Load Testing: The Performance and Load testing will be executed by the PMC post-UAT acceptance. But the test environment, testing licenses, test script creation and all technical support will have to be provided by MSI along with the required testing support. The inputs for this activity will be the design documents approved by the Department. For the performance and load testing, the PMC will be required to stimulate the testing environment using the appropriate tools. Under controlled environment, performance of the system will need to be evaluated to match the SLAs.
- 5.4.7.12.6. All the logs/analytics of cloud, CDN, application, database server, DRM, ad server, MAM are to be shared during the UAT. Access to these services to be provided to the Prasar Bharati.

5.4.8. Documentation

- 5.4.8.1. The selected MSI shall prepare documents as mentioned below, but not limited to:
 - 5.4.8.1.1. FRS/SRS/Use Case/Gap Analysis Report
 - 5.4.8.1.2. Detailed Bill-of-material and Infrastructure sizing report
 - 5.4.8.1.3. Solution design and architecture, high level and low level design of the application.
 - 5.4.8.1.4. Configuration files of the infrastructure DC & DR
 - 5.4.8.1.5. Standard operating procedures
 - 5.4.8.1.6. Information security management procedures
 - 5.4.8.1.7. Business Continuity plan and Disaster Recovery plan
 - 5.4.8.1.8. Any other required documentation The documentation should be in line with defined industry standards. The selected MSI should obtain signoff on all the deliverables (documents and milestones), including design documents, standard operating procedures, security policy, procedures from the Department, etc. and shall make necessary changes as recommended before submitting the final version of the documents

5.4.9. User Training

- 5.4.9.1. The selected MSI would be required to provide training on various aspects to enable effective use of the new system to achieve the envisaged outcomes. The scope of work of the selected MSI is described in this section.
- 5.4.9.2. The selected Bidder would be required to prepare a detailed training plan covering at least the trainings to be conducted, targeted audience, location, dates for training, duration and training content.
- 5.4.9.3. The Bidder will have to create training materials for all the Training Programmes Approval for training materials prepared should be obtained from the Prasar Bharati.
- 5.4.9.4. It would be Bidders's responsibility to set up the entire Infrastructure helpful in providing successful Training to the officials like, computer, network, printer, LCD projector, screen, printed course material and consumables like pen, writing pad, Utility Software CDs (optional) etc.
- 5.4.9.5. The schedule and the training material for imparting training shall be developed by the Bidder in consultation with the Prasar Bharati. The training material shall be made available online for Prasar Bharati users
- 5.4.9.6. Functional training on all Prasar Bharati modules should be made available.
- 5.4.9.7. One week operational/management training is to be provided to 20 Prasar Bharati officials.

5.5. Detailed Service Level Agreement (SLA)

- 5.5.1.1. The detailed Service Level Agreement shall be as mentioned in the clause 12.17 Service Level Agreement

6. Pre-Qualification Criteria

6.1. The Organization / Agency fulfilling the following Pre-Qualification criteria only needs to submit their responses.

6.2. The Pre-Qualification criteria shall be as below:

Sr. No	Criteria	Supporting document
1	<p>The Bidder should be registered as per the relevant Act in India (Companies Act, 1956 or Companies Act 2013 or a Partnership firm / LLP registered in India under Partnership Act 1932/2008 as amended).</p> <p>In case of a Consortium, the Prime Bidder should be registered in India.</p> <p>The Bidder (Single Entity or Prime Bidder in case of a consortium) should be in existence for atleast 10 years as on date of submission of the bid response.</p>	<ul style="list-style-type: none"> • Copy of Certificate of Incorporation or equivalent, • In case of consortium: <ul style="list-style-type: none"> ○ Copy of Certificate of Incorporation or equivalent of all members ○ A duly notarized / registered Memorandum of Understanding signed between Prime Bidder and all the consortium members ○ MOU should clearly mention detailed roles and responsibilities of the Prime Bidder and its Consortium members.
2	<p>Bidder (in case of the consortium members collectively together or individually) should have an experience of successfully commissioning at least one full scale professional OTT platform and such OTT platform should have been successfully made live for the client during the last five years from the date of submission of the bid response. The scope of such projects should cover:</p> <ol style="list-style-type: none"> 1. Making the content ready for the OTT platform 2. Design, development and commissioning of the OTT platform 3. Hosting of the content in the cloud 	<ul style="list-style-type: none"> • Work orders / completion certificate in the name of the bidder clearly highlighting the work undertaken by the Bidder for developing the OTT platform. The detailed breakup of the work should be clearly mentioned in the work order. • Work order, completion certificate etc. should be issued by the client • In case of any non disclosure agreements signed with clients, the Bidder should substantiate the claim of the work undertaken for the client which is duly endorsed, signed and stamped by a practicing and registered Chartered Accountant on his / her letter head.

Sr. No	Criteria	Supporting document
	<p>4. Managing the content ingestion, transcoding of the content</p> <p>5. Design and commissioning of the Content Delivery Network</p> <p>6. Analytics for the OTT platform</p>	
3.	<p>The Bidder should have</p> <p>Average Annual turnover of 200% of estimated cost of the project in the last 03 financial years</p> <p>OR</p> <p>Cumulative Turnover of 600% of estimated cost of the project in the last 03 financial years</p> <p>OR</p> <p>Average Annual Net Worth of minimum of 50% of estimated cost of the project in the last 03 financial years</p> <p>OR</p> <p>Cumulative Net Worth of minimum of 150% of estimated cost of the project in the last 03 financial years</p>	<ul style="list-style-type: none"> • A certificate (on the letter head) from the practicing and registered Chartered Accountant / Statutory Auditor duly signed & stamped and clearly mentioning the annual turnover details for a Single Entity and all members of the Consortium (in case of consortium) each year in the last three financial years (2020-21, 2021-22,2022-23) • Copy of the audited Profit and Loss Statement for Single Entity and all the members of the consortium including Prime Bidder (in case of consortium) for each of the last three financial years (2020-21, 2021-22,2022-23)
4.	<p>The Bidder (in case of a consortium, all the members) should have positive net worth for last 3 Financial Years (2020-21, 2021-22,2022-23)</p>	<ul style="list-style-type: none"> • A certificate (on the letter head) from the practicing and registered Chartered Accountant / Statutory Auditor duly signed & stamped and clearly mentioning the net worth for a Single Entity and all members of the Consortium (in case of consortium) each year in the last three financial years (2020-21, 2021-22,2022-23) • Solvent entity (CA certified documents)

Sr. No	Criteria	Supporting document
5.	The bidder (in case of a consortium, all members of the consortium) should not have been blacklisted /debarred by any Governmental / Non – Governmental Organisation in India as on bid submission date.	<ul style="list-style-type: none">Self-Certification by Bidder, (in case of consortium, all members of the consortium) on their respective letter head duly signed by the authorized signatory mentioning that the Bidder has not been blacklisted /debarred by any Governmental / Non – Governmental Organisation in India as on bid submission date.

Note: Any document in other than English language should be translated to English language by the Bidder. The whole and sole responsibility of the correctness of the translation shall be with the Bidder only.

7. Bid Evaluation

- 7.1. The evaluation of the Bidders shall be done in 3 stages where the Bidders shall be first evaluated against the Pre-Qualification criteria. Only those bidders fully satisfying the Pre-Qualification criteria shall be considered for further Technical and Commercial evaluations.
- 7.2. Only those Bidders who score a minimum of 75 marks in the Technical Evaluation shall be considered for further evaluation. Prasar Bharati reserves the right to relax/increase the minimum marks required in Technical Evaluation for consideration for further evaluation depending upon the number of qualifying Bidders. The bids shall be evaluated using the Quality Cum Cost Based system (QCBS) selection method as mentioned below:
- 7.3. The bidders qualifying the criteria above, shall be selected based on QCBS method where the technical quality of the proposal will be given a weightage of 60%. The commercial proposal shall be allocated weightage of 40%.
- 7.4. The Technical score of bidders shall be derived as under:

$$ST = 100 * T_x / T_m$$

Where:

ST shall mean the Technical Score of the bidder to be evaluated;

T_m shall mean the highest marks obtained among all the bidders;

T_x shall mean the marks obtained by the bidder to be evaluated.

7.5. The Financial Score of bidder shall be derived as under:

$$SF = 100 * Fm / Fx$$

Where:

SF shall mean the Financial Score of the bidder to be evaluated;

Fm shall mean the lowest evaluated price (Total commercial value) among all the bidders;

Fx shall mean the evaluated price (Total Commercial value) of the bidder to be evaluated.

7.6. The Bid Score, shall be obtained by weighing the quality and cost scores and adding them up. On the basis of the combined weighted for quality and cost, the Bidder shall be ranked in terms of the Bid Score obtained as:

$$H = 0.6 * ST + 0.4 * SF$$

Where: H shall mean the Bid Score of the bidder to be evaluated;

7.7. The proposals will be ranked in terms of Bid Score scored.

7.8. The Bidder obtaining the highest Bid Score in evaluation of quality and cost will be ranked as H1 followed by the proposals securing lesser marks as H2, H3, ...etc. The proposal with the highest Bid Score H1 will be considered for award of contract.

7.9. In case of highest Bid Score being equal for more than one (1) bidder, the bidder scoring higher technical score shall be considered for award of contract.

7.10. The evaluation committee ("Evaluation Committee") appointed by CEO, Prasar Bharati will carry out the technical evaluation of proposals based on the prescribed evaluation criteria. Evaluators of Technical Proposals shall have no access to the Financial Proposals until technical evaluation is concluded.

8. Technical evaluation Criteria

8.1. The Technical Proposal shall be evaluated based on the following criteria –

#	Main criteria	Sub criteria	Max. Marks	Supporting Document
1	Number of Years in operations The bidder (in case of the Consortium, the Prime Bidder) must be in business for at least 10 years as on the last date of bid submission.	<ul style="list-style-type: none"> Minimum 10 years 5 marks >10 years and <= 15 years 7 marks >15 years 10 marks 	10	<ul style="list-style-type: none"> Copy of Certificate of Incorporation or equivalent
2	Turnover The Bidder (in case of a consortium, the Prime Bidder) should have an average annual turnover of INR 332 Cr. for the last three (3) financial years (2020-21, 2021-22, 2022-23)	Average Turnover <ul style="list-style-type: none"> 332 Cr. & <400 Cr. 5 Marks 400 Cr. & <=500 Cr. 7 Marks >500 Cr. 10 Marks 	10	<ul style="list-style-type: none"> A certificate (on the letter head) from the practicing and registered Chartered Accountant / Statutory Auditor duly signed & stamped and clearly mentioning the annual turnover details for the Bidder (in case of Consortium, all members of the Consortium) each year in the last three financial years (2020-

#	Main criteria	Sub criteria	Max. Marks	Supporting Document
				21, 2021-22,2022-23)
3	Manpower The Bidder should have Manpower having relevant experience in handling similar projects in last five years from the date of submission of the bid response: <ul style="list-style-type: none"> • Project Manager • Solution Architect • Data Architect • Technology Lead • Cloud Architect • Content Migration expert • Media Ingestion expert • UI / UX Expert 	<ul style="list-style-type: none"> • Project Manager 5 marks • Solution Architect 2 Marks • Cloud Architect 2 marks • Content Migration Expert 2 marks • Media Ingestion Expert 2 mark • Graphics / UI / UX developer 2 mark <p>Note: The proposed resources to the extent possible will not be allowed to be replaced till the Go-Live of the entire OTT platform. In case of any replacements during the entire contract duration, the penalties as per SLA shall be levied. A maximum of 2 replacements of above profiles with penalties shall only be allowed.</p>	15	<ul style="list-style-type: none"> • Details and CV as per format mentioned in Annexure <p>Note: Add multiple rows in the project details section (nature of works) to elaborate (full experience) on the project experience, wherever required</p>
	Certifications The Bidder should have the following certifications: <ul style="list-style-type: none"> • ISO 20000 • ISO 9001 • ISO27001 • ISO 27017 • ISO 27018 • ISO 22301 	<ul style="list-style-type: none"> • Any three valid certifications – 1 mark • Any 5 valid certifications – 3 marks • More than 5 valid certification – 5 marks 	5	<ul style="list-style-type: none"> • Copy of the valid certification

#	Main criteria	Sub criteria	Max. Marks	Supporting Document
	<ul style="list-style-type: none"> • ISO 27701 • CMMI 3 or above • SOC 3 / 4 			
4	<p>Experience</p> <p>The Bidder (in case of Consortium all members collectively or individually) should have an experience of successfully commissioning at least one full scale professional OTT platform and such OTT platform should have been successfully made live for the client during the last five years from the date of submission of the bid response, but not limited to the following scope:</p> <ol style="list-style-type: none"> 1. Making the content ready for the OTT platform 2. Design, development and commissioning of the OTT platform 3. Hosting of the content in the cloud 4. Managing the content ingestion, 	<ul style="list-style-type: none"> • 1 full scale professional OTT platform made go-live - 10 marks • 2 full scale professional OTT platform made go-live - 20 marks • More than 2 full scale professional OTT platform made go-live - 30 marks 	30	<ul style="list-style-type: none"> • Work orders / completion certificate in the name of the bidder clearly highlighting the work undertaken by the Bidder for developing the OTT platform. The detailed breakup of the work should be clearly mentioned in the work order. • Work order, completion certificate etc. should be issued by the client <p>In case of any non disclosure agreements signed with clients, the Bidder should substantiate</p>

#	Main criteria	Sub criteria	Max. Marks	Supporting Document
	<p>transcoding of the content</p> <p>5. Design and commissioning of the Content Delivery Network</p> <p>6. Analytics for the OTT platform</p>			<p>the claim of the work undertaken for the client which is duly endorsed, signed and stamped by a practicing and registered Chartered Accountant on his / her letter head.</p>
6	The Bidder should present an Approach and Methodology with live demonstration	<p>The Bidder's presentation would be evaluated on following criteria.</p> <ul style="list-style-type: none"> • Understanding of the project scope and requirements – 25% weightage • Capability and Commitment level towards the project including the timelines with supporting examples/ case studies - 25% weightage • Overall solution proposed covering a case study, presentation/ demonstration – Here the bidder is expected to showcase the 	30	<p>Approach and Methodology presentation and Live Demonstration of the sample platform</p>

#	Main criteria	Sub criteria	Max. Marks	Supporting Document
		<p>content strategy, media ingestion, development plan, advertisement plan, work plan, implementation strategy for the OTT platform specified in the RFP and timelines – 25% weightage</p> <ul style="list-style-type: none"> • Quality Assessment / Quality Checks and adherence to the international standards – 25% weightage <p>Note: The Bidder shall present before the Prasar Bharati evaluation committee showcase a live demonstration of the sample OTT platform developed for Prasar Bharti</p>		

8.2. Note:

The bidders would need to submit documents to substantiate the evaluation criteria. The documentation to substantiate similar projects need to be either work orders or completion certificates or client letters stating satisfactory work.

- 8.3. The Evaluation Committee constituted by Prasar Bharati shall evaluate the technical bids based on proposal, documents submitted and presentations to arrive at the technical score.
- 8.4. It is to be noted that the decision of the Evaluation Committee in the evaluation of responses to the RFP shall be final. No correspondence with the Evaluation Committee regarding the evaluation process shall be entertained. The Evaluation Committee reserves the right to reject any or all proposals on the basis of any deviations. Concealment or contradiction of facts would be held otherwise and liable for strict action. Any such incidence gives Prasar Bharati complete right to reject the claim of the bidder at any stage, even after the completion of tendering process, without even a formal notice.

9. Timelines and Deliverables

9.1. The overall project is expected to go live in 52 weeks from the date of signing the contract and the Release 1 in 5 weeks. In case of any delays in hardware procurement, bidder to provide alternative platform on a temporary basis till the actual equipment is delivered. There shall be no additional commercials provided for this temporary hardware.

9.2. Total project duration is of 60 Months. Detailed breakup is provided in the table below.

9.3. T is denoted as the signing of the agreement

S. No.	Release	Phase	Milestone	Timelines
1.	Rel 1 <ul style="list-style-type: none"> Media Ingestion Room MAM User Management Payment Gateway OTT Platform (should be a Minimum Viable Product in this release) 3 Genres (to be decided at the FRS / SRS stage) CMS CDN 	Preparation of the FRS/BRD & HLD document	Submission of the detailed BRD/FRS, HLD document including the scope, dependencies and modules	T + 10 days
2.		Preparation of the use cases	Detailed SRS, Use Cases, LLD, Sprint Plan & Wireframes demonstration to the client	T + 15 Days
3.		First cut of all the proposed modules	A live / beta demonstration of the modules to client	T + 20 days
4.		UAT and Signoffs	Undertake UAT and incorporate the suggestions on the modules	T + 25 days
5.		Go Live (Release 1)	Beta Go-Live of the entire application	T + 30 Days
6.		Incorporating bug fixes post Go-Live	Suggestion and important bug fixes	T + 45 Days
1.	Rel 2	Preparation of the BRD/FRS,	Submission of the detailed BRD/FRS, HLD document including the	T + 105 days

S. No.	Release	Phase	Milestone	Timelines
	<ul style="list-style-type: none"> Video Transcoding and Editing Streaming Engine Exhaustive CMS Full CDN Other APIs Advance Analytics 	HLD document	scope, dependencies and modules	
2.		Preparation of the use cases	Detailed SRS, Use Cases, Sprint Plan, LLD & Wireframes demonstration to the client	T + 135 Days
3.		First cut of all the proposed modules	A live / beta demonstration of the modules to client	T + 150 days
4.		UAT and Signoffs	Undertake UAT and incorporate the suggestions on the modules	T + 165 days
5.		Go Live (Release 2)	Beta Go-Live of the entire application	T + 180 Days
6.		Incorporating bug fixes post Go-Live	Suggestions and important bug fixes	T + 190 Days
1.	Rel 3 <ul style="list-style-type: none"> Recommendations engine Advanced Analytics in detail and dashboard Genres as decided by Prasar Bharati User Management Fixes & Enhancements Any other as per scope and Prasar 	Preparation of the BRD/FRS, HLD document	Submission of the detailed BRD document including the scope, dependencies and modules	T + 195 days
2.		Preparation of the use cases	Detailed SRS, Use Cases, Sprint Plan, LLD & Wireframes demonstration to the client	T + 225 Days
3.		First cut of all the proposed modules	A live / beta demonstration of the modules to client	T + 240 days

S. No.	Release	Phase	Milestone	Timelines
4.	Bharti requirements	UAT and Signoffs	Undertake UAT and incorporate the suggestions on the modules	T + 255 days
5.		Go Live (Release 3)	Beta Go-Live of the entire application	T + 270 Days
6.		Incorporating bug fixes post Go-Live	Suggestions and important bug fixes	T + 280 Days
7	Successful Go-Live (Rel 1, Rel 2 and Rel 3) of fully functional OTT platform	Go-Live of OTT	Successful bug fixing of all the releases and successful Go-Live (Rel 1, Rel 2 and Rel 3)	T + 300 days
8	Operation & Support payment	Quarterly	Payable from Rel 1 Go-Live and to be computed on monthly basis on actuals and as per the details mentioned in the commercial bid format	Calculated on monthly basis but payable on quarterly basis at the end of the quarter

10. Commercial Bid:

- 10.1. As already detailed in instructions to bidder, the instant tender is in two-bid system.
- Technical Bid
 - Commercial Bid
- 10.2. Both Technical Bid and Commercial Bid will be submitted concurrently duly digitally signed on the website <https://prasarbharati.eproc.in>
- 10.3. Financial offers shall be submitted online in prescribed format (Excel Sheet) in Commercial Bid only. Any revelation of financial offer in technical bid or any of its Annexure will lead to outright rejection of the offer.
- 10.4. **Commercial Bid Format :** The format of commercial bid is as hereunder for guidance AND compliance purpose only . **Please do not submit any commercial / financial quotes in the technical proposal, the commercial needs to be only uploaded online on the portal.**

#	Particulars for OTT platform services for Prasar Bharati	Specification reference	Unit	Quantity for evaluation	HSN Code	GST Rate applicable
			a	b		c
1	Development of OTT Platform, Application development as per scope of work (One Time Cost)	Clause 5.2	1 set	1		
2	Setting up of Media Ingestion Room (One Time Cost)	Clause 5.1	1 set	1		
3	Enterprise Service Support, Operation and maintenance of OTT Platform and all functionalities and upgrades as per the scope of work including but not limited to maintenance and operations of Hardware, Middleware, Integration, Support, Cloud, DC hosting, Cyber Security, Content Security or any other item to complete the solution as per scope of work.	Clause 5.4	Per month	60		

RFP for Selection of MSI for OTT platform for Prasar Bharati

#	Particulars for OTT platform services for Prasar Bharati	Specification reference	Unit	Quantity for evaluation	HSN Code	GST Rate applicable
4	Integration of additional linear TV channel	Clause 5.2	<i>per channel</i>	25		
5	Integration of additional FAST Channel	Clause 5.2	<i>per channel</i>	15		
6	Development of additional OTT applications for new platform	Clause 5.2	<i>per platform</i>	5		
7	Advance analytics service integrated with OTT platform	Clause 5.2	<i>per month</i>	60		
8	Advertisement serving charges : Advertisements stitched / served	As per RFP	<i>per lakhs</i>	36,000		
9	DRM Charges	Clause 5.2	<i>per lakhs play</i>	18,000		
10	MAM charges as SAAS	Clause 5.1	<i>per license month</i>	3,000		
11	Content storage on Cloud	Clause 5.3	<i>per TB Month</i>	90,000		
12	Operational Charges for Content conversion, metadata updation and operations in media ingestion room, etc	Clause 5.1 / 5.4	<i>per Hour</i>	20,000		
13	Media Transcoding	Clause 5.1 / 5.3	<i>per TB</i>	36,000		
14	Bandwidth Charges at Media Ingestion room of 1 Gbps speed	Clause 5.1	<i>per month</i>	60		
15	24x7 Help Desk & Premium Support with 8 language support and at least 20 seater	Clause 5.4	<i>per month</i>	60		
16	Content delivery network (CDN) : Data Transfer Per TB	Clause 5.3 / 5.4	Per TB	3,00,000		
17	Charges for cloud computing etc.	Clause 5.3 / 5.4	per lakh users hours	3,000		

Note:

#	Particulars for OTT platform services for Prasar Bharati	Specification reference	Unit	Quantity for evaluation	HSN Code	GST Rate applicable
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- 1 Quantity mentioned above will be used for evaluation purpose

11. Payment Terms

- 11.1. The payment shall be made on verification of satisfactory delivery. The payment for One Time cost shall be made as per clause 11.2. In case One Time cost is more than 20% of the overall project cost, the remaining amount shall be payable as per clause 11.3. The cost other than the One Time Cost shall be made as per clause 11.4.
- 11.2. The payment milestones shall be as mentioned below, for the One Time Cost (Sr. No 1 and 2 of the commercial bid), limited to 20% of the overall project cost:
- 11.2.1. 40% payable upon successful completion and Go-Live of Release 1.
 - 11.2.2. 30% payable upon successful completion and Go-Live of Release 2.
 - 11.2.3. 20% payable upon successful completion and Go-Live of Release 3.
 - 11.2.4. 10% payable upon successful bug fixing of all the releases and successful Go-Live of the fully functional OTT platform.
- 11.3. One time cost (Sr. No 1 and 2 of the commercial bid) over and above 20% of the overall project cost, shall be payable in equated yearly instalments payable across Year 2 to Year 5. This payment shall be made along with payment of last quarter for that year.
- 11.4. For payments other than one time cost, the milestones shall be as under, as per verification of satisfactory delivery by Prasar Bharati:
- 11.4.1. The payment shall be calculated on monthly basis and payable on quarterly basis on submission of invoices along with necessary documents as under, at the end of the quarter.

#	Description of services / deliverables	Payment verification method
1.	Enterprise Service Support, Operation and maintenance of OTT Platform and all functionalities and upgrades as per the scope of work including but not limited to maintenance and operations of Hardware, Middleware, Integration, Support, Cloud, DC hosting, Cyber Security, Content Security or any other item to complete the solution as per scope of work.	as per verification of delivery on monthly basis
2.	Integration of additional linear TV channel	<i>as per actual and on addition of new channel on each platform and API</i>

#	Description of services / deliverables	Payment verification method
3.	Integration of additional FAST Channel	<i>as per actual and on addition of new channel on each platform and API</i>
4.	Development of additional OTT applications for new platform	<i>as per actual on addition of new platform, data from analytics and the concerned app store</i>
5.	Advance analytics service integrated with OTT platform	<i>Delivery of analytics service on monthly basis</i>
6.	Advertisement serving charges : Advertisements stitched / served	<i>usage report from ad server and advanced analytics</i>
7.	DRM Charges	<i>usage report from DRM license server and advanced analytics</i>
8.	MAM charges as SAAS	<i>as per actual licenses used per month</i>
9.	Content storage on Cloud	<i>as per actual storage consumed based on report of storage form cloud</i>

#	Description of services / deliverables	Payment verification method
10.	Operational Charges for Content conversion, metadata updation and operations in media ingestion room, etc	<i>from analytics as well as local and cloud storage consumption report</i>
11.	Media Transcoding	<i>Storage / usage report of transcoding</i>
12.	Bandwidth Charges at Media Ingestion room of 1 Gbps speed	as per verification of delivery on monthly basis
13.	24x7 Help Desk & Premium Support with 8 language support and at least 20 seater	as per verification of delivery on monthly basis
14.	Content delivery network (CDN) : Data Transfer Per TB	from CDN report
15.	Charges for cloud computing etc.	Analytics user per hours

Note:

The Bidder is required to submit the system generated reports on active users, CDN capacity used etc. and should be self attested by the Single Bidder / Prime Bidder in case of Consortium on their respective letter heads.

12. Annexure

12.1. ANNEXURE-1 (FORM-1)

BIDDER'S GENERAL INFORMATION

To,

Prasar Bharati

TENDER NO:

1	Bidder Name:	
2	Number of Years in Operation	
3	Registered Office Address	<p>_____</p> <p>City: District:</p> <p>State:</p> <p>PIN/ZIP:</p>
4A	Bidder's address where order/contract is to be placed	<p>_____</p> <p>City: District: State:</p> <p>PIN/ZIP:</p>
4B	Address from where Goods/ Services are to be dispatched/ provided along with GST no.	City: District:

RFP for Selection of MSI for OTT platform for Prasar Bharati

	<i>(In case supply of Goods/ Services are from multiple locations, addresses and GST n o . Of all such locations are</i>	State: PIN/ZIP: GST No.:
	<i>to be provided).</i> (Indian Bidder only)	
5	Telephone Number of address where order is to be placed	 _____ (Country Code) (Area Code) (Telephone Number)
6	E-mail address	
7	Fax Number (if available)	 _____ (Country Code) (Area Code) (Telephone Number)
8	Website	
9	Name & Designation of Contact Person	
10	ISO Certification, if any {If yes, please furnish details}	
12	Banker's Name	
13	Branch	
14	Branch Code	
15	Bank Account Number	
16	PAN No	

RFP for Selection of MSI for OTT platform for Prasar Bharati

17	Status of Firm	Proprietorship Firm/Partnership firm/Limited/Others If Others Specify: [Enclose relevant certificates / partnership deed/certificate of Registration, as applicable]
18	GST No. (refer sl. no. 4B above)	[Enclose copy of GST Certificate]
19	Whether Micro or Small Enterprise? (Indian Bidder only)	Yes / No <i>(If Yes, Bidder to submit requisite documents as specified in ITB)</i>
20	Type of Entity (Indian Bidder only)	Corporate/ Non-Corporate (As per CGST/SGST/UTGST Act). (In case of Non-Corporate Entity, bidder will submit documentary evidence for same).
21	Whether Bidder is Startups or not? (Indian Bidder only)	Yes / No
22	Whether Bidder is related to any employee of Prasar Bharati? (If, yes, then the list may also be enclosed as mentioned in Para 2.30.3)	Yes / No

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal

12.2. Annexure-2

Letter of Authority

[Proforma for Letter of Authority for Attending Pre-Bid Meetings' /'Un-priced Bid Opening' / 'Price Bid Opening'/Subsequent 'Negotiations']

Ref: Date:

To,

PRASAR BHARATI

(India's Public Service Broadcaster)

DIRECTORATE GENERAL: DOORDARSHAN

DOORDARSHAN BHAWAN, COPERNICUS MARG,

NEW DELHI – 110001

SUB: Goods__Supply__Service : Name

TENDER NO: Tender__ Reference__Number

Dear Sir,

I/We, <_____>hereby authorize the following representative(s) for attending any 'Meetings [Pre-Bid Meeting]', 'Un- priced Bid Opening', 'Price Bid Opening' and for any subsequent 'Negotiations' correspondence / communication against the above Bidding Documents:

[1] Name & Designation Signature

[2] Phone/Cell:

Fax:

E-mail: @

[3] Name & Designation Signature

[4] Phone/Cell:

Fax:

E-mail: @

We confirm that we shall be bound by all commitments made by aforementioned authorised representative(s).

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:

Note: This "Letter of Authority" should be on the "letterhead" of the Firm / Bidder and should be signed by a person competent and having the 'Power of Attorney' to bind the Bidder. Not more than 'two [02] persons per Bidder' are permitted to attend "Techno-commercial / Un-priced" & "Price Bid" Openings. Bidders authorized representative is required to carry a copy of this authority letter while attending the un-priced and priced bid opening, the same shall be submitted to PRASAR BHARATI.

12.3. Annexure-3

Bid Submission Form and Agreement

To,

PRASAR BHARATI

(India's Public Service Broadcaster)

DIRECTORATE GENERAL: DOORDARSHAN

DOORDARSHAN BHAWAN, COPERNICUS MARG,

NEW DELHI – 110001

SUB: Goods__Supply__Service : Name

TENDER NO: Tender__ Reference__Number

Dear Sir,

After examining / reviewing the Bidding Documents for the tender of“

Including "Specifications & Scope of Work", "General Term Conditions [GTC]" and "Price Bid", etc. the receipt of which is hereby duly acknowledged, we, the undersigned, are pleased to offer to execute the whole part of the job and in conformity with the said Bid Documents, including Addenda / Corrigenda Nos. .

We confirm that this Bid is valid for a period as specified in BDS from the date of opening of "Techno-Commercial / Un-priced Bid", and it shall remain binding upon us and may be accepted by any time before the expiry of that period and any extension thereof.

If our Bid is accepted, we will provide the "Contract Performance Security / Security Deposit" equal to" <_____> of the Contract Price" or as mentioned in Tender Document for the due performance within "thirty [30] days" of such Award.

Until a final Agreement/Letter of Award is prepared and executed, the tender document (including addenda/ corrigenda) together with the "Notification of Award" shall constitute a binding Agreement between us.

We understand that Bidding Document is not exhaustive and any action and activity not mentioned in Bidding Documents but may be inferred to be included to meet the intend of the Bidding Documents shall be deemed to be mentioned in Bidding Documents unless otherwise specifically

excluded and we confirm to perform for fulfilment of Agreement and completeness of the Work in all respects within the time frame and agreed price.

We understand that you are not bound to accept the lowest priced or any Bid that you may receive.

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:

12.4. Annexure-4

Performa of Bank Guarantee for Bid Bond

Bank Guarantee No. _____

Ref :

To

PRASAR BHARATI

(India's Public Service Broadcaster)

DIRECTORATE GENERAL: DOORDARSHAN

DOORDARSHAN BHAWAN, COPERNICUS MARG,

NEW DELHI – 110001

Dear Sirs,

Whereas the PRASAR BHARATI(India's Public Service Broadcaster), DIRECTORATE GENERAL: DOORDARSHAN having its head office at DOORDARSHAN BHAWAN, COPERNICUS MARG, NEW DELHI – 110001(hereinafter called the Organization) which expression shall, unless repugnant to the context or meaning thereof, include all its successors, administrators, executors and assignees, has floated a Tender No. _____ and M/s _____ having Registered/ Head Office at _____ (Hereinafter called the "Bidder" which expression shall, unless repugnant to the context or meaning thereof, mean and include all its successors, administrators executors and assignees) have submitted a quotation Reference No. _____ and Bidder having agree to furnish as a conditions precedent for participation in tender as unconditional and irrevocable bank guarantee of Rupees _____ Only) for the due performance of Bidder/s obligations as contained in the terms of the Notice inviting Tenders (NIT) and other terms and conditions contained in the Tender Documents supplied by the Organization specially the conditions that (a) Bidder shall keep his tender open for a period of day, i.e., from _____ to _____ or any extension thereof, and shall not withdraw or modify it in a manner not acceptable to the Organization(b) the Bidder will execute the contract, if awarded, and shall furnish performance guarantee in the format prescribed by the Organization within the required time. The Bidder has absolutely and unconditionally accepted these conditions. The Organization and the Bidder have agreed that NIT/tender document is an offer made on the condition that the tender, if submitted would be kept open in its original form without variation or modification in a manner not acceptable to the Organization for a period of _____ days, i.e., from _____ to _____ or any extension thereof and that making of the tender itself shall be regarded as an unconditional and absolute acceptance of the conditions, contained in NIT and the tender documents. They have further agreed that the contract consisting of NIT/Tender documents as the OFFER and submission of the tender as the ACCEPTANCE shall be a separate contract distinct from the contract which will come into existence when the tender is finally accepted by

the Organization. The consideration for this separate initial contract preceding the main contract is that the Organization is not agreeable to sell the NIT/tender documents to the Bidder and

to consider the tender to be made except on the condition that the tender shall be kept open for the period indicated above and the Bidder desires to make a tender on this condition after entering into this separate initial contract with the Organization promises to consider the tender on this condition and Bidder agrees to keep this tender open for the required period. These reciprocal promises form the CONSIDERATION for this separate initial contract between the parties.

2. Therefore, we _____registered_____ (indicate the name of Bank)under the laws of _____ having head/registered office at _____(hereinafter) referred to as the "Bank" which expression shall, unless repugnant to the context or meaning thereof, include all its successors, administrators and executors hereby issue irrevocable and unconditional bank guarantee and undertake to pay immediately on first demand in writing Rupees _____ at any time immediately on such demand without any demur, reservations, recourse, contest or protest and/ or without any reference to the Bidder and any such demand made by the Organization on the bank shall be conclusive and binding notwithstanding any difference between organization and the Bidder or any dispute pending before any court arbitrator or any other matter whatsoever. We also agree to give that Guarantee herein the Organization in writing. This guarantee shall not be determined/discharged/affected by the liquidation, winding up, dissolution or insolvency of the Bidder and will remain valid, binding and operative against the bank.

3. The bank also undertakes that the Organization at the option shall be entitled to enforce this guarantee, against the Bank as a principal debtor, in the first instance, without proceeding against the Bidder.

4. The bank further agree that as between the bank and the Organization, for purpose of the guarantee, any notice of the breach of the conditions contained in NIT and other terms and conditions contained in the Tender Documents as referred above given to the bank by the Organization shall be conclusive and binding on Bank, without any proof, notwithstanding any other matter or difference or dispute whatsoever. We further agree that this guarantee shall not be affected by any change in our constitution, in the constitution of the Organization or that of the Bidder. We also undertake not to revoke, in any case, this Guarantee during its currency.

5. The bank agrees with the Organization that the Organization shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms of the tender or get extension of the validity period from time to time. We shall not be relieved from our liability by reason of any such variation or extension of the validity period or for any forbearance, act of omission and commission on the part of the Organization or any indulgence shown by the Organization to the said Bidder or by any such matter or thing whatsoever which under the law relating to sureties, would, but for this provision, have the effect of so relieving us.

6. Notwithstanding anything contained herein above our liability under this Guarantee is limited to Rupees (_____ only) in aggregate and it shall remain in full force upto and including 45 days after _____ unless extended further (indicate the last date of validity period) from time to time, for such period as may be instructed in writing by M/s _____ on whose behalf this guarantee has been given, in which case, it shall remain in full force upto and including 45 days after the expiry of extended period. Any claim under this guarantee must be received by us before the expiry of 45 days from _____ or (indicate the last date of validity period) before the expiry of 45 days after the expiry of extended period, if any, if no such claim has been received by us within 45 days after the said date/extended date, the rights of the Organization under this guarantee will cease subject to Para 8. However, if such a claim has been received by us within and upon forty five days after the said date/extended date, all rights of the organization under this guarantee shall be valid and shall not cease until we have satisfied that claim.

7. In case contract is awarded to the Bidder here in after referred to as "Contractor" the validity of this Bank Guarantee will stand automatically extended until the contractor furnished to the Organization a bank guarantee for Rs. _____ (in figure) (Rupees _____ only) (in words) towards performance guarantee for satisfactory performance of the contract. In case of failure to furnish performance bank Guarantee in the format prescribed by this Organization by the required date the claim must be submitted to us within 120 days after the last date of validity period or extended period, if any. If no such claim has been received by us within 120 days after the said date/extended date, rights of the organization under this guarantee will cease. However if such a claim has been received by us within and up to 120 days after the said date/extended date all rights of the Organization under this guarantee will cease. However, if such a claim has been received by us within and upto 120 days after the said date/extended date, all rights of the Organization under this guarantee shall be valid and shall not cease until we have satisfied that claim.

8. The Bank confirms that this guarantee has been issued with the approval of appropriate Exchange Control Authority in _____ and any other authority (indicate the name of the country of issue of Guarantee) if required as per the laws of the country of issue of guarantee.

The bank confirms that this guarantee has been issued with observance of the appropriate Exchange Control rules and Regulations of the country.

In witness whereof the Bank, through its authorised officer, has set its hand & stamp on this _____ day of _____ at _____ of _____ (month & year)

Signature

(Full name in capital letters)

(Designation with bank stamp)

Date.....

Witness No. 1

Signature

Full name and Address (in capital letters).....

.....

.....

Witness No. 2

Signature

Full name and Address (in capital letters).....

.....

.....

INSTRUCTIONS

(FOR FILLING UP BANK GUARANTEE FOR BID BOND)

The bank guarantee should be stamped in accordance with the Stamp Act.

The non-judicial stamp paper should be in the name of the issuing bank.

Clause 7 of the bank guarantee is applicable in cases of global tenders where foreign tenders also participate. When tenders are invited from parties within India, clause 7 may be deleted and replaced by clause. "The bank also agrees that courts of the place from where tenders have been invited shall have exclusive jurisdiction".

Please indicate the currency in which bank guarantee is being given Rs/-(Rupees) have been mentioned only for illustrations. Therefore, in cases where bank guarantee is being given in a currency other than Rupees' or US Dollars' these terms may be deleted and replaced by relevant currency.

The period of forty five (45) days mentioned in clause 6 and one hundred twenty (120) days as given in clause 6 should be available after the expiry of the validity period of the tender or any extension thereof.

The bank guarantee by Indian bidder will be given from an Indian scheduled commercial bank only. The foreign bidders will give Bank Guarantee from an Indian scheduled commercial bank situated in that country. In case no Indian Bank is situated in bidder's country then Bank Guarantee from a foreign bank acceptable to the Organization will be considered, provided it is confirmed by an Indian scheduled commercial bank and shall be governed by the Indian laws and subject to the jurisdiction of the courts in New Delhi.

12.5. Annexure-5

Project citation format

Relevant projects	
General information	
Name of the project	
Client for which the project was executed	
Name and contact details of the client	Name:____ Designation:_____ Email:____ _____ Contact: __
Project details	
Description of the project	
Scope of services	

Technologies used	
Outcomes of the project	
Other details	
Total cost of the project	
Duration of the project (no. of months, start date, completion date, current status)	

Note: Please provide following with each project citation

Copy of Work Order **or**

Letter from the client to indicate the successful completion of the projects, if any

Proposed work plan

#	Activity	Calendar Month					
		1	2	3	4	5	6

Indicate all main activities of the assignment, including delivery of reports (e.g.: inception, interim, and final reports), and other benchmarks. For phased assignments indicate activities, delivery of reports, and benchmarks separately for each phase.

Duration of activities shall be indicated in the form of a bar chart.

12.6. Annexure-6

Team composition

Qualification of Core Team

Manpower	Minimum Qualifications
Project Manager	<p>Educational Qualification: Masters/Bachelor's degree in a relevant field (e.g., Computer Science, Information Technology or eqv) or Masters in Business Administration(Systems or Eqv).</p> <p>Professional Certification: Project Management Professional (PMP), Prince 2 or equivalent certification is preferred.</p> <p>Overall Experience: 10+ years of project management experience.</p> <p>Relevant Experience: Proven track record of successfully managing IT projects, including scope, budget, and timeline.</p> <p>Tools & Technologies: Proficiency in project management software (e.g., Microsoft Project), collaboration tools, and Agile/Scrum methodologies.</p>
Solution Architect	<p>Educational Qualification: Bachelor's or Master's degree in Computer Science or a related field.</p> <p>Professional Certification: TOGAF or AWS Certified Solutions Architect is a plus.</p> <p>Overall Experience: 10+ years of IT architecture and design experience.</p> <p>Relevant Experience: Extensive experience in designing complex IT solutions.</p> <p>Tools & Technologies: Proficiency in architecture modelling tools, cloud technologies, and enterprise architecture frameworks.</p>
Data Architect	<p>Educational Qualification: Bachelor's or Master's degree in Computer Science, Information Systems, or a related field.</p> <p>Professional Certification: Certified Data Management Professional (CDMP) or equivalent is preferred.</p> <p>Overall Experience: 10+ years of data architecture and database design experience.</p> <p>Relevant Experience: Proven expertise in designing and implementing data solutions.</p>

Manpower	Minimum Qualifications
	<p>Tools & Technologies: Proficiency in database management systems, data modelling tools, and ETL technologies.</p>
Tech Lead	<p>Educational Qualification: Bachelor's degree in Computer Science or a related field.</p> <p>Professional Certification: Relevant technical certifications (e.g., Microsoft Certified, Cisco Certified) are a plus.</p> <p>Overall Experience: 10+ years of software development experience.</p> <p>Relevant Experience: Strong leadership skills and experience leading development teams.</p> <p>Tools & Technologies: Proficiency in programming languages and development tools relevant to the project.</p>
Cloud Architect	<p>Educational Qualification: Bachelor's or Master's degree in Computer Science or a related field.</p> <p>Professional Certification: AWS Certified Solutions Architect or equivalent cloud certification is preferred.</p> <p>Overall Experience: 10+ years of IT architecture and cloud computing experience.</p> <p>Relevant Experience: Proven track record of designing and implementing cloud solutions.</p> <p>Tools & Technologies: Proficiency in cloud platforms (e.g., AWS, Azure, GCP), containerization technologies, and cloud security.</p>
DevOps Expert	<p>Educational Qualification: Bachelor's degree in a relevant field.</p> <p>Professional Certification: DevOps-related certifications (e.g., AWS Certified DevOps Engineer) are a plus.</p>

Manpower	Minimum Qualifications
	<p>Overall Experience: 6+ years of experience in DevOps and CI/CD pipelines.</p> <p>Relevant Experience: Strong expertise in automating deployment and infrastructure management.</p> <p>Tools & Technologies: Proficiency in DevOps tools, container orchestration, and version control systems.</p>
Product Manager	<p>Educational Qualification: Bachelor's degree in a relevant field (e.g., Business, Computer Science).</p> <p>Professional Certification: Product management certification (e.g., Certified Scrum Product Owner/Agile SAFe) is preferred.</p> <p>Overall Experience: 6+ years of product management experience.</p> <p>Relevant Experience: Proven track record of successfully managing IT products or projects.</p> <p>Tools & Technologies: Familiarity with product management tools and methodologies, such as Agile and Scrum.</p>
UI/UX Expert	<p>Educational Qualification: Bachelor's degree in Graphic Design, Interaction Design, Human-Computer Interaction, or a related field.</p> <p>Professional Certification: UI/UX design certifications (e.g., Nielsen Norman Group UX Certification) are a plus.</p> <p>Overall Experience: 6+ years of UI/UX design experience.</p> <p>Relevant Experience: Strong portfolio demonstrating user-centered design for web and mobile applications.</p> <p>Tools & Technologies: Proficiency in design and prototyping tools (e.g., Adobe Creative Suite, Sketch, Figma) and knowledge of usability testing methodologies.</p>

Project team

Name of Staff with qualification and experience	Area of Expertise	Position Assigned	Task Assigned	Time committed for the engagement

Curriculum Vitae Format

Photo	Name			
	Position:			
	Date of Birth			
	Education:	<input type="checkbox"/>		
4. Employment Record	From	To	Company	Position Held
5. Brief Profile	<input type="checkbox"/>			
8. Countries of Work Experience				

9. Languages	<input type="checkbox"/>
10. Work Undertaken that Best Illustrates Capability to Handle the Task Assigned	
<p>Nature of Work: Year:</p> <p>Location:</p> <p>Company:</p> <p>Position Held:</p> <p>Main features:</p> <p><input type="checkbox"/></p> <p>Activities Performed:</p>	
<p><input type="checkbox"/></p>	
<p>Certification</p> <p>I, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.</p> <p><i>Date</i> _____</p> <p>_____</p> <p><i>Signature of staff member Day / Month / Year</i></p>	

12.7. Annexure-7

Checklist

Tender no.		Tender__ Reference__Number	
Specification no		XXXXXXXXXXXXXXXXXX	
Specification for		Goods__Supply__Service : Name	
(COMMERCIAL)			
Group A			
Name of Bidder and Address			
GSTIN of Firm			
S · N o	Description		YES / NO / NOT APPLI CABL E
1 · 1	Whether requisite tender Processing fee has been paid?		Remarks
2 · 1	Whether NEFT/RTGS/FDR/DD Bank Guarantee for the requisite earnest money/Bid Bond enclosed with the offer?		
2 · 2	If so, furnish the following		
		Name of the Bank	
		Value	

		Number			
		Date of issue			
		Period of validity of the DD/FDR/ Bank Guarantee (it should not be for less than 165 days(90 days in case of DD) from the date of opening of Technical Bid)			
3		Have the rates, prices and totals etc. been checked thoroughly before signing the tender?			
4		Has a statement incorporating the Nil-deviation from the commercial terms and conditions of this Organization has been prepared and enclosed with the offer?			
5		Whether charges for training of this Organisation's officials included in the prices? If not, whether these have been quoted separately?			
6		Whether firm FOR Destination prices have been quoted?			
8		Whether the cost of installation/erection/commissioning at site is included in the prices or not and whether it has been quoted separately?			
9		Whether the period of validity of the offer is as required in the tender document. If not, mention the extent of variation in days.			
10		Whether the offer has been signed indicating full name?			
11		Are the pages of the tender consecutively numbered and an indication given on the front page of the tender as to how many pages are contained in the tender?			

1 2	Has the tender been prepared in sufficient details/clarity so as to avoid post tender clarifications/amendments?		
1 3	Whether required sample asked in tender has been submitted along with the offer		
1 4	Whether all Clauses of the tender are accepted?		
1 5	If not, the clauses not accepted may please be indicated		
1 6	Whether guarantee/warranty has been furnished?		
1 7	Whether Commercial bid and technical bid of the tender document duly filled in and submitted.		
1 8	Whether each Page of Appendix- A, B, C, D, E, F and G of the tender document is signed and submitted with the offer.		
1 9	Whether Integrity Pact duly signed is submitted, if estimated cost of the bid is more than 2 Crore.		
Group B			
1	Whether a copy of the latest income tax return has been enclosed?		
2	Whether details of your registration under GST have been indicated in the offer?		
Group C			
(Technical)			

1	Whether necessary literature/catalog of the full complement of equipment offered as well as operation service and maintenance manual thereof has been attached with the offer?		
2	Whether the material being offered fully conforms to all the required technical specifications (Appendix-D)?		
3	If not, has the extent of deviation and how it is suitable to this Organisation's requirement been specified.		
5	Whether the model of each equipment offered are the latest?		
6	Whether the spares support will be available for a period of 5 years from the date of supply?		
7	Do you have an after-sales service centre in India?		
	If no, which is the nearest service centre (Address).		
8	Whether complete details of after-sales service arrangements given including training for the officials of this organization?		

12.8. Annexure-8

Nil Deviation Certificate

PRASAR BHARATI

(India's Public Service Broadcaster)

DIRECTORATE GENERAL: DOORDARSHAN

DOORDARSHAN BHAWAN, COPERNICUS MARG,

NEW DELHI – 110001

Subject: Notice Inviting Tender for _____

NIT Enquiry No:

Dated

Tender no. Tender__ Reference__Number

NIL DEVIATION CERTIFICATE

Notwithstanding anything mentioned in our bid, we hereby accept all the terms and conditions of this Tender Document without any reservations whatsoever. We hereby undertake and confirm that we have understood all the specifications, stipulations, terms and conditions as mentioned in this Tender enquiry.

I hereby declare that – There is no deviation in the offer.

Signature of Authorized Signatory of Bidder

Name:

Designation:

Date:

Place:

Seal of Organization:

12.9. Annexure-9

Declaration Regarding Holiday/Banning and Liquidation, Court Receivership

To,

PRASAR BHARATI

(India's Public Service Broadcaster)

DIRECTORATE GENERAL: DOORDARSHAN

DOORDARSHAN BHAWAN, COPERNICUS MARG,

NEW DELHI – 110001

SUB: [REDACTED]

TENDER NO: Tender [REDACTED]

Dear Sir,

We hereby confirm that we are not on 'Holiday' by any offices of Prasar Bharati/ AIR/ DD/ CCW/ Government or Public Sector (due to "poor performance" or "corrupt and fraudulent practices") or banned by Government department/ Public Sector on due date of submission of bid.

Further, we confirm that neither we nor our allied agency/(ies) (as defined in the Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of Government or Public Sector.

We also confirm that we are not under any liquidation, court receivership or similar proceedings or 'bankruptcy'.

In case it comes to the notice of Prasar Bharati that the bidder has given wrong declaration in this regard, the same shall be dealt as 'fraudulent practices' and action shall be initiated as per the Procedure for action in case of Corrupt/Fraudulent/Collusive/Coercive Practices.

Further, we also confirm that in case there is any change in status of the declaration prior to award of contract, the same will be promptly informed to Prasar Bharati by us.

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

12.10. Seal:

Annexure-10

E-Banking Mandate Form

(To be issued on Bidder letter head)

1. Bidder/customer Name:
2. Bidder /customer Address:
3. Bidders' e-mail id:
4. Particulars of bank account
 - a) Name of Bank
 - b) Name of branch
 - c) Branch code:
 - d) Address:
 - e) Telephone number:
 - f) Type of account (current/saving etc.)
 - g) Account Number:
 - h) IFSC of the bank branch
 - i) 9 digit MICR code

I/We hereby authorize Prasar Bharati to release any amount due to me/us in the bank account as mentioned above. I/We hereby declare that the particulars given above are correct and complete. If the transaction is delayed or lost because of incomplete or incorrect information, we would not hold Prasar Bharati responsible.

(Signature of Bidder/)

12.11. Annexure-11

Integrity Pact

[To be executed on plain paper and submitted along with bid/tender document for Bidders having a value of Rupees two crores or more.]

To be signed by the Authorized Signatories of the Bidders and Prasar Bharati

This pre-bid pre-contract Agreement, hereinafter called the INTEGRITY PACT, is made on this day of the month of____, 20____. BETWEEN CEO Prasar Bharati (Broadcasting Corporation of India), Prasar Bharati House, Copernicus Marg, New Delhi 110001 acting through Deputy Director General (Purchase) >Address: <DG: DD> hereinafter called the “Buyer”, which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns, on the one hand,

AND

M/s< _____>, at address<_____>acting through
Sh.<_____>

, Chief Executive Officer, hereinafter called the “BIDDER”, which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns, on the other.

PREAMBLE

WHEREAS the BUYER proposes to procure (Supply, Installation, Testing and Commissioning of <_____>), hereinafter referred as “<SITC of _____>” and has floated a tender [Tender No.<_____>], hereinafter referred to as the “TENDER”, and the BIDDER/ SELLER is willing to offer/ has offered the <(Name of the Work/Supply:><_____> and the BUYER intends to award a contract / purchase order / work order for the <SITC of _____> covered under the TENDER hereinafter referred to the “CONTRACT”,

AND WHEREAS the BIDDER/ SELLER is a company incorporated in India under Companies Act, 1956/2013 or a Partnership registered under Indian Partnership Act, 1932 or a Limited Liability Partnership (LLP) in India or Government undertaking or a Government Autonomous

body and the BUYER is an Autonomous Organisation of the Government of India performing its functions on behalf of the President of India.

AND WHEREAS the BUYER has appointed Independent External Monitors (IEMs) to monitor

The TENDER process and the execution of the CONTRACT for compliance with the principles as laid down in this INTEGRITY PACT.

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this INTEGRITY PACT, the terms and conditions of which shall also be read as integral part of the TENDER document and CONTRACT between the parties.

NOW, THEREFORE,

To avoid all forms of corruption by following a system i.e. fair, transparent and free from any influence / prejudiced dealing prior to, during and subsequent to the currency of the CONTRACT to be entered into with a view to:-

Enable the BUYER to obtain the <SITC of _____> at a competitive price in conformity with the defined specifications by avoiding the high cost and distortion any impact of corruption on public procurement,

And

Enable the BIDDER/ SELLER to abstain from bribing or indulging in any corrupt practices in order to secure the CONTRACT by providing assurance to the BUYER that their competitors will also abstain from bribing and other corrupt practices,

And

Enable the BUYER to prevent corruption in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this INTEGRITY PACT and agree as follows:

1. Article 1 – COMMITMENTS OF THE BUYER

1.1 The BUYER undertakes that no official of BUYER, connected directly or indirectly with the CONTRACT/ TENDER or the BUYER personally or any of his family members will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favor or any material or immaterial benefit or any other advantage from the BIDDER/ SELLER, either for themselves or for any person, organization or third party related to the CONTRACT in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the CONTRACT.

1.2 BUYER will, during the pre-contract stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular

BIDDER/ SELLER, which could afford an advantage to that particular BIDDER in comparison to the other BIDDERS.

1.3 The officials of the BUYER will report to the Independent External Monitor (IEM) with a copy to the Chief Vigilance Officer (CVO) any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

1.4 In case any such misconduct on the part of such official(s) of the BUYER is reported by the BIDDER to the BUYER with the full and verifiable facts and the same is prima facie found to be correct by the BUYER, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the CONTRACT process. In such a case, while an enquiry is being conducted by the BUYER, the proceedings under the CONTRACT would not be stalled, unless considered necessary.

2 Article 2 - COMMITMENTS OF THE BIDDER

2.1 The BIDDER commits himself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of the bidding or during any pre- contract or post-contract stage in order to secure the CONTRACT or in furtherance to secure it and in particular commits himself to the following:-

2.1.1 The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official or family member of the BUYER, connected directly or indirectly with the Bidding Process, or to any person, organization or third party related to the CONTRACT in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.

2.1.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage, or inducement to any official of the BUYER or family member of the BUYER or otherwise in procuring the CONTRACT or forbearing to do or having done any act in relation to the obtaining or execution of the CONTRACT or any other CONTRACT with the Prasar Bharati for showing or forbearing to show favor or disfavor to any person in relation to the CONTRACT or any other CONTRACT with Prasar Bharati.

2.1.3 BIDDER shall disclose the name and address of his agents and representatives and the Indian BIDDERS shall disclose his foreign principals or associates, if any.

2.1.4 BIDDER shall disclose the payments to be made by them to agents/ brokers or any other intermediaries, in connection with this TENDER/CONTRACT.

2.1.5 The BIDDER further confirms and declares to the BUYER that the BIDDER is the original manufacturer/ authorised partner of the <SITC of _____> and has not engaged any

individual or firm or company whether Indian or foreign other than those Para 2.1.3 and Para 2.1.4 above, to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries, whether officially or unofficially to the award of the CONTRACT to the BIDDER.

2.1.6 The BIDDER will not collude with other parties interested in the CONTRACT to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the CONTRACT.

2.1.7 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

2.1.8 The BIDDER shall not use impropriety, for purpose of competition or personal gain, or pass on to others, any information provided by BUYER as part of the business relationship, regarding plans, technical proposal and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.

2.1.9 The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

2.1.10 The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above in the sub clause of this Article2.

2.1.11 If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the BUYER, or alternatively, if any relative of an official of the BUYER has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filling of tender.

2.1.12 The term, relative "for this purpose would be as defined in Section 2(77) of the Companies Act, 2013.

2.1.13 The BIDDER shall not lend or borrow any money or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the BUYER.

3 Article 3 - PREVIOUS TRANSGRESSION, IF ANY, OF THE BIDDER

3.1 The BIDDER declares that no previous transgression has occurred in the last three years immediately before signing of this INTEGRITY PACT with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the TENDER process.

3.2 The BIDDER agrees that if it makes incorrect statement on this subject, he can be disqualified from the TENDER process or the CONTRACT, if already awarded, can be terminated for such reason.

3.3 If the BIDDER can prove that he has resorted/ recouped the damage caused by him and has installed suitable corruption prevention system, the BUYER may, at his own discretion, as per laid down organisational procedures, revoke the exclusion prematurely.

4 Article 4 - SANCTIONS FOR VIOLATIONS

4.1 Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the BUYER to take all or any one of the following actions, wherever required:-

4.1.1 To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(S) would continue.

4.1.2 The Earnest Money Deposit (in pre-contract stage) and/or Security Deposit/ Performance Bond (after the CONTRACT is signed) shall stand forfeited either fully or partially, as decided by the BUYER and the BUYER shall not be required to assign any reason there for.

4.1.3 To immediately cancel the CONTRACT, if already signed, without giving any compensation to the BIDDER.

4.1.4 To recover all sums already paid by the BUYER, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with Interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from the BUYER in connection with any other CONTRACT for any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.

4.1.5 To encash the advance bank guarantee and performance bond/ warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.

4.1.6 To cancel all or any other contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such cancellation/ rescission and the BUYER shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.

4.1.7 Registration of suppliers and their eligibility to participate in Procurement Entity's procurements is subject to compliance with Code of Integrity for Public Procurement and good performance in contracts.

i. A bidder shall be debarred if he has been convicted of an offence.

a. Under the prevention of Corruption Act. 1988: or

b. Under the Indian Penal Code or any other law for the time being in force, for causing a threat to public health as part of execution of a public procurement contract.

ii. A bidder debarred under sub-section (i) or any successor of the bidder shall not be eligible to participate in a procurement process of any procuring entity of Prasar Bharati for a period not exceeding three years commencing from the date of debarment.

iii. Buyer may debar a bidder or any of its successor, from participating in any procurement process undertaken by it, or period not exceeding two years, if it determines that the bidder has breached the code of integrity.

iv. Prasar Bharati will maintain such list of debarred suppliers which will also be displayed on its website.

v. The bidder shall not be debarred unless such bidder has been given a reasonable opportunity to represent against such debarment.

4.1.8 To recover all sums paid in violation of this INTEGRITY PACT by the BIDDER to any middlemen or agent or broker with a view to securing the CONTRACT.

4.1.9 In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the BUYER with the BIDDER, the same shall not be opened.

4.1.10 The BUYER will be entitled to take all or any of the actions mentioned at Paras 4.1.1 to 4.1.9 of this INTEGRITY PACT also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

4.1.11 The decision of BUYER to the effect that a breach of the provisions of this INTEGRITY PACT has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the IEM(s) appointed for the purposes of this INTEGRITY PACT

5 Article 5 - INDEPENDENT MONITORS

5.1 THE BUYER has appointed an Independent External Monitor (hereinafter referred to as “MONITOR”) for this INTEGRITY PACT in consultation with the Central Vigilance Commission (Addresses and Contact details of the Monitor is:

Smt. Meenakshi Mishra, IA &AS (Retd). E-mail: pcmishra@hotmail.com	Shri Alope Prasad, IPS (Retd.) E-mail: alokewa@gmail.com
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5.2 The task of the MONITOR shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Integrity Pact.

5.3 The MONITOR shall not be subject to instructions by the representatives of the parties and shall perform his functions neutrally and independently. He will report his findings to Chief Executive Officer, Prasara Bharati (CEO,PB).

5.4 Both the Parties accept that the MONITOR has the right to access, without restriction, all the documents relating to the Project/ procurement, including minutes of meetings.

5.5 The BIDDER accepts that the MONITOR has the right to access, without restriction, all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the MONITOR, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his Project documentation. The same is applicable to Subcontractors of the BIDDER. The MONITOR shall be under contractual obligation to treat the information and documents of the BIDDER and his Subcontractor(s) with confidentiality.

5.6 The BUYER will provide to the MONITOR sufficient information about all meetings among the parties related to the Project/ procurement provided such meetings could have an impact on the contractual relations between the Parties. The Parties will offer to the MONITOR the option to participate in such meetings.

5.7 As soon as the MONITOR notices, or believe to notice, a violation of this INTEGRITY PACT, he will so inform the Authority designated by the BUYER with a copy to CVO, PB and request them to discontinue or take corrective action, or to take other relevant action. He will also inform separately to CEO, PB with copy to CVO, PB. The MONITOR can in this regard submit non-binding recommendations. Beyond this, the MONITOR has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

5.8 The MONITOR will submit a written report to the CVO, PB within 4 to 8 weeks from the date of reference or intimation to him by the BUYER or BIDDER and, should the occasion arise, submit proposals for correcting problematic situations.

5.9 If the MONITOR has reported to the CEO, PB and CVO, PB a substantial suspicion of an offence under the relevant IPC/PC Act and they have not, within reasonable time taken visible action to proceed against such offence, the MONITOR may also transmit the information directly to the Central Vigilance Commissioner

6 Article 6 - FACILITATION OF INVESTIGATION

In case of any allegation of violation of any provisions of this INTEGRITY PACT or payment of commission, the BUYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

7 Article 7 - LAW AND PLACE OF JURISDICTION

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the BUYER.

8 Article 8 - OTHER LEGAL PROVISIONS/ ACTIONS

8.1 The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extent law in force relating to any civil or criminal proceedings.

8.2 Any dispute or difference arising between the parties with regard to the terms of this INTEGRITY PACT and / or, any action taken by the BUYER in accordance with this INTEGRITY PACT or interpretation thereof shall not be subject to arbitration.

8.3 Both the parties agree that this INTEGRITY PACT has precedence over the TENDER/ CONTRACT documents with regard to any of the provisions covered under this INTEGRITY PACT.

9 Article 9 – VALIDITY

9.1 The validity of this INTEGRITY PACT shall be w.e.f. the date of its signing and shall extend up to 5(five) years or during the complete execution of the CONTRACT to the satisfaction of both the BUYER and the BIDDER, including warranty period, whichever is later. For unsuccessful BIDDERS at the tendering / pre-contract stage, this INTEGRITY PACT shall expire after six (06) months from the date of signing of the CONTRACT.

9.2 Should one or several provisions of this INTEGRITY PACT turn out to be invalid; the remainder of this Integrity Pact shall remain valid. In this case, the Parties will strive to come to an agreement to their original intentions.

9.3 If any claim is made/ lodged during the validity period of the INTEGRITY PACT, the same shall be binding and continue to be valid despite the lapse of INTEGRITY PACT as specified above.

9.4 The parties hereby sign this INTEGRITY PACT at on_____.

(For & On behalf of the Prasar Bharati)

(For & On behalf of BIDDER)

(Office Seal)

(Office Seal)

Place:.....

Date:.....

Witness 1:

(Name & Address)

Witness 2:

(Name & Address)

12.13. Annexure-13

Proforma For Bank Guarantee For Performance Security

(To be stamped in Accordance with Indian stamp Act)

The Non-judicial stamp paper should be in the name of issuing Bank

RefBank Guarantee No.

To

PRASAR BHARATI

(India's Public Service Broadcaster),

DG: DOORDARSHAN, DOORDARSHAN BHAWAN,

Copernicus Marg, NEW DELHI

Dear Sirs,

1 In consideration of PRASAR BHARATI ((India's Public Service Broadcaster), DG:DOORDARSHAN having its head office at India (herewith referred to as the Organisation which expression shall, unless repugnant to the context or meaning thereof, include all its successors, administrators, executors and assignees and having entered into a contract dated (hereinafter called "the contract" which expression shall include all the amendments thereto) on behalf of the PRASAR BHARATI with M/s_____ having its Head/ Registered office at _____ (hereinafter referred to the contractor which expression unless repugnant to the context having been executors and assigns) and the contract having been unequivocally been accepted by the contractor resulting in a contract bearing No._____ dated_____ valued at Rs._____ (Rupees_____) (in words) for having agreed that the contractor shall furnish to the organisation Performance Guarantee for the faithful performance of the entire contract to the extent of 5% of the of the value of the contract Rupees_____ (in words). We_____ (Name of the Bank) having its registered unless repugnant to the context or meaning thereof, include all its successors, administrators, executors and assignees do hereby guarantee and undertake to pay immediately on first demand in writing, in Rupees as acceptable to the Organisation any and all moneys the extent of Rupees_____ (In words). In aggregate at any time without any demur, reservations, recourse, contest or protests and /or without any reference to the contractor. Any such demands made by the Organisation on the Bank shall be conclusive and binding notwithstanding any difference between the Organisation and contractor or any dispute pending before any court Arbitrator or any other authority. We agree that guarantee herein

contained shall be irrevocable and shall continue to be enforceable till it is discharged by the Organisation in writing.

2 The Organisation shall have the fullest liberty without affecting in any way the liability of the Bank under this guarantee, from time to time to extend the time for performance of the contract by the contractor or vary the terms of the contract. The Organisation shall have the fullest liberty without affecting this guarantee to postpone from time to time the exercise of power vested in them or of any right which they might at anytime in any manner, and either to enforce, or to forebear to enforce, any covenants contained or implied in the contract between the Organisation and the contractor or any other course or remedy or security available to the Organisation. The Bank shall not be released of its obligations under these presents by any exercise by the Organisation of its liberty with reference to matter aforesaid or any of them or by reason of any other act of forbearance or other acts of omission or commission on the part of the Organisation or any other indulgence shown by the Organisation or by any other matter or thing whatsoever, which under law would, but for this provision, have the effect of relieving the Bank.

3 The Bank also agrees that the Organisation at its option, shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance, without proceeding against the contractor and notwithstanding any security or other guarantee that the Organisation may have in relation to the contractors liabilities.

4 The Bank further agrees that the Guarantee herein contained shall remain in full force during the period that is taken for the performance of the contract i.e. complete delivery of the material/equipment as the same is a condition of supply contract and all the dues of the Organisation under or by virtue of this contract, have been fully paid and its claim satisfied or discharged or till the Organisation discharge this guarantee in writing.

5 We further agree that as between us and the Organisation for the purpose of this guarantee any notice given to us by the Organisation that the money is payable by the contractor and any amount claimed in such notice by the Organisation shall be conclusive and binding on us notwithstanding any difference between the Organisation and the contractor or any dispute pending before any court, Tribunal, Arbitrator or any other authority. We further agree that this Guarantee shall not be affected/discharged by any change in our constitution, in the constitutions of the Organisation that of the contractor. We also undertake not to revoke this guarantee during its currency. This guarantee shall not be determined discharged or affected by the liquidation, winding up, dissolution or insolvency of the contractor and shall remain valid, binding and operative against the Bank.

6. Notwithstanding anything contained herein above, our liability under this guarantee is limited to Rs. _____ (In figure) (Rupees _____) (In

words) in aggregate and it shall remain in full force up to and including 60 days after (Indicate the date of expiry of Guarantee/Warranty period) unless extended further, from time to time, for such period as may be instructed in writing by M/s_____ on whose behalf this guarantee has been given, in which case it shall remain in full force up to the expiry of the extended period. Any claim under this guarantee must be received by us before the expiry of one year from_____(indicate the date of expiry of Guarantee/warranty period) or before the expiry of one year after the expiry of extended period, if any. If no such claim has been received by us within one year after the said date/extended date, the right of the Organisation under this guarantee will cease, However, if such a claim has been received by us within and up to one year after the said date/extended date, all the rights of the Organisation under this Guarantee shall be valid and shall not cease until we have satisfied that claim.

7. The bank confirms that this guarantee has been issued with the approval of the appropriate Exchange Control, Rules and regulations of the country.

We also agree that this guarantee shall be governed and construed in accordance with Indian Laws and subject to the exclusive jurisdiction of Indian courts.

The bank also agrees that Courts of New Delhi, India shall have exclusive jurisdiction.

Dated this.....day of At
.....

(SIGNATURE)

(Full name and address in of official capital letter)

(Designation with Bank Stamp)

Date

Witness No. 1

Signature

Full name and Address (in capital letters).....

.....

Witness No. 2

Signature

Full name and Address (in capital letters).....

.....

* Applicable where the party is foreign one.

** Applicable where the party is Indian.

INSTRUCTIONS

(FOR FILLING UP BANK GUARANTEE FOR PERFORMANCE BOND)

I. The Bank guarantee should be stamped in accordance with the stamp act.

II. The non-judicial stamp paper should be in the name of the issuing bank.

The bank also agrees that the Court of New Delhi India shall have exclusive jurisdiction.

a. The period one year mentioned in clause 6 should be available after the expiry of the validity period/satisfactory performance, as the case may be, or any extension of such period.

b. The Bank Guarantee by bidders will be given from any Scheduled Commercial Bank in India.

c. In the case of guarantee by a foreign bank, the same should be got confirmed by an Indian Commercial bank.

12.14. Annexure-14**Solution details**

S. N o	Proposed Solution (Provide the Product Name or fill Custom Built, in case of a new developmen t)	Versio n & Year of Releas e	OE M	Features & Functionalitie s	O&M Support (Warranty/AT S/ : as required as per RFP)	Reference in the Submitted Proposal (Please provide page number/sectio n number/ volume)

(SIGNATURE OF BIDDER)

12.15. ANNEXURE-15

BIDDERS PAST SUPPLIES PROFORMA					
	Name & address of client	Period from	Description in detail	Total quantity supplied	Remarks

12.16. FALL CLAUSE

1. The price for the stores/services/works under the contract/Supply order by the contractor / Supplier shall in no event exceed the lowest price at which supplier/contractor or his agent / principal / dealer as the case may be, sells the stores / services / works or offers to sell stores / services / works of identical description to any persons / organizations including the purchaser or any department of the Central Govt. or any Deptt. of State Govt. or any Statutory undertaking of the Central or State Govt., as the case may be, during the currency of the contract supply/work order.

2. If at any time, during the said period, the contractor / supplier or his agent / principal / dealer as the case may be, reduce the sales price, sells or offers to sell such stores / services / works to any persons / organizations including the purchaser or any Deptt. of Central Govt. of any Deptt. of a State Govt. or any statutory undertaking of the Central or State Govt. as the case may be, at a price lower than the price chargeable under the contract/supply order, he shall forthwith notify such reduction or sale or offer of sale to the Purchase Authority who has issued this contract / supply order and price payable under the contract/supply order for the stores supplied / services rendered / works carried out after the date of coming into force of such reduction or sale or offer of Sale shall stand correspondingly reduced. The above stipulation will however, not apply to :--

a) Exports by the contractor / supplier; or

b) Sale of goods as original equipment at prices lower than the prices charged for normal replacement.

3. The contractor/supplier shall furnish the following certificate to the concerned Purchaser.

"I / We certify that there has been no reduction in sale price of the stores / services of description identical to the stores / services supplied to PRASAR BHARATI (India's Public Service Broadcaster), DIRECTORATE GENERAL: DOORDARSHAN under the contract / supply order here in and such stores / services have not been offered / sold by me / us to any person organisation including the purchaser or any Deptt. of Central Govt. or any Deptt. of a State Govt. or any statutory Undertaking of the Central or State Govt. as the case may be upto the date of bill during the currency of the supply order contract whichever is later at a price lower than the price charged to the Organisation under the contract / supply order except for quantity of stores categories under sub-clauses (a) and (b) of sub para (3.22.2) above, details of which are as follows.....

In case, if the price charged by our firm is more, Prasar Bharati will have the right to recover the excess charged amount from the subsequent/unpaid bill of the supplier.

12.17. SERVICE LEVEL AGREEMENT

The Bidder shall be responsible for providing support for all the services required for OTT platform on 24X7X365 basis as per RFP.

The maintenance will include compliance process to the defined international standards and security guidelines. Further customer Security policies and procedures if any that needs to be considered and included in the scope of work

The MSI shall ensure Uptime and utilization of the cloud, CDN and other resources as per the defined SLA.

The Bidder shall provision monitoring tools for measuring the service levels, application performance and utilization, server performance and utilization, storage performance and utilization and network performance and utilization. The tool shall be capable of providing the exact utilization of servers and shall be able to generate per day, per month and per quarter.

Utilization reports based on which the payments will be made to the Bidder.

The Bidder shall provide system monitoring tool for best user experience to monitor the following:

- System response
- Database response
- Connectivity
- Live / active user status
- CDN usage status
- Any other components as decided by Prasar Bharati

Bidder shall conduct Mock drills for DR testing or simulation at least in every six months interval.

MIS Reports - Bidder shall submit the reports on a regular basis in a mutually decided format. The Bidder shall workout the formats for the MIS reports and get these approved by the customer after awarded the contract. The following is only an indicative list of reports that may be submitted to the customer:

- Daily

- Weekly
- Monthly
- Quarterly
- Annual improvements and suggestions

12.17.1 Service Level Agreement (SLA) and Penalties

The purpose of this Service Level Requirements/Agreement (hereinafter referred to as SLA) is to clearly define the levels of service which shall be provided by the Bidder to customer for the duration of this contract period of the Project. The SLAs which are not covered explicitly in this document, shall be as per the Meity SLAs.

All the payments to the Bidder are linked to the compliance with the SLA metrics specified in this document.

The SLA are proposed to be performance based. For purposes of SLA, the definitions and terms as specified along with the following terms shall have the meanings set forth below:

- a. **“Uptime”** shall mean the time period for which the IT Infrastructure Solution along with specified services / components with specified technical and service standards are available for users in all in-scope Applications across the customer application landscape. Uptime, in percentage, of any component (Non-IT and IT) can be calculated as:
$$\text{Uptime} = \{1 - [(\text{System Downtime}) / (\text{Total Time} - \text{Planned Maintenance Time})]\} * 100$$
- b. **“Downtime”** shall mean the time period for which the IT Infrastructure Solution and/or specified services / components with specified technical and service standards are not available to users. This includes Servers, Routers, Firewall, Switches, all servers and any other IT and non-IT infrastructure, their subcomponents etc. at all Project locations etc. The planned maintenance time / scheduled downtime will include activities like software upgrades, patch management, security software installations etc.

- c. The selected Bidder will be required to schedule ‘**planned maintenance time**’ with prior approval of customer. This will be planned outside working time. In exceptional circumstances, customer may allow the service provider to plan scheduled downtime in the working hours.
- d. “**Incident**” refers to any event / abnormalities in the functioning of the IT Infrastructure solution and services that may lead to disruption in normal operations.
- e. “**Resolution Time**” shall mean the time taken (after the incident has been reported at the helpdesk), in resolving (diagnosing, troubleshooting and fixing) or escalating (to the second level) getting the confirmatory details about the same from the bidder and conveying the same to the end user), the services related troubles during the first level escalation.
- f. “**MRC (Monthly Recurring Cost)**” refers to the recurring monthly charges for the service.

12.17.2 Severity Levels

- **Severity 1** - Environment is down or major malfunction resulting in an inoperative condition or disrupts critical business functions and requires immediate attention. A significant number of end users (includes public users) are unable to reasonably perform their normal activities as essential functions and critical programs are either not working or are not available.
- **Severity 2** - Loss of performance resulting in users (includes public users) being unable to perform their normal activities as essential functions and critical programs are partially available or severely restricted. Inconvenient workaround or no workaround exists. The environment is usable but severely limited.
- **Severity 3** - Moderate loss of performance resulting in multiple users (includes public users) impacted in their normal functions.

12.17.3 Service Level Agreement

Sr no	Parameter	Target	Basis	Penalty
1	Availability of the OTT Platform including Cloud, CDN, MAM and all other associated services.	$\geq 99.95\%$	Per Occurrence (will be calculated on Monthly basis)	SLA - Availability Downtime per Month Service Credits (%) From (%) To (%) <ul style="list-style-type: none"> • $100 < 99.95$ 0 to 21.6 mins 0% of MRC • $99.95 < 99.93$ > 21.6 mins to 30.24 mins 10% of MRC • $99.93 < 99.90$ > 30.24 to 43.20 minutes 20% of MRC < 99.90 > 43.20 minutes 25% of MRC
3	DR drills	At least 2 No's per Annum	Per occurrence. This will be calculated yearly	<ul style="list-style-type: none"> • No of DR Drills = 1 - 1% of the Yearly Payment

				<ul style="list-style-type: none"> No of DR Drills = 0 - 2% of the Yearly Payment
4	Security incidents and Breaches including data theft or loss or corruption	No breaches	Per occurrence	<ul style="list-style-type: none"> Severity 1 (as define) - Penalty of Rs 10 Lakh per incident. Severity 2 (as define) - Penalty of Rs 5 Lakh per incident. Severity 3 (as define) - Penalty of Rs 3 Lakh per incident. These penalties will not be part of overall SLA penalties cap per month / quarter. In case of serious breach of security wherein the data is stolen or corrupted, customer reserves the right to terminate the contract.

5	The Service Provider shall submit MIS Usage report as per the matrix and frequency decided by Prasar Bharati	Report of the previous Month shall be submitted on 5th day of the current Month	Per occurrence	<ul style="list-style-type: none"> • ≤ 5 days - No Penalty • ≤ 10 days - 0.5% of MRC • ≤ 20 days - 1% of MRC • Between 21 – 30 days - 2% of MRC
6	Meeting the timeline for the project	No delay (Project to be executed as per prescribed Time Line)	Per Release	0.5 % per week of the associated payment. (Maximum penalty shall be limited to 10 % of the contract value)
7	Development of Application for Additional platform	With in 90 days	Per application	0.5 % per week of the associated payment