

**E-TENDER
FOR**

**SUPPLY, INSTALLATION, TESTING AND
COMMISSIONING OF 2D DIGITAL DOME
PROJECTION SYSTEM WITH THREE
YEARS ONSITE COMPREHENSIVE
MAINTENANCE**

**AT
REGIONAL SCIENCE CITY,
LUCKNOW**



Ministry of Culture
Government of India

**NATIONAL SCIENCE CENTRE
(A UNIT OF NATIONAL COUNCIL OF SCIENCE MUSEUMS)
BHAIRON ROAD, NEAR GATE NO – 4, PRAGATI MAIDAN
NEW DELHI – 110 001**

NATIONAL SCIENCE CENTRE, DELHI
(A Unit of National Council of Science Museums)

Disclaimer & Disclosures:

National Science Centre, Delhi (NSCD) has prepared this document to give background information on the captioned job/ project to the interested bidders/ agencies/ contractors.

NSC, Delhi reserves the right not to proceed with the Project or to change the configuration of the Project, to alter the timetable reflected in this document or to change the process or procedure to be applied. It also reserves the right to decline to discuss the matter further with any bidder submitting the Tenders.

No contractual obligation on behalf of NSC, Delhi, whatsoever, shall arise from this tender unless & until a formal contract is signed and executed by duly authorized Officers of NSC, Delhi and the bidder in due course after invitation of tenders.

NSC, Delhi may modify any / all of the terms of this tender process giving due notification through Central Public Procurement Portal and the National Science Centre, Delhi's website: <https://nscd.gov.in>.

NSC, Delhi will not be liable for any costs incurred by the Bidders in the preparation of the tender & its presentation. The preparation of Bidder's proposal will be made without obligation by NSC, Delhi to acquire any of the items included in the Bidder's product, or select any Bidder's proposal, or to discuss the reasons why a particular Bidder's proposal is accepted or rejected.

All information included by the bidders in their proposal will be treated in strict confidence.

National Science Centre
(A Unit of National Council of Science Museums)
Pragati Maidan, Bhairon Road,
New Delhi - 110001

Tender No.: NSCD/18011/E-Tender – 33/ 2024 – 25

NOTICE INVITING E-TENDER

On-line Digitally signed e-tenders under Two Bid System are invited from competent Company/Firm/Agency/Consortium, who satisfy the eligibility criteria enumerated in the Tender Documents for ***SITC OF 2D DIGITAL DOME PROJECTION SYSTEM WITH THREE YEARS ONSITE COMPREHENSIVE MAINTENANCE FOR REGIONAL SCIENCE CITY, LUCKNOW*** as per the **Scope of Work at ANNEXURE – D and Detailed Technical Specifications at Annexure-F and the General Terms & Conditions.**

Agencies having proven experience and capability of executing the order in the targeted time may download the Tender Papers from Central Public Procurement Portal (CPPP): <http://eprocure.gov.in/eprocure/app> or from NSC, Delhi website <https://nscd.gov.in> as per the following schedule:

1	Bid Document Published Date	04/03/2025 (18:15 hours)
2	Bid document download start date	04/03/2025 (18:30 hours)
3	Pre-bid queries/clarifications start date	04/03/2025 (18:45 hours)
5	Last Date of submission of Pre-Bid Queries/clarifications (No later queries shall be entertained)	11/03/2025 (17:00 hours) at the following email id's: nscdl01@gmail.com nscdelhi10@gmail.com pcrscl@gmail.com
6	Date, time and place of Pre-Bid meeting Pre-Bid meeting will be held on hybrid mode. Physical Mode Venue: Conference Hall, NSC, Delhi. The bidder who will submit the pre-bid clarification through email shall get the intimation from NSC, Delhi to attend the pre-bid meeting online. Bidders interested to attend the meeting online should send their email address.	Date: 13/03/2025 Time: 12.00 Noon onwards Place: National Science Centre, Pragati Maidan, Bhairon Marg, New Delhi – 110001. Link for Pre-Bid meeting is as under:- meet.google.com/avz-jzor-jbg
7	Bid Submission Start Date	18/03/2025 (11:00 hours)
8	Bid Submission End Date	30/03/2025 (18:00 hours)
9	Technical (Techno-commercial) Bid Opening	01/04/2025 (15:00 hours)
10	Intimation regarding technically qualified vendors	To be notified later
11	Date and Place of Technical Presentation	To be notified later
12	Technical Presentation (Qualified vendors only)**	To be notified later
13	Financial Bid Opening Date (Technically Qualified vendors only)	To be notified later

13	Estimated Cost of Work (including GST)	₹300.00 Lakhs
14	Earnest Money Deposit @2.5% of estimate	₹7.50 lakhs (Rupees Seven Lakh Fifty Thousand only).
15	Period of Completion of Work	120 days

Link for Pre-Bid Meeting: - meet.google.com/avz-izor-jbg

Topic: **SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 2D DIGITAL DOME PROJECTION SYSTEM WITH THREE YEARS ONSITE COMPREHENSIVE MAINTENANCE AT REGIONAL SCIENCE CITY, LUCKNOW**

Time: 13/03/2025 12:00 Noon India

Join Google Meeting (online)

Bidders interested to participate through online video conferencing for pre-bid may send their confirmation to Store & Purchase Section, NSC, Delhi through email id nscdelhi10@gmail.com and they need to send their contact details and e-mail id to the above-mentioned e-mail address.

The online bid, both Technical Bid and Financial Bid, should be uploaded by the due date and time as per the above schedule. The responsibility to ensure the same lies with the bidders. Offline tenders shall not be accepted and no request in this regard will be entertained whatsoever. Online Technical Bid will be opened at the first instance in NSC, Delhi at 15:00 hours on 01-04-2025 for technical evaluation as well as selection of technically acceptable offers.

In the second stage, the Financial Bids of only the selected and techno-commercially acceptable offers/system/ equipment will be opened. Decision of the NSC, Delhi, regarding selection of eligible and qualified vendors / firms for opening the Financial Bid shall be final and binding on the bidders. NSC, Delhi reserves the right to accept or reject any or all tenders in full or part without assigning any reason whatsoever. NSC, Delhi is not bound to accept merely the lowest tender but the technical suitability, capability and superiority of the job shall be of prime consideration for selection of the agency.

Tender document can be downloaded from Central Public Procurement Portal (CPPP) website “<http://eprocure.gov.in> / eprocure/ app”.

Submission of the Bid: This Tender is an e-Tender and bids are to be submitted through CPP Portal (<http://eprocure.gov.in> / eprocure/ app) only. Bids submitted in physical forms will be summarily rejected.

Details of EMD, Exemption documents for EMD, submission of tender, etc. are indicated in the tender document.

The online bid both Technical (Techno-Commercial) Bid and Financial bid duly furnished in Cover –I and Cover-II respectively should be uploaded by the due date and time as per the above schedule. The responsibility to ensure the same lies with the bidders.

NSC, Delhi reserves the right to amend / withdraw any of the terms and conditions in the tender documents or to reject any or all bids without giving any notice or assigning any reason. NSC, Delhi also reserves the right to accept or reject any or all tenders in full or part without assigning any reason whatsoever. NSC, Delhi shall also not be bound to accept merely the lowest tender but the technical suitability, capability and superiority of the concept/ technology interface/system etc. shall be of prime consideration for selection of the appropriate set of concept/ technology interface /system collectively considered as a complete solution.

General Information and Instructions

1. The instructions given herein will be strictly binding on the bidders and deviation, if any will make the tender or tenders liable to be considered invalid. Tenders incorporating additional conditions by the bidder are liable for rejection.
2. Bids shall be submitted online only at CPPP website: <https://eprocure.gov.in/eprocure/app>. Manual bids shall not be accepted.
3. The instructions given in “**Instruction for Online Bid Submission**” should be strictly followed during submission of the Bid.
4. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
5. An agent of foreign OEM, for submitting the offer on behalf of OEM, would be required to produce a copy of their legal bid agreement with their principal as an Indian agent failing which their bid would be disqualified.
6. Bid should be submitted along with the Earnest Money of ₹7.50 lakhs (Rupees Seven Lakh Fifty Thousand only) being 2.5% of the estimated cost of the project by way of Pay Order/ Demand Draft/ Banker’s Cheque/ NEFT*/ RTGS*/ Bank Guarantee from any Nationalized Bank / Scheduled Commercial Bank in favour of “National Science Centre, Delhi”, payable at New Delhi (Bank Details of National Science Centre, Delhi for NEFT/RTGS is given in **ANNEXURE- K**.

Bank Gurantee submitted against EMD must be valid for 06 months from date of submission and claim period must be 06 months after end of validity period.

Earnest Money deposits in respect of such offers which are not accepted will be returned to the bidders within 30 working days from the date on which the final decision is taken about the agency through which tendered work will be carried out or within 2 (two) months from the date of the opening of the tenders, whichever is earlier. No interest will be paid on the Earnest Money deposited with the Centre. Will be returned on submission of PG or adjusted with the PG.

In case the successful bidder refuse to accept the offer after finalization and fail to execute the agreement or does not comply with General Terms & Conditions within 07 (seven) days from the date of placement of the order as per the finalized and accepted terms & conditions, earnest money deposit would be automatically forfeited and the order shall be cancelled forthwith.

7. **Validity of Bids:** The Bids should remain valid for 90 (ninety) days from the date of opening of Financial Bids.
8. **Rejection of Bids:** Canvassing by the Bidder(s) in any form, unsolicited letter and post-tender correction may invoke summary rejection. Conditional tenders will be rejected. Noncompliance of applicable General Information and Instructions will disqualify the Bid.
9. The Bidders should have Digital Signature Certificate (DSC) for filling up the Bids. The person signing the tender documents should be authorized for submitting the online e-tender.
10. The Bidders shall fill up the Prescribed Format for submission of **Technical Bid as per “Annexure-A”** format duly signed by the authorized signatory. The person signing the tender document should be authorised for submitting the online e-tender.
11. The Financial Bid (BOQ) shall be filled in and signed by the authorized signatory online as per proforma “(ANNEXURE – I)” available at Central Public Procurement Portal e-tender system website <http://eprocure.gov.in/eprocure/app>. off line Financial Bid shall not be accepted

12. Tenders must be uploaded online in two separate covers - namely **Cover – 1 (Technical Bid)** and **Cover– 2 (Financial Bid/ BOQ and Cost Breakup Sheet)** on Central Public Procurement Portal. The contents of Cover-1 and Cover-2 shall be as follows:

Cover-1 (Technical Bid)

- i. “Technical (Techno-Commercial) Bid” (alongwith all relevant documents as per the Format given in **ANNEXURE-A**) duly filled in and digitally signed with an official stamp.
- ii. EMD Details (Scanned copy of EMD submitted physically to be uploaded). In case Registration as MSME Bid Securing Declaration Form as Per **Annexure-P** to be uploaded alongwith MSME /NSIC /UDHYAM Registration Certificate and details as per **Annexure-O**.
- iii. The Technical Brochures of each equipment with technical explanation for every feature of the product offered by the bidder alongwith Check List as per **Annexure-M**.
- iv. The scanned copy of “Complete set of NIT including Scope of Work (**Annexure-D**), Detailed Technical Specifications (**Annexure-F & F-1**), Bill of Quantities (**Annexure-I**), Terms & Conditions etc. to be uploaded duly signed by the Authorized Signatory with the official stamp as a token of acceptance of the same by the bidders.
- v. Declaration form **I, II**, declaration Form as per **ANNEXURE-B, C** and **Tender Acceptance Letter** as per **Annexure-Q**
- vi. Documents related to Eligibility Criteria as per Clause 2 of GT&C such as General Eligibility, existence eligibility, turnover eligibility & work Experience eligibility alongwith certificates of the relevant works done during the last 7 years supported by appropriate credentials as per **Annexure-G**.
- vii. Scanned Copy of PAN Card, GST Registration, ITR Filed Acknowledgement issue by Income Tax Deptt. For last 03 years and Average Annual Financial Turnover Declaration as per Format given in **Annexure-H**.

Cover-2 (Financial)

- i. The “Financial Bid (BOQ)” (as per Detailed Scope of Work, Specifications and Bill of Quantities) i.e. Schedule of Price Bid in the item-wise tabular format duly filled in and digitally signed.
- ii. Cost Breakup for each quoted component (as per detailed scope of work and bill of quantities) duly filled in tabular format as per **ANNEXURE-J** and the declaration as per **ANNEXURE-L** digitally signed with an official stamp.

The Cover-1, i.e. Technical (Techno-Commercial) Bid shall be opened by NSCD at the first instance and evaluated by the competent authority. At the second stage, the Cover-2 containing Financial Bid of only techno-commercially acceptable offers shall be opened for further evaluation and ranking before awarding the contract.

N.B.: The bidders shall consider the prevailing tax rates while quoting the rates. However, in the event of any changes in the statutory taxes and duties, the rates applicable at the time of payment shall be made by the competent authority of the NSC, Delhi against submission of supporting documentary evidence.

Order shall be placed in favour of the bidder whose technical bid is acceptable and offered OVERALL lowest rate of item(s) as per BOQ in ANNEXURE – I.

The authorities of NSC, Delhi do not bind themselves to accept the lowest tender and reserve the right to reject or accept any or all tenders wholly or partially without assigning any reason whatsoever.

Instructions for Online Bid Submission

1. The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.
2. More information useful for submitting online bids on the CPP Portal may be obtained at <https://eprocure.gov.in/eprocure/app>

REGISTRATION

1. Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link “Online Bidders Enrolment” on the CPP Portal which is free of charge.
2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.) with their profile.
5. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC“s to others which may lead to misuse.
6. Bidders may then log-in to the site through the secured log-in by entering their user ID / Password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS

1. There are various search options built in the CPP Portal to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords, etc. to search for a tender published on the CPP Portal.
2. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective “My Tenders” folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
2. The bidders should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk,

PREPARATION OF BIDS

1. Bidders should take into account any corrigendum published on CPPP in connection with the tender document before submitting their bids.
2. Please go through the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of sets in which the bid documents have to be submitted, the number of documents - including the names and content of each of the documents that need to be submitted. Any deviations from these may lead to rejection of the bid.
3. Bidders, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF / JPG formats. Bid documents may be scanned with 100 dpi with black and white option, which helps in reducing size of the scanned document.
4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates, etc.) has been provided to the bidders. Bidders can use “My Space” or “Other Important Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for the bid submission process.

SUBMISSION OF BIDS

1. Bidders should log-in to the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidders will be responsible for any delay due to other issues.
2. The bidders have to digitally sign and upload the required bid documents one by one as indicated in the tender document.
3. Bidders have to select the payment option as “offline” to pay the requisite Earnest Money Deposit (EMD) and enter detail of the instrument.
4. Bidders should submit the EMD as per the instructions specified in the tender document. The original instrument should be posted/couriered/given in person to the Tender Processing Section at the above address, latest by the last date of bid submission. The detail of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected. However, concession for submission of EMD shall be applicable to the Tenderers/Bidders registered with NSIC/MSME as per prevailing Govt. guidelines. The Tenderers/Bidders should upload document of the firm for claiming such exemption. Tenderer/Bidder must upload relevant docs. if the bidder is registered under NSIC/MSME.
5. A standard Price Schedule format (BOQ) (ANNEXURE – I) and cost breakup (ANNEXURE – J) has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidders). No other cells should be changed. In case no rate value is required to be quoted in any particular cell, that cell may be kept blank, figure “0” (zero) shall not be entered in such cell(s). Once the details have been completed, the bidders should save it and submit it online, without changing the filename. If the BOQ (ANNEXURE – I) file is found to be modified by the bidders, the bid will be rejected.
6. The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referring the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

7. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128-bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
8. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
9. Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message and a bid summary will be displayed with the bid number and the date & time of submission of the bid with all other relevant details.
10. The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meeting.

ASSISTANCE TO BIDDERS

1. Any enquiries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority or the relevant contact person indicated in the tender.
2. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal helpdesk. The contact number for the helpdesk is 1800 233 7315.
3. Any queries relating to the Tender may be addressed to nscdl01@gmail.com, nscdelhi10@gmail.com with proper credentials of the bidders before the bid clarification date thereafter no queries will be entertained.

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Tender No.: NSCD/18011/E-Tender – 33/ 2024 – 25

GENERAL TERMS AND CONDITIONS

Name of the work: Supply, Installation, Integration, Testing and Commissioning of 2D Digital Dome Projection System, hardware and software packages, content, tools and / or drivers of a complete and fully functional Digital Dome projection system (18 mtr. Diameter) and all accessories, with Three Years Onsite Comprehensive Maintenance for Regional Science City, Lucknow as per detail specifications laid out at Annexure – F.

Tenders invited under Two-Bid System from competent Company / Firm / Agency / Consortium, who satisfy the eligibility criteria enumerated in the document.

1. INTRODUCTION

National Science Centre, Delhi invites bids for ***SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 2D DIGITAL DOME PROJECTION SYSTEM WITH THREE YEARS ONSITE COMPREHENSIVE MAINTENANCE FOR “REGIONAL SCIENCE CITY, LUCKNOW.”***

The Astrovision 70 Projection System of M/s GOTO, Japan installed at Regional Science City, Lucknow is 18-meter Hemi-Spherical Tilted Dome with 165 degree of projection area. Proposed Immersive Digital Projection system shall consist of array of projectors mounted on a suitable structure to display thematic digital content with requisite overlap, edge blending and geometric correction on surface/ screen of the dome.

This Tender outlines the SITC of 2D Digital Dome Projection System at Regional Science City, Lucknow to screen 2D fulldome educational and planetarium shows for visitors. The facility has been used to conduct shows on Science & Technology in an immersive projected environment.

2. ELIGIBILITY CRITERIA

- i.** Limited Companies/ Corporations/ Agencies/ Consortiums/JVs etc. are allowed to bid for the work.
- ii.** Limited Companies/ Corporations/ Agencies/ Consortiums/JVs etc. should have at least 5 years of experience in setting up a 2D digital planetarium and dome projections system.
- iii.** The Bidder must be an original manufacturer of the Digital Planetarium and dome projections system software or an authorized agent/partner of OEM of Digital Planetarium and dome projections system software. In case the bidder is an authorized agent of the manufacturer then authorization letters from OEM must be furnished with all the details by the bidder.
- iv.** The Bidder/lead partner of a consortium/ manufacturer must have previous experience of having supplied/upgrade/maintained at least one 2D digital dome projection system for at least 15m diameter in India/outside India within the last 5 years which was operational for public at least for one year. This project should have been operational and functional for the public in all aspects for at least one year in the last five years.

- v. Proof regarding the experience of the OEM/Bidder in providing the maintenance support for digital planetarium and dome projections projection systems must be submitted supported with the proof from the client. Proof regarding the same must be submitted by the OEM as per **ANNEXURE-N**.
- vi. OEM must have an authorized agent in India. The authorized agent must have experience of installation/upgradation/maintenance and integration of 2D/3D digital projection system in India during the last seven years (The experience of authorized agent with other OEMs in the past shall be considered).
- vii. The Bidder/manufacturer must have trained staff in service and maintenance of digital planetarium and dome projection systems in India. The service and support infrastructure for dome projection system available to be provided. Bidder/manufacturer must attach copy of certificates showing factory trained staff.

The bids shall be rejected on the basis of not fulfilling the above qualifying criteria (i to vii) and will not be considered for further evaluations of the bid.

viii. General Eligibility:

- a. Valid GST, EPF and ESI Registration of the participating firm/lead partnership firm in case of consortium/JV
- b. Valid PAN card and Agency must have filed IT returns for the last FIVE years
- c. Valid electrical License of the /firm/lead firm
- d. Bidder can be a registered company/Partnership Firm/Proprietorship Firm/LLP/Consortium etc.

Documents required: Bidders should submit the copy of GST, EPF and ESI registration, copy of PAN card, copy of the electrical license and a copy of company registration. In the case of Consortium/JV, a copy of the agreement is also required to be submitted.

- ix. **Bidder Existence Eligibility:** The bidding agency (the lead partner in case of consortium/JV) should be in existence for at least 5 years as on the date of publication of this tender.

Documents required: For establishing the existence of the agency which is participating in the bid, the bidder should submit a copy/copy of the work order(s) issued on the name of the agency (of the lead partner in case of consortium/JV) as well as copies of work completion certificate of the same work.

x. Turnover Eligibility:

The Average Annual Turnover of the Bidder for the best of three of the last five financial years (2019-20, 2020-21, 2021-22, 2022-23, 2023-24,) should be minimum INR 3.00 Crore. in case of consortium/JV the turnover of the lead partner should fulfill the requirement) for the best three of last five financial years (2019-20, 2020-21, 2021-22, 2022-23, and 2023-24) **should be minimum INR 3.00 Crore**

Note:

- (i) In case of bidder being Indian Chanel partner of OEM the turnover of the OEM shall be considered.
- (ii) In case of consortium/JV the turnover of the lead partner should fulfill the requirement.

Documents Required: Turnover of the bidder (of the lead partner in case of consortium/JV) and the duly certified document from CA clearly indicating the Turnover of the last five financial years (2019-20, 2020-21, 2021-22, 2022-23, 2023-24) as per **Annexure – H**.

- xi. Work Experience Eligibility: The Bidder should have completed the similar works during the last 7 years from the date of the issue of this tender as per the details given below. One similar work of value not less than 80% of estimated cost of the project.**

Or

Two similar works each of value not less than 50% of estimated cost of the project.

Or

Three similar works each of value not less than 40% of estimated cost of the project

Notes:

- Here the similar works shall mean SITC of 2D/3D digital dome projection system and 2D/3D digital planetarium systems for dome size of at least meter
 - In the case of Consortium/JV participating in this tender, the works of all the individual members of the Consortium/JV done independently will be considered as valid work experience.
 - If any bidder has executed the similar work as a part of a consortium/JV in the past then the work experience of the bidder shall be considered as valid only if all the consortium/JV partners are participating together in the present tender also.
 - The details of qualifying works/projects shall be furnished as per the proforma in **ANNEXURE-G** and if required, the bidder shall also facilitate inspection of the above qualifying project(s) by NSCD's officials to ascertain the performance of the system.
 - Documents Required: The bidder should submit a copy/copy of the work order(s) issued in the name of the agency as well as copies of work completion certificate of those works, clearly indicating the value of the work of similar nature. If the work order contains several works, only the value of the works of a similar nature shall be considered for work experience. If the value of the works of similar nature is not specifically mentioned in the cost breakup, the work experience against that work order will not be considered as valid.
 - The evaluation **shall be done as per the marking scheme given in clause 9(B).**
- xii.** NSCD may inspect any of those works at its discretion to verify the credentials of the bidder for the qualifying works/ projects indicated above for which the Bidder shall provide references (including Referee names and contact details) in respect of the projects implemented.
- The bidder should provide documentary proof to clearly substantiate each eligibility criteria, failing which the bid will be summarily rejected.**
- xiii.** Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:
- Made misleading or false representation in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
 - Record for poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.
- xiv. Proof of Concept (PoC)**
- The bidders shall be advised to present a project implementation scheme i.e. scheme for implementing the proposed system as per site requirements by way of suitable presentation. The details of the building/ hall for installing the required system is enclosed as per Annexure-F1.
 - The PoC should cover all aspects that are referred to in part 9 (i.e. technical presentation before the Technical Evaluation Committee) of clause 9(B).
 - Further requirement if any regarding the presentation shall be communicated in due course.

Note:

- **Bidders are required to submit documents to support their claim as per format in Annexure-A**
- **The bidders should be ready for the demonstration of Proof of Concept (PoC) on short notice, say 3 days from the communication from NSCD.**
- **Bidders should submit the PDF file of the PoC along with the technical bid.**
- **Uploading unnecessary documents may lead to disqualification of bidders.**

3. SCOPE OF CONTRACT

The successful bidder shall carry out and complete the works in every respect in accordance with this contract and in accordance with the directions of the designated officers and to the satisfaction of the NSCD. The designated officers may from time to-time issue further drawings and/or written instructions, detailed directions and explanations in regard to:

- a. The variation or modification of the design, quality or quantity of works for the addition or omissions or substitution of any work.
- b. Any discrepancy in the drawings or between the quantities and/or specifications etc.
- c. The removal from the site of any material brought therein by the successful e-tenderer and the substitution of any other materials therefrom.
- d. The removal and/or re-execution of any works executed by the successful bidder.
- e. The dismissal from the works of any persons employed thereupon.
- f. The opening up for the inspection of any work covered up.
- g. The amending and making good of any defects.
- h. Any / all defect(s) pointed out to the successful bidder by the competent representative of NSCD during such inspection shall be promptly rectified at the cost (including material cost) of the successful bidder to meet the desired quality, and specification as per requirement of NSCD failing which penal action shall be taken as deemed fit by NSCD. The decision of NSCD in this regard shall be final and binding on the successful bidder.
- i. The successful bidder shall comply with and duly execute any work comprising such instructions, detailed directions and explanations, provided that if the Engineer's instructions involve variations from the priced Schedule of Quantities, such instructions shall be issued by the Centre and the successful e-tenderer shall take appropriate action.
- j. **Successful bidder to provide everything necessary:** The successful bidder shall provide everything necessary for the proper execution of the Work or 2D immersive digital Dome projection system (18 mtr. diameter) on the existing 18 mtr. diameter Aluminium dome including all associated works, accessories according to the true intent and meaning of the design, drawings and specifications and bill of quantities taken together, whether the same may or may not be particularly shown on the drawings or described in the specifications or included in the bill of quantities, provided that the same is to be reasonably inferred therefrom and if the bidder finds any discrepancy in the drawings, or between the drawings and specifications and bill of quantities, the bidder shall immediately refer the same to the Engineer who shall decide which shall be followed. Figured dimensions shall be followed in reference to scale.

4. RATES

The rates quoted by the bidder shall include all incidental charges like packing, forwarding, freight, insurance, and delivery etc. as may be applicable to this tender for supply, installation, commissioning, testing of 2D immersive digital Dome projection system (18 mtr. diameter) on the existing 18 mtr. diameter Aluminum dome including repair and cleaning of existing dome, all associated works, accessories such as planetarium chairs, carpet etc. as per BoQ and training along with 3 years onsite comprehensive warranty and 4 years CAMC of the complete and integrated functional digital dome projection system at REGIONAL SCIENCE CITY, LUCKNOW, UTTAR PRADESH. The price should include the cost of minor electrical work, cove lighting in the dome theatre and providing training for the operation of the system to the representatives of NSCD & RSCL in detail.

Supply, prices shall be quoted in INR. The rates quoted by the Successful bidder shall be paid at net rates for SITC including the component of transportation and labour charges etc. Accepted E-tender rates shall not be changed due to changes in wages of labour either. The rates of Goods and Service Tax and other taxes/levies to be imposed on the quoted rates as the case may be shall be clearly mentioned in the offer form with proper break-up. No GST exemption (Form C/E/D) will be issued. Prices and rates quoted shall be firm and fixed for the entire period of execution of the order and no escalation of rates on any ground whatsoever shall be accepted.

5. QUANTITIES

All the quantities given in the schedule of quantities are provisional and indicative. Bidders may, prior to submitting their proposals, examine the requirements at their own expense and obtain and ascertain for themselves, at their own responsibility and other information necessary for preparing their proposals. The e-tenderers shall be deemed to have given Balanced Rates and quantities for each item with make model and specification. Also irrespective of variation in quantities to any extent the e-tenderer shall be paid at accepted contract rates only. NSCD reserves the right to increase or decrease quantities to any extent.

6. SCOPE OF WORK – As per the ANNEXURE-D of the tender.

7. RETENTION MONEY:

- i. Total 10% as per the following details:
 - i. **Performance guarantee:** 3% of tendered value (After adjusting 2.5% of tendered value as EMD deposited by the tenderer) to be deposited on award of work before signing of agreement through demand draft drawn on any Nationalised Bank/ Certified Cheque from a Nationalised Bank or insurance surety bond or fixed deposit receipt or bank guarantee or online transaction in the account of NSCD as per Annexure-K.
- Note:
1. EMD and Performance Guarantee (PG) deposited in other modes than online transfer, has to be drawn or duly pledged in favour of National Science Centre, Delhi.
 2. Security Deposit: 5% of the value of work done to be recovered from R.A. bills/ final bill.
- ii. The Retention Money so retained shall not carry any interest thereon.
 - iii. The date on which the entire project is complete with necessary training and handing over shall be treated as the “successful date of completion”. The 50% of Retention Money will be released to the agency after the completion of the project the balance 50% of the retention money shall be released after 3 years of warranty/ defect liability period (post successful date of completion) and on providing satisfactory completion certificate of services and handing over the equipment setup in original & proper working condition.
 - iv. If the agency has entered into CAMC for a period of the entire setup with NSCD for a period of 4 years post the Defects Liability Period of 3 years then 10% of the quoted annual CAMC charges is to be deposited by the agency as Retention Money and the same shall be refundable after satisfactory completion of the Comprehensive Annual Maintenance Contract period with NSCD/ client as detailed under TERMS OF PAYMENT.
 - v. In case of cancellation of the contract for the reasons attributable to the successful bidder, this retention money shall be forfeited and the amount necessary to make up this amount shall be recovered from any money due to the successful bidder under this or any other contract with NSCD.
 - vi. In case, the successful bidder causes any damage to the property of the Client, the NSCD shall have discretionary rights to execute the repair of damages and recover the amount from the successful bidder or to adjust the equivalent amount from the successful bidder’s Retention Money.
 - vii. In case of death of successful bidder, Security Deposit shall be returned /refunded to the legal heir of the successful bidder after adjustment of dues, if any, post the actual completion of the work & upon expiry of the specified guarantee/defects liability period as well as satisfactory completion of CAMC period of four years post the Defect Liability Period.

8. JOINT VENTURES/CONSORTIUM

- i. In the event that the successful bidder is a consortium/joint venture formed, lead partner/prime contractor in whose name the bid issued, shall be fully and solely responsible for the performance of contract and all works designed and executed under the contract.
- ii. Bids submitted by a consortium or joint venture of maximum two firms including lead partner, all partners shall comply with the following requirements:
 - a. The consortium as a whole must be a sound entity technically and the lead partner must be a sound entity financially.
 - b. The Consortium as a whole must satisfy the qualification criteria set forth herein. The turnover of the lead partner must satisfy the eligibility criteria of the tender. The bid shall contain a statement of the members of the consortium and shall provide all information necessary to satisfy Client/Employer that the Consortium fulfills the qualifying criteria.
 - c. The Bids shall contain original copy of the Memorandum of Understanding (MOU) on Rs.100 Non-Judicial Stamp paper (or as applicable) between the consortium members clearly identifying the lead partner, scope and responsibility and financial part of each member in the performance of the contract.
 - d. The consortium members will obtain approval of the Client for any change in the shareholding structure and scope of work or any other terms of MOU.
 - e. The lead partner of the consortium shall be nominated as being in-charge to represent the Consortium in all dealings with the Client/Employer and for providing any information or clarification sought from the Consortium.
 - f. The Bid shall be signed by all the consortium firms by their authorized person. The lead partner shall be authorized to incur liabilities and receive instructions for and on behalf of any and all member(s) of the Consortium and all dealings including billing and payments, shall be done exclusively with the leader of the consortium.
 - g. Only firms or joint ventures that have been qualified under this procedure will be eligible to bid for this project.
 - h. All members of the Consortium shall be liable for the execution of the project in accordance with the terms of the MOA and Contract agreement.
 - i. Any individual bidder or member of a consortium cannot be a member in another consortium and participate in this tender.
 - j. All correspondence or communications will be done by the Lead partner (or authorized representative of Lead partner) of the consortium.
 - k. Net worth as on the last day of the preceding financial year should be positive during the preceding three consecutive financial years.
 - l. Bidder submitting their bid shall not be under liquidation, court receivership or similar proceeding.

Notes:

1. Technical bids of the agencies that fulfill the above pre-qualification criteria shall be opened.
2. The bidder has to upload the compliance letter on its letterhead duly signed by the authorized signature & other supporting documents as asked for in the bid in scanned format. Failing to submit the same or non-compliance/deviation from any bid terms and conditions, eligibility criteria or technical specifications may result in rejection of the bid.

9. PROPOSAL EVALUATION / SELECTION CRITERIA

A three-stage procedure (two-bid system) based Selection Evaluation will be adopted in evaluating the proposals

1. **Eligibility Criteria Evaluation:** Any shortcoming of the documents will lead to rejection of the bid and other covers will not be opened.
2. **Technical Presentation Evaluation:** The agencies qualifying on the basis of their eligibility criteria will only be called for Thematic/Technical Presentations (may be arranged in online) which can be at a very short notice.
3. **Financial Evaluation:** Only the bidders/firms securing the minimum qualifying marks based on Eligibility Criteria Evaluation and Technical/Presentation Evaluation as described in details below will be eligible for their Financial Bid Opening & Financial Evaluation.

A. Technical Evaluation

- i) The Evaluation Committee appointed by the Centre shall carry out its evaluation applying the evaluation criteria specified in the bid document. Evaluation of the application would be done as per the submitted documents. Bidders/Agencies, who are in the trade and are fulfilling the pre-qualification criteria as per the documents required would only be called for thematic presentation, which can be at a very short notice of even five days.
- ii) Each responsive proposal shall be attributed a technical score. Based on the technical assessment, agencies securing minimum **75 marks out of 100 will be** shortlisted and the financial bids of only the shortlisted agencies will be opened. The date and time of opening of the financial bids will be intimated to the selected/ shortlisted agencies through CPP portal.

B. Technical Evaluation Marking Scheme

The technical bid will be evaluated on the basis of the indicated parameters in the table below:

Evaluation of bids found eligible as per pre-qualification criteria would be undertaken by Technical Evaluation Committee Constituted by the competent authority as per parameters cited below:

Sl. No.	Parameter	Criteria	Sub Marks	Total Marks 100	Marks Obtained
01.	Credentials of applicant/ agency: The bidder should have minimum 05 year experience preceding the proposal due date, in the similar work* (Total Max. marks- 10)	5 Years - 5 Marks	5	10	
		More than 5 years Add +1 mark as bonus for each extra year. Max. bonus marks - 5 marks	5		
02.	Financial Soundness: Firms / Companies should have average annual financial turnover of Rs. 300.00 lakhs during the last 5 financial years (AY 2023-24, 2022-23, 2021-22, 2020-21 and 2019-20) {of Lead Partner in case of consortium} <i>(Average of best three of five will be considered)</i> N.B - Exception may be considered only for AY 2021-22 (due to Pandemic) (Total Max. Marks- 10)	Turnover of Rs.300.00 lakhs to 350.00 lakhs – 5 marks	5	10	
		Turnover of Rs.350.00 lakhs to 400.00 lakhs – Bonus 2 marks	2		
		Turnover of Rs.400.00 lakhs to 500.00 lakhs – Bonus 2 marks	2		
		Turnover of more than 500.00 lakhs – Bonus 1 marks	1		

Sl. No.	Parameter	Criteria	Sub Marks	Total Marks 100	Marks Obtained
03.	Similar Work Experience (Total Max. Marks- 20)	One similar work of value not less than 80% of estimated cost of the project. OR	20	20	
		Two similar works each of value not less than 50% of estimated cost of the project. OR			
		Three similar works each of value not less than 40% of estimated cost of the project			
04.	Support from OEMs (The lead partner of JVs/ Consortium shall enclose the supporting documents based upon the certification in this respect from OEMs to establish the facts)	Planetarium/ Dome Projection – 3 marks	10	10	
		Projectors & accessories- 3 marks			
		Media Creation, image generator server and playback system including show control manager- 2 marks			
		Integrated Audio System- 2 marks			
05.	Technical presentation before the Technical Evaluation Committee (Total Max Marks- 50)	Technology adopted/ quality of proposed equipment – 20 marks	20	50	
		Show designing capability using Suitable software with available libraries - 10 marks	10		
		Offered films as specified keeping in mind the parameters Content relevance, release date, language, running time etc.- 10 marks	10		
		Concept design, clarity of thought, neatness in setup planning- 10 marks	10		

Note:

- Bidders who are awarded zero marks in any of the items from S. No. 1 to 5 will not be considered as technically qualified. Bidders must get 75% in the technical for getting eligible for opening the financial bid.
- The bidder will have to enclose a presentation on the concept note along with the technical proposal and a list of at least 5 nos. 4k format films for Dome Show in Hindi/English language. The presentation shall also cover the comprehensive details, approach & methodology, Organization structure, Work program, Implementation strategy, offered equipment list, technical brochures and specification sheet, timeline etc. Vendors are requested to mention the hyperlink (youtube/ other platform) with respect of offered films.
- All the criteria are to be substantiated with necessary valid documents wherever required.

C. Financial Evaluation

Financial Bid:

- i. The Financial Bids of the technically qualified bidders will be opened online through CPP Portal.
- ii. The lowest financial bid would be the best financial bid quoted exclusive of Custom duty and GST etc.
- iii. Only fixed price financial bids indicating total price for all the work/services specified in this bid document will be considered excluding Custom duty and GST etc. which are to be paid by the client.
- iv. Details of the taxes and duties leviable on the basic cost of the equipment of set up and services to be indicated clearly in the financial bid by the bidder however the same shall not be included in the final basic price.
- v. **Errors & Rectification:** Arithmetical errors will be rectified on the following basis: "If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail".

Note: Technical Bids will be evaluated on the basis of documents as detailed above & Presentations to be made by the eligible agencies before the constituted Technical Evaluation Committee. The date and time of the presentations (if organized) will be conveyed to the eligible agencies.

10. COMPLETION TIME: Time is the essence of the tender. The entire work of final system interfaces supply shall be completed in a time bound manner. The entire work shall be completed in **120 days (one hundred twenty days)** from the date of placement of Letter of Intent. The tenderer may please note that all the system interfaces shall have to be completed in the same time frame. Any extension required may only be granted by NSC, Delhi considering the situation and cause only.

11. DEFECT LIABILITY PERIOD, OPERATION AND COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT

- a. Defect Liability Period (DLP) shall be of THREE YEARS from the date of actual satisfactory completion & handling of the entire job as certified by the authorities of NSCD.
- b. The Comprehensive Annual Maintenance Contract (CAMC) will be of FOUR YEARS and will commence from the date of satisfactory completion of the Defect Liability Period.
- c. During the Defect Liability Period and Comprehensive Annual Maintenance Contract Period, the successful bidder within their quoted rates shall service & maintain the entire Digital Dome Projection System installation with all its control units & other accessories, rectify any or all the observe defects or any all the defects as pointed out to them within a reasonable time, as decided by the competent authorities of NSCD.
- d. Apart from the routine preventive maintenance, whenever the successful bidder is called for providing any kind of repairs/maintenance, they shall render all such services within a reasonable time, any number of times within the quoted rates and at no extra cost or expenses whether during the DLP or the CAMC period.
- e. A register of such visits during DLP & CAMC as well as a logbook of services rendered/ major works done shall be maintained wherein counter signatures of the authorized NSCD/ RSCL representative shall be obtained from time to time.
- f. A penalty in the form of deduction as fit by NSCD authority shall be applied and be deductible from the Retention Money / Security Deposit of the bidder/ money payable to the agency for any lapse in providing services, rectifying defects or in case of an inordinate delay in attending the faults/defects or responding to the service/breakdown calls and lapse in operations.

- g. If the successful bidder fails to rectify the defects within 48 hours of its reporting, such defects will be rectified by NSCD/RSCL by engaging departmental staff or outside agencies at their discretion, and the cost thereof, as decided by NSCD will be deducted from the Retention Money / Security Deposit of the successful bidder retained by NSCD money payable to the agency.
- h. The bidder may separately prepare & upload a detailed scope of CAMC with other terms & conditions on their letterhead, which will be mutually modifiable with the successful bidder during the execution of the work and the DLP.

In case of any requirement for replacement of any supplied spares by the bidder, NSCD shall not be responsible for re-export of the damaged components and that will be replaced by the successful bidder

12. TERMS OF PAYMENT:

Total Contract Payment shall be on progressive basis as per the breakup in the following table:

Sl.No.	On Completion of	Payment Admissible
1	On delivery of the entire materials/consignment and submission of bill of quantities	60% (Sixty percent) of the total sum of the items in INR on delivery of the entire materials/consignment and submission of bill of quantities
2	On successful completion of SITC of projectors, sound system, ups and other equipment etc. as per bill of quantities	30% (Thirty percent) of the total sum of the items in INR
3	On successful operational training and handing over the equipment to the authorized representative of NSCD/ RSCL and satisfactory running of the Digital Dome Projection System for a minimum period of 10(ten) consecutive days and on submission of a certificate issued by NSCD stating that installation of the ordered system has been done satisfactorily and also on submission of warranty certificate.	Balance 10% (Ten percent) of the total sum of the items in INR.
4	After completion of 3 years defect liability period the agency will be required to submit Security Deposit equivalent to 10% of the Annual CAMC charges quoted by them before start of the CAMC	Refund of 100% of Security Deposit/ Retention Money against CAMC will be made after successful completion of four years of CAMC.

Note:

All payments, as above, shall become payable within thirty days of submission of the respective invoices duly supported by documents such as completion certificate/ performance certificate etc. The payment shall be transferred to the bank account of the successful bidder through electronic transfer only, for which the bank details of the bidder has to be provided with each invoice.

Statutory deductions/recoveries viz. TDS, TDS GST, Labour Cess, etc. shall be made as per the relevant provisions from the payment due to the bidder from time to time.

13. FORECLOSURE OF THE CONTRACT

If at any time after acceptance of the tender or during the progress of work, the purpose or object for which the work is being done changes due to any supervening cause and as a result of which the work has to be abandoned or reduced in scope, the NSCD reserves the right to foreclose the agreement by giving one-month notice in writing to that effect to the agency stating the decision as well as the cause for such decision and the agency shall act accordingly in the matter. The agency shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works. The agency, however, shall be paid at contract rates, full amount for works executed at site.

14. OTHER TERMS AND CONDITIONS

- i. The successful Bidder shall submit within 7 (seven) days from the date of placement of the work order the duplicate copy of the work order duly signed with official stamp on all the pages as a token of their acceptance of the work order/LOI.
- ii. Non-Judicial Stamp Paper of appropriate value within 7 (seven) days from the date of placement of the work order.
- iii. In case the successful bidder refuses to accept the offer after finalisation or does not comply with sending of acceptance of the order within 07 (seven) days from the date of placement of the order as per the finalised and accepted terms & conditions, the order shall be cancelled forthwith and the EMD will be forfeited.
- iv. **Penalty Clause:** In case of non-completion of the entire work within the stipulated time, and the delay is not attributable to site requirements, Liquidated Damage (L.D.) @1% per week of the total cost of work awarded subject to a maximum of 10% of the gross value of work done or cost of work awarded, whichever is greater, shall be recovered from the bill of the successful bidder.
- v. The authorities of NSCD do not bind themselves to accept the lowest tender and reserves the right to accept or reject any or all tenders wholly or partially without assigning any reason whatsoever.
- vi. The quoted rate shall remain unchanged during the entire contract period. The successful bidder shall be liable for depositing all taxes, levies, cess, etc. on account of service rendered by it to concerned tax collection authorities from time to time as per extant rules and regulations on the matter.
- vii. The successful bidder shall maintain all statutory registers under the applicable laws. The bidder shall produce the same, on demand, to the concerned authority of this Office or any other authority under Law.
- viii. The Tax Deduction at Source (TDS) shall be affected, as and when applicable, as per the provisions of Income Tax Act, as amended from time to time and a certificate to this effect shall be provided to the bidder/contractor/supplier by this Office.
- ix. In case, the successful bidder fails to comply with any statutory/ taxation liability under appropriate law and as a result thereof this Office is put to any loss/ obligation, monetary or otherwise, this office (National Science Centre, Delhi) will be entitled to get itself reimbursed out of the outstanding bills or the Security Deposit of the Agency, to the extent of the loss or obligation in monetary terms.
- x. Bidders should provide the details of their local office, service centers in or near Lucknow for after sales service and maintenance of the entire system.
- xi. The successful bidder shall be required to depute a team of qualified and experienced personnel to coordinate, execute and supervise all the activities from commencement till completion and handing over the system. This team of personnel will also be required to monitor the progress and review in consultation with NSCD & RSCL officials on a regular basis.
- xii. Bidders should provide an escalation matrix of their company for this project. Names of all the persons, contact details along with their designation should be submitted.

xiii. Notwithstanding anything contained herein above, in case of any dispute, claim and/or legal action arising out of this contract, the same shall be subject to the jurisdiction of courts at Delhi only.

xiv. **Arbitration Clause:** All disputes and differences between the successful tenderer and the Centre of any kind, except quality of workmanship and materials, whatever arising out of or in connection with the order on the carrying out of the work (whether during the progress of the work or after their completion and whether before or after the determination, abandonment or breach of the terms and conditions of the order) shall be referred to the sole arbitration of a person nominated by the Director General, National Council of Science Museums, whose decision in this regard will be final and binding on both the successful Tenderer and the Centre.

The provisions of the Arbitration and Conciliation Act 1996 or any statutory modification of the rules made there under for the time being in force shall apply to arbitration's proceedings under this Clause.

xv. **FORCE MAJEURE**

Neither party shall bear responsibility for the complete or partial non-performance of any of its obligations (except for failure to pay any sum which has become due on account of receipt of goods under the provisions of the present contract), if the non-performance results from such Force Majeure circumstances as Flood, Fire, Earth Quake and other acts of God as well as War, Military operation, pandemics/ epidemics, natural calamities, blockade, Acts or Actions of State Authorities or any other circumstances beyond the parties control that have arisen after signing of the present contract. In such circumstances the time stipulated for the performance of an obligation under the present contract is extended correspondingly for the period of time of action of these circumstances and their consequences.

National Science Centre
(A Unit of National Council of Science Museums)
Pragati Maidan, Bhairon Road,
New Delhi - 110001

Tender No.: NSCD/18011/E-Tender – 33/ 2024 – 25

TECHNICAL (TECHNO-COMMERCIAL) BID

S. No.	Particulars	Details	Page No.
		(to be filled by the bidders)	
General Information			
1	Name and Full Address of the bidder with Tel. No, E-mail & Fax Number (s) and Contact person		
2	Name and Address of the lead partner of the consortium to whom the order will be placed. (Applicable only for the Consortium)		
3	Status of the bidder: - Company / Partnership Firm/ Proprietorship firm/Consortium – Please specify		
4	In case of Company – please enclose Memorandum and Articles of Association along with certificates of incorporation, if company is a public limited then the certificate for commencement of business also to be enclosed.	Submitted/ Not Submitted	
5	In case of Partnership Firm – please enclose Certificate of Registration under the Partnership Act, 1932, along with valid partnership deed.	Submitted/ Not Submitted	
6	In case of Proprietorship or Individual – please enclose a declaration on the letterhead	Submitted/ Not Submitted	
7	In case of Consortium – please enclose a Memorandum of Understanding (MOU) on Rs.100. Non-Judicial Stamp paper	Submitted/ Not Submitted	
8	Compliance of statutory laws i) Copy of PAN card ii) Copy of Registration Certificate under GST	Submitted/ Not Submitted	
9	i) Copy of ESI registration certificate, if applicable ii) Copy of EPF registration certificate, if applicable In case of non-applicability of EPF and / or ESI, the applicant shall submit a declaration to this effect. In case self-declaration is found to be false at any stage then the contract will be terminated and the firm will be debarred from future tenders for three years.	Submitted/ Not Submitted	
10	State the Name of the Banker including IFSC Code and Account Number of the Bidder to follow digital mode of payment.	Submitted/ Not Submitted	
11	Enclose the contact details (including name, mobile/ landline no. etc.) of the person of operational maintenance of the setup		

12	The bidding agency (the lead partner in case of consortium/JV) should be in existence for at least 5 years as on the date of publication of this E-Tender. Documents required: For establishing the existence of the agency which is participating in the bid, the bidder should submit a copy/copies of the work order(s) issued on the name of the agency (of the lead partner in case of consortium/JV) as well as copies of work completion certificate of the same work.(ANNEXURE – G)	Submitted/ Not Submitted	
13	The Average Annual Turnover of the Bidder (of the lead partner in case of consortium/JV) for the best of 3s of 5 financial years (2019-20, 2020-21, 2021-22, 2022-23, and 2023-24) should be minimum INR 3.00 crore. Documents Required: Turnover of the bidder (of the lead partner in case of consortium/JV) and the duly certified document from CA clearly indicating the Turnover of the last five financial years (2019-20, 2020-21, 2021-22, 2022-23, and 2023-24) (ANNEXURE – H)	Submitted/ Not Submitted	
14	The Bidder should have completed the similar works during the last 5 years from the date of the issue of this E-Tender as per the details given below. One similar work of value not less than 80% of the estimated cost of project OR Two similar works each of value not less than 50% of the estimated cost of project OR Three similar works each of value not less than 40% of the estimated cost of project (ANNEXURE-G)	Submitted/ Not Submitted	
15	Maintenance for Planetarium/ Digital Projection show (ANNEXURE-N)	Submitted/ Not Submitted	
16	Bidders should submit the PDF file of the Product Catalogue with the technical bid as per the checklist (ANNEXURE-M).	Submitted/ Not Submitted	
17	Name and details of the Manufacturer whose components are provided for the project (as per ANNEXURE-G1)	Submitted/ Not Submitted	
18	Documentary evidence like Work Order, Completion Certificate, Income Tax Return, Audited Report, and Financial Statement, Valid MSME/NSIC Registration Certificate etc. to support. Sl. No.-11 to 14 above.	Submitted/ Not Submitted	
19	Recommended seating arrangement for the theatre where the equipment(s) offered shall be housed (Submit detailed design and drawing of sitting layout)	Submitted/ Not Submitted	
20	Single point contact details for all post- installations service-related issues with hierarchy levels (if any)	Submitted/ Not Submitted	
21	Detailed address and set up link from where support for maintenance during post warranty shall be offered by the firm at Lucknow (Uttar Pradesh)	Submitted/ Not Submitted	
22	Shelf-life time of the Digital Immersive 2D projection system (i.e. the technical support as well as spare parts including consumables shall be available with the firm for atleast 7 years).	Submitted/ Not Submitted	

23	Details of enclosed EMD @ 2.5% of estimated amount is ₹300.00 lakh (Rupees Three Hundred Lakh only)	Online Transfer..... UTR No..... DD No dated drawn on bank.....	
24	Any other relevant information		

I/We hereby declare that the above statements are true. I/We also declare that the decision of the National Science Centre, Delhi regarding selection of eligible firms for opening of Financial Bid (Part-II) shall be final and binding on me/us.

Date:
Official Seal

Signature of the Tenderer /Constituted Attorney

National Science Centre
(A Unit of National Council of Science Museums)
Ministry of Culture, Govt. of India
Pragati Maidan, Bhairon Road, New Delhi - 700091

Tender No.: NSCD/18011/E-Tender – 33/ 2024 – 25

DECLARATION-I

We do hereby accept the “Scope of Work, General Terms & Conditions etc. as provided by the National Science Centre along with the Tender documents for the work of *SITC of 2D Digital Dome Projection System with Three Years Onsite Comprehensive Maintenance at Regional Science City, Lucknow* and also under take to execute the work within the stipulated time strictly as per the Scope of work and Technical Specifications of National Science Centre, Delhi, in the event of placement of any order on us. The NSCD shall be at liberty to cancel the order in full or part, in the event of failure of the above declaration made by us at our cost.

Signature of the tenderer
(With date and Official Seal)

Tender No.: NSCD/18011/E-Tender – 33/ 2024 – 25

(Following declaration to be provided by the Bidder on the Company letterhead)

DECLARATION-II

This is to certify that I/We have no close relative as an employee of the National Science Centre, Delhi (close relatives means: Father, Mother, Brother, Sister, Son, Daughter and Spouse) nor any such close relatives are associated with us as proprietor/partner/share holder/ director and like.

Signature of the tenderer / Constituted Attorney
(With date and Official Seal)

Date:

Place:

SCOPE OF WORK:**SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 2D DIGITAL DOME PROJECTION SYSTEM WITH THREE YEARS ONSITE COMPREHENSIVE MAINTENANCE FOR REGIONAL SCIENCE CITY, LUCKNOW as per the following details:**

The bidder is required to carry out the above project on turnkey basis for proper integration and operation of the complete system and provide solution commensurate with following:

The solution should be using five projectors, DLP and Laser Diode/Phosphor based technology with suitable edge blending software, 4K resolution or better, minimum 14000 ANSI lumens brightness, contrast ratio of 25000:1(dynamic) or better and minimum operational life of 20,000 hrs. or more.

1. **Design and development of the provided space:** The provided space as mentioned in ANNEXURE-L is a separate facility inside Regional Science City, Lucknow. Hence, the main concern of the civil/partition work is to develop the place keeping the aesthetic of the place intact. Installation of immersive projection system on the surface of Dome, sound system and show control management and other components related to space development falls under the scope of the bidder.
2. **Audio System:** A 5.1 surround audio system of Harman, BOSE, Sony, JBL or Yamaha brand shall be an integrated part of the overall system. It shall be fully controlled under the Show Control System as per table 1.6 and needs to be supplied and installed and it shall address the requirements of full dome projection environment to ensure maximum immersive experience. The system shall also provide public address system inside the theatre.
3. **LED Cove Light:** LED cove lighting and its integration with the show control system shall be in the scope. The cove light will have sufficient brightness without any dark zone in the Dome.
4. **Computing Server:** A high-performance media server, image generator and playback system which can create as well as play high resolution- 4K resolution, 2D dome shows smoothly without any jerk or time lapse. It should provide a user-friendly Graphical User Interface to control system configuration, content creation, distortion correction, access to a library of high-resolution astronomical imagery for incorporation into new shows.
5. **Show Control Manager:** The display environment should include an integrated Show Control System, capable of controlling all hardware, other equipment, including the display system, audio, media, cove, lighting system, exit and emergency exit signage lighting. The Show Control System should provide following features:
6. **Calibration and Alignment:** For Fulldome Projection System with multiple projectors, manual adjustments for calibration and alignment are not feasible and hence automatic features are required to maintain calibration and alignment.
7. **Supply of shows:** Selected bidder shall provide at least 8 free 4K 2D full dome planetarium as well as Astronomy Sky Show available in-house or from international producers like NASA/ ECO/ ESA etc. in Hindi and English.

Note: Necessary scripts and original sound track in digital format must be supplied. The duration of should be around 25-35 minutes duration.

8. **Network Infrastructure:** High-speed intranet/LAN connectivity among the headset for downloading, updating, and accessing Digital content. The LAN should be designed such that internet connectivity should be possible to provide from one single point. This may require online support from OEM, in case of maintenance mainly.

9. **Seating Arrangement:** SITC of the specially designed and manufactured planetarium shall be under the scope of the work. For this purpose, the bidder shall provide a drawing of seating arrangement and also provide planetarium chairs (240 Chairs + 5 Chairs) as per the specification and indication of chairs required for best possible experience of the planetarium. The required numbers of the chair and its specifications are given Annexure-F.
10. **Carpeting & Vinyl Flooring:** The scope of work also includes providing and laying of Vinyl and carpet in the planetarium theatre as per the specifications given in **Annexure-F**.
11. **Site modification and preparation of 2D Digital Dome Projection System:** Need based Analysis, Space Planning, Concept Design, Schematic Design, Detailed Design, Site Supervision, Set Up, Testing and Commissioning, Training, Audio Visual System Management, Illumination Management etc. shall all be under the scope of the work of the bidder.
- Dismantling of the existing Goto AstroVision projection system including the DogHouse. Re-construction of the DogHouse area and strengthening of the same using ISMB/ISMC section and casting with concrete to extend the seating area in this region.
 - Making cut-outs for the projector on the concrete peripheral wall (not on the aluminium dome). No load bearing area can be modified or damaged. The bidder may take approval from structural consultant before undertaking this work.
 - Special Mounting for projectors to be designed, fabricated and installed by the bidder. No major civil dismantling or modification will be allowed.
 - Repair of damaged parts of the Aluminium Dome screen, minor repair works of buckled or damaged panels and general cleaning of the dome shall be undertaken by the bidder. The civil work also include cleaning, repairing & touchup of damaged areas of existing dome to make surface of the dome ready for projection.
 - Dismantling of the existing Console area in order to accommodate new console with lesser foot-print.
 - Making good of all damages.
12. **Full dome planetarium/astronomy sky shows of 25 to 25 minutes duration in English and Hindi:** The selected bidder at least 8 free 2D 4K full dome Planetarium as well as Astronomy Sky Shows available in-house or from international producers like NASA/ ESO/ ESA etc. in English and Hindi.
13. **Maintenance and Support:** Regular maintenance schedules for all equipment and dedicated technical support to address any issues promptly and ensure uninterrupted operation **with down time less than 24 hours should be given under AMC.**
14. **Power Supply and Backup:** Entire system shall be provided with rugged, full proof industrial grade online suitable UPS with backup of minimum forty-minute duration including surge protection. The make and configuration of such a system will be finalized strictly as per the recommendation of the OEMs.
15. **Detailed Layout:** The bidder shall submit detailed layout design, capacity, load calculation, requirement of cooling of projectors, audio system, speakers etc. including area of placement of projectors, U.P.S system, Image Generators, servers, console etc. for providing air-conditioning system. However, A/C system shall not be in the scope of the bidder.
16. **System Runtime:** The system is to be designed with very high up-time commitment 24x7x365. The selected bidder shall maintain inventory of spares for the designated up-time commitment for on-site comprehensive warranty.

17. **User Training and documentation:** Two level of training are to be arranged – Basic training of two days for 5 executives and 10 days of technical training for 5-10 participants is required to be organized at **Lucknow Science Centre**. **Training material and complete installation manual in both hard and soft copies is to be provided (two sets of each).**

Training topic on “**FULLDOME PROJECTION SYSTEM**”

Sl. No.	Detailed Description
1.	Architecture of FULLDOME PROJECTION SYSTEM
2.	Hardware components of FULLDOME PROJECTION SYSTEM (Projectors, screen, controller, image servers, network elements, storage etc.)
3.	FULLDOME PROJECTION SYSTEM Administration: Hardware and Software Installation, Configuration, Trouble-shooting and Maintenance procedure including preventive maintenance.
4.	Alignment and Calibration with usage of instrument and tools
5.	Field replaceable components and applicable procedures for field replacement
6.	Special features of the show control software
7.	FAQs

18. **Preventive Maintenance:** Preventive maintenance shall be carried out by the bidder at regular intervals during the warranty period (3 years) and post warranty period of four years and a logbook to this effect shall be maintained at site. The bidder shall submit a preventive maintenance schedule in the tender.
19. If any measures shall be considered while designing for safety of people and equipment. The selected bidder shall remain responsible for closely monitoring the work at site to ensure that desired quality of work is executed.
20. **System Integration:** Integration of all subsystems as indicated above to configure the “Digital Dome Projection System” shall be the responsibility of the bidder. The bidders shall quote for charges for comprehensive annual maintenance of the installed facility for a period of four years post warranty period/ DLP of three years on year-to-year basis.

Note:

All electrical works and minor civil works relating to the installation of the system/show, fabrication/ installation of base steel structure for mounting of projector are to be taken up by the selected bidder, and all necessary materials, machines and any other machine tools required for the fabrication and installation are to be arranged by the selected bidder at their own cost. The selected bidder will provide design, drawings, details and complete specifications for electrical, sound system installation, steel structure for installation of projectors array as described earlier. Removal of existing planetarium chairs, SITC of new planetarium chairs, laying of Carpet, and Vinyl flooring inside the theatre shall also be the responsibility of the successful bidder.

All safety precautions and compliance of statutory obligations shall be taken care of by the selected bidder during execution of the entire project at site.

Client’s responsibilities:

- Providing accessibility and permission to work inside the existing Dome.
- Providing electrical power for execution of the work.
- Providing lockable space for storage of materials by the selected vendor.

Tender No.: NSCD/18011/E-Tender – 33/ 2024 – 25

REFERENCE PICTURES OF DIGITAL DOME PROJECTION SYSTEM



Dismantling of the existing Goto AstroVision projection system including the DogHouse

FORMAT FOR ARTICLES OF AGREEMENT

ARTICLES OF AGREEMENT made at

 (Place) this..... day of
 (Date) (Month & Year) between the

 National Science Centre, Delhi,
 hereinafter referred to as the NSC, DELHI which expression shall include its successors and assigns on the
 one part and

 (Name of the successful bidder)
 trading in the name and style of

 (Name and complete address of the successful bidder) hereinafter referred to as the Agency, which
 expression shall include his/their respective heirs, executors, administrators and assigns on the other part.
 WHEREAS the NSC, DELHI is desirous of getting the work of
 done and has caused (Name of the work) Notice
 Inviting E-tender (Including appendix), drawings, schedule of quantities and specifications describing the
 work and conditions of contract to be prepared
 by.....

AND WHEREAS the said NIT (including appendix) drawings as per list attached, specifications and the
 priced schedule of quantities and conditions of contract have been signed by or on behalf of the parties
 hereto. AND whereas the Successful bidder has deposited in Bank Draft/Pay Order/
 NEFT/RTGS..... (Exact amount in words) the amount
 being 10% of the ordered value of the e-tender) with National Science Centre, Delhi as Security Deposit for
 the due performance of this Agreement as provided in the said conditions.

NOW IT IS HEREBY AGREED AND DECLARED BY AND BETWEEN THE PARTIES HERETO AS
 FOLLOWS:

1. In consideration of the payments to be made to him as hereinafter provided the successful bidder shall upon and subject to the conditions herein contained execute and complete the work within 120 days from the date of issue of letter of intent/ Work Order (as defined in the scope of work **(ANNEXURE – D)** of the NIT and as per the said drawings and such further detailed drawings as may be furnished to him from time to time and described in the said specifications and the said priced schedule of quantities along with the progress of the building work.
2. National Science Centre, Delhi shall pay to the successful bidder such sum as shall become payable hereunder at the time and in the manner specified in the said conditions.
3. Time is the essence of this agreement and the successful bidder shall proceed with the work, throughout the stipulated period of this contract, strictly according to the CPM/PERT/BAR CHART attached herewith and forming a part of this agreement. At any stage during execution, if any work lags behind the target as indicated in the CPM/PERT/BAR CHART for reasons directly attributable to the successful bidder, he shall pay or allow National Science Centre, Delhi to deduct from any money due to him a liquidated damage as per Penalty Clause 14(iv) of the General Terms and Conditions of contract.
4. This agreement comprises the work above and all subsidiary works connected therewith, even though such works may not be shown on the drawings, or described in the said specifications or the priced Schedule of Quantities.

5. National Science Centre, Delhi reserves to itself the right of altering the drawings and of adding to or omitting any item of work or of having portions of the same carried out departmentally or otherwise and such alterations or variations shall not vitiate this agreement.
6. The General Terms and Conditions, Scope of Work (ANNEXURE – D), Bill of Quantities etc. that are part of the tender document for this work will form an integral part of this agreement.
7. All disputes and differences of any kind whatever, arising out of or in connection with the contract on the carrying out of works (Whether during the progress of the work or after their completion and whether before or after the determination, abandonment or breach of the 42 contract) shall be referred to arbitration as per Clause 14(xiv) of General Terms and Conditions of contract. In case of any legal dispute, other than the arbitration, the court of jurisdiction shall be at the place written in the first line of this agreement.

The provisions of the Arbitration & Reconciliation Act 1996 or any statutory modification or re-enactment thereof and of the rules made there under for the time being in force shall apply to arbitration proceedings under this clause. In witness whereof the parties have set, their respective hands the day, the year, and the place hereinabove written.

**SIGNED, STAMPED AND
 DELIVERED for Contractor
 WITH SEAL**

**SIGNED, STAMPED AND
 DELIVERED for NSC, Delhi
 WITH SEAL**

In presence of the following witnesses:

In presence of the following witnesses: (National Science Centre, Delhi)

Signature, Name & Address of Witnesses

Signature, Name & Address of Witnesses

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DETAILED TECHNICAL SPECIFICATIONS AND INDICATIVE BILL OF QUANTITIES**2D DIGITAL DOME PROJECTION SYSTEM**

Supply, Installation, Testing and Commissioning of 2D Digital Dome Projection system require following equipment/components/ essential accessories for successful completion include supply and installation of an array of projectors and allied systems with the requisite overlap and edge blending, is to be provided along with suitable geometry correction for the dome screen as specified, to provide a seamless display of at least **31 MP arranged in a cove projection configuration (after blending)** with the specifications. The projectors are to be mounted on a suitable structure. Selected bidder will fabricate and install the projector mounting structure at site as per the design, details, drawings and specifications provided by the bidder. Image Generator Server, projectors, Audio racks, 5.1 surround sound system, show control system, UPS etc. for the visitor area of 240-245 persons seating capacity with unidirectional seating arrangement and other necessary units and routing of the cables needed to connect all constituent components of the system. The bidder must visit the site before submission of tender

Specifications of the major component of Digital Dome Projection System

S.No.	Item Description	Preferred Make	Specification	Qty
1	Projection System	Christie/ Barco/ Panasonic	<p>Specifications: An array of 5 (five) projectors and allied systems with the requisite overlap and edge blending is to be provided along with suitable geometry correction for the screen of existing 18 meter diameter, 165 degrees dome to provide a seamless display.</p> <p>The resolution should be 31 MP or higher (after blending) and at least 6800 effective pixel over the meridian.</p> <p>The bidder will have to provide within the tender reply the calculations of such effective resolution. Calculations must be reliable and presented explicitly. The term "effective pixels" means that even if a pixel at some points in the dome is formed by more than one light beam from more than one projector, that pixel must be counted as one.</p> <p>The brightness of the projected image across the dome must be the same and be of at least 100 Lux when using 4K UHD resolution. The number of frames per second displayed must be of minimum 60 fps.</p> <p>The projection system must be connected to the main computer located in the server room.</p>	1 Set

			<p>Selected bidder will fabricate and install the projector mounting structure at site as per the design, details, drawings and specifications provided by the bidder.</p> <p>The bidder must visit the site before submission of tender and identify the most suitable place in the building for keeping the Image Generator Server, projectors, Audio racks, UPS and other necessary units and routing of the cables needed to connect all constituent components of the system.</p> <p>Projector: The projection system must consist of 5 digital projector. Each projector should have 3840 x 2400 pixels resolution using wobulated technology (4K UHD). The light source should be laser diode/ laser phosphor. The lifetime of the light source should be at least 20,000 hours.</p> <p>The projector should be DLP with Dynamic Contrast (on/off) of the projector must be at least 25000:1.</p> <p>The brightness of the projector must be at least 14,000 ANSI lumens</p> <p>If the projectors require additional cooling or air supply, it must be integrated with the installation.</p>	
2	Image Generator Server and Playback system with dome show software	Dell/HP	<p>Image Generator server/s complete with industrial grade component-</p> <p>A suitable solution shall be ensured to drive the required projector array with the specifications given below. Image Generator server shall drive at most two projector connected through fibre optic cables and planetarium shows to be displayed in real time onto digital immersive dome projection screen.</p> <p>Processor (CPU): CPU: Minimum of 12 cores, 24 threads, minimum 30MB Cache, 3.2GHz base frequency.</p> <p>Graphics card (GPU): Graphics card with at least 5880 CUDA Core, 1.9 GHz base frequency, 12 GB DDR6, 2.4 GHz boost frequency, ADA architecture.</p>	3 nodes+1 spare

			<p>Memory (RAM): 64 GB DDR5-2933 ECC SDRAM ECC or higher @ 4800MHz or more</p> <p>Storage: 2 x SSD having minimum 4TB size each</p> <p>Operating System: Licensed OS with all necessary drivers</p> <p>The system must be able to display images from various sources:</p> <ul style="list-style-type: none"> * From astronomy software, calculated in real time * From previously prepared shows, encoded in popular formats such as XVID-H.263, AVC-H.264, HEVC-H.265 <p>Other requirements:</p> <ul style="list-style-type: none"> * Should drive projector/s for dome show films and planetarium. * Should provide synchronization between images/videos projected onto the dome for a seamless image/ video without any tearing. * <i>Additional SSD and RAMs may be configured to meet the overall specifications, if necessary.</i> 	
3	Show Control System and Operator Console	HP/ Dell	<p>The display environment should include an integrated Show Control System, capable of controlling all hardware, other equipment, including the display system, audio, media, cove, lighting system, exit and emergency exit signage lighting. The Show Control System should provide following features:</p> <p>Detailed description:</p> <ol style="list-style-type: none"> 1. The entire dome projection system, including the video player, the astronomical simulation, the projectors, the audio, the lighting, must be controlled from the control station. The control of the above systems must be automated and programmable with the use of e.g. scripts. 2. The screen should have following: At least 2 monitors with Display size: minimum 22 inch (diagonal) Display Resolution: 1920X1080 or better. And a dimming hardware to control monitor brightness in dark environment. 3. The control master computer must meet at least the following parameters: <ol style="list-style-type: none"> a) CPU: Minimum of 12 cores, 24 threads, minimum 30MB Cache, 3.2GHz base frequency. b) 64 GB RAM DDR5 ECC or higher @ 4800MHz or more. c) Graphics card with at least 5880 	1 master and console set

			<p>CUDA Core, 1.9 GHz base frequency, 12 GB DDR6, 2.4 GHz boost frequency, ADA architecture</p> <p>d) 2 x SSD having minimum 4TB size each.</p> <p>e) Licensed OS</p> <p>f) Backlit keyboard and mouse</p> <p>4. It must be possible to conduct a full live presentations from the control station. As well as wirelessly from a mobile tablet or iPad. The range of the wireless connection should allow to move around the dome without losing control on the mobile device.</p> <p>5. The software installed on the tablet is to be identical to that installed on the Master computer. in particular, the software installed on the tablet must have the following functionalities:</p> <ul style="list-style-type: none"> - Provide an interactive view of the dome that allows the control of the observer's position, clicking on an object and taking actions from the displayed menu via the touch screen of the mobile device. - Provide access to any data installed or created on the Master computer - Support the drag & drop function to start displaying images and other multimedia. <p>The software running on the tablet and the Master computer must be synchronized, which means that a change made on one device is immediately visible on the other.</p> <p>6. Wireless gamepad that enables control the camera like in a flight simulations.</p>	
4	Calibration and Alignment		<p>For Fulldome Projection System with multiple projectors, manual adjustments for calibration and alignment are not feasible and hence automatic features are required to maintain calibration and alignment as per table below.</p> <p>Auto alignment and calibration</p> <p>Software, hardware and camera based mechanisms to be included in order to ensure error free edge blending / geometric correction on screen as well as to maintain uniform colour and contrast on projectors and dome screen.</p> <p>Auto alignment, auto edge blending and correction system shall be available in the system through GUI.</p>	1 Set

5	Fulldome Player and Simulation Software		<p>Latest version of the reputed OEM developed and maintained interactive planetarium and 2D playback software with perpetual license or open-source for playback of dome video shows and planetarium shows and may have facility to convert large format shows into dome shows so the shows developed by different developers around the world may be used.</p> <p>The following features are to observed:</p> <p>a.) Digital Dome Projection system should be driven by a fulldome simulation software with real time astronomy as main feature.</p> <p>b.) All images and databases supplied with the solution should be completely free of rights and can therefore be used to create shows as many times as desired. The databases should be able to be updated free of charge.</p> <p>c.) The software should be capable to display the sky from any location on Earth at any time a million years in the past or future. Also can go to any planet or astronomical location in the Solar System, Galaxy, or Universe and can orbit a planet, moon, asteroid, or any other object that user have modeled. It should be capable to get close to a planet or moon and can see a realistic image of its surface. These images are based on the latest data from probe missions, and should be updated when new images are released.</p> <p>d.) The fulldome simulation software should be able to move from wide view of 10^{27}m to 10^{-18}m anywhere in this universe continuously without any jerk.</p> <p>It should incorporate the following features:</p> <ul style="list-style-type: none"> • Night sky simulation • Solar system simulation • • Deep sky objects simulation • Milky way simulation • Earth science simulation • Fulldome video player • Slideshow player to allow the display of flat, fisheye or panoramic videos and Images with transition like a “PowerPoint” presentation. • User Friendly Graphical Interface • Wireless interface • All parameters of the system (simulation date, observer position and orientation, parameters of objects such as intensity, color, etc.) should be modifiable with a duration from an initial state to a target state • For time control, it should be possible to Instantaneous or progressive movement forward or backward in time. The time can be defined in Julian day or in GMT or in local date / time • Should be able to visualize massive 3D objects database. 	1 Set
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			<ul style="list-style-type: none"> • include labels to display names for any objects represented (Sun, Planets, Dwarf Planets, Satellites, Stars, Milky Way, Messier, etc.). <p>e.) Astronomical calculations expected:</p> <ul style="list-style-type: none"> • The simulation of the sky including the following celestial objects: Sun, planets, dwarf planets, natural and artificial satellites, asteroids, comets, stars depending on the date over an interval of + or - 100,000 years, the position and the orientation of the observer using the VSOP87 and SPICE calculations. • The calculation and correct representation of the apparent magnitude of stars, planets and natural satellites depending on the position of the observer and the date. • The proper movement of the stars. • Stellar parallax. • • The release of the moon • Real-time shadow projection: dark side of astronomical objects, shadow of a satellite on its planet, shadow of a planet on its rings, shadow of a planet on its satellites. The user should be able to remove the shadow from the dark side of the stars. • The possibility of modifying or not the astronomical parameters of a body: diurnal movement, annual movement at constant solar time, annual movement at constant sidereal time, precession movement, size of the body, speed of rotation, of revolution, resizing of the orbit. <p>g.) Features of the fulldome simulator to include at least the following:</p> <ul style="list-style-type: none"> • Realistic atmospheres based on algorithms accounting for the physical phenomena (like Rayleigh scattering and Mie scattering) for at least Earth and Mars. • Atmosphere model should simulate multiple scattering. The ground of the planet should also react according to atmosphere thickness. • The fulldome simulation software must allow a continuous view of planets from outer space up to several meters on the surface for at least for Earth, Mars, Moon, Venus, Mercury, Ceres Vesta, Pluto and Charon. Such representation must include known data for terrain and known data for ground imagery. Such visualisation should be possible at 60 frames per second especially during motion. • The fulldome simulation software must include the terrain simulation of Pluto and Charon based on New Horizon mission. It must be possible to load “on the fly” high resolution satellite imagery and high resolution relief files (Geotiff, JPEG2000 format, etc.) for a specific georeferenced area on at least Venus, Earth, Moon and Mars. Such images should be loaded on-line or off-line directly from the images generators hard drive. • It shall be possible to display rainbow at the 	
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			<p>surface of the planets, with proper position according to the observer position and orientation. The simulation should also allow to show primary and secondary rainbow as well as Alexander's band. On Earth it shall be possible to show Aurora (shown in 3D and therefore visible from the surface as from space continuously)</p> <ul style="list-style-type: none"> • On Earth, it shall be possible to visualize shooting stars with possibility to load these parameters from a meteor shower database. The database of shooting stars will concern at least the Leonids, the Perseids, the Orionids, Eta aquarids. The database can be updated by the user. • • The fulldome simulation software should represent lunar and solar eclipses. • Zodiacal Light and Gegenschein. Saturn's Rings Technology made up of endless particles of dirty ice. Realistic representation of the Sun view from Earth and Mars atmosphere and view from space. • • Asteroids representation: various 3D models of known asteroids, including at least Ryugu, Itokawa, Bennu. • Comets representation: 3D animated models of comets with automatic orientation of the comet's dust and plasma trails according to its position with respect to the Sun with at least 5 different 3D animated comets must be supplied: Bradfield, Hale-Bopp, Halley, Hyakutake and McNaught. • • The star database should contain more than 110,000 stars from the Hipparcos catalogue, • The Milky Way should be represented in different ways. From the inside, it will be represented by an image wrapped around the viewer. • The fulldome simulation software should include at least 9 Volumetric Deep Sky Objects represented in real time at their proper location. Desired requirement is: <ol style="list-style-type: none"> 1) Rotten Egg or Calabash Nebula (OH231) 2) Cat's Eye Nebula (NGC6543) 3) Bug Nebula (NGC6302) 4) Saturn Nebula (NGC7009) 5) Minkowski's Butterfly Nebula (M2-9) 6) Red Rectangle Nebula (HD44179) 7) Ant Nebula (Mz3) 8) Diffuse Nebula (SNR0509-067.5) 22) Helix Nebulae (NGC7293) • Advanced 3D models with reflexion of light on the objects, and with projection of shadow of elements composing the 3D Model. The catalog should include the following objects: <ol style="list-style-type: none"> 1) Block II GPS 2) Cassini • CloudSat 7) Galileo 8) Grace satellite 	
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			<p>10) Hubble telescope 13) Iridium 15) Juno 17) New Horizons 18) Pioneer 19) Rosetta 23) Sputnik 26) Voyager 28) Philae</p> <p>Those objects shall have a photo realistic representation including effect such as reflexions on the metallic and reflective parts.</p>	
6	Integrated Audio System	Harman/ D&B/ L- Acoustics/ Bose/ JBL/ AKG/ Yamaha	A 5.1 surround audio system of Harman, BOSE, Sony, JBL or Yamaha brand shall be an integrated part of the overall system. It shall be fully controlled under the Show Control System as per table below and needs to be supplied and installed and it shall address the requirements of Fulldome projection environment to ensure maximum immersive experience. The system shall also provide public address system inside the theatre.	1 Set
	6a.	3 speakers Left/Center Right	<p>a) Type: 3-way speaker b) Frequency response (± 3 dB): 50 Hz - 18 kHz c) Dispersion: $90^\circ \times 50^\circ(-30/+20^\circ$ up/down) d) Power: 460W passive e) Max SPL pressure: 134 dB, @ 1 m f) Crossover: Bi-amp (LF+MF/HF) or passive g) Sensitivity @ 1 m: 98 dB</p> <p>Nominal impedance: 4 ohms passive</p>	
	6b.	2 speakers for the surround channels	<p>a) Type: 2-way speaker b) Frequency response: (± 3 dB): 55Hz - 18 kHz c) Dispersion: $90^\circ \times 110^\circ$ d) Power: 260W e) Max SPL pressure: 125 dB, @ 1 m</p>	

			<p>f) Sensitivity @ 1 m: 92 dB</p> <p>Nominal impedance: 8 ohms</p>	
	6c.	1 Subwoofer	<p>a) Type: 1x18" subwoofer</p> <p>b) Frequency response (± 3 dB): 30 Hz - 500 kHz</p> <p>c) Power: 650W</p> <p>d) Max SPL pressure: 132 dB, @ 1 m</p> <p>e) Sensitivity @ 1 m: 95 dB</p> <p>Nominal impedance: 4 ohms</p>	
	6d.	Power Amplifiers	<p>a) The audio amplifiers shall allow to control and amplify each audio channel independently. Each channel shall deliver an output power at least equal with the power of the speaker connector to corresponding channel at given impedance</p> <p>b) Signal-to-noise ratio: > 103 dB (8 ohms, 1 kHz)</p> <p>c) Damping Factor: >200 (8 ohms, 10 Hz to 400 Hz)</p> <p>d) THD: <0.5%</p>	
	6e.	Audio processor	<p>a) DSP, EQ</p> <p>b) Built-in crossover, can convert up to 7.1 audio channels into passive, bi- or tri-amp.</p> <p>c) Speaker management</p> <p>d) Interactive graphical interface that provides the processor with a 1/3 octave graphic equalizer, LCD screen and volume button accessible on the front panel</p> <p>e) System fault detection</p> <p>f) Analog input connector to accept 8 channels of signals from external sources.</p> <p>g) 8-channel analog output</p>	

			<ul style="list-style-type: none"> h) Redundant output to directly distribute audio signals during a power outage. i) Microphone input with gain level adjustment j) LAN connection via RJ45 connector k) Frequency response 20 Hz -20K Hz, ref 1KHz +/-1dB l) THD + N <0.01%, 20 Hz - 20 kHz m) Dynamic range >102 dB 	
	6f.	Digital Audio Mixer	<ul style="list-style-type: none"> a) connection of a minimum of 20 inputs and 10 outputs. b) The adjustment of the parameters may be done by a min 5” touch screen display. It can also be operated from a distance through remote control application. c) Allow to adjust the sound level of each sound input separately (microphone or other). d) Patch panel with a minimum of 20 inputs and 10 outputs to be connected to the digital mixer through a single cable. e) Equipment connected to patch panel should be allowed to be patched in the digital mixer as audio input / outputs. 	
	6g.	2 wireless handheld microphones as well as the associated rack mountable receivers	<ul style="list-style-type: none"> a) Sensitivity 1.6 mV/Pa b) Sound Pressure Level 150 dB SPL c) Cardioid d) Signal-to-noise-to-noise ratio ≥ 110 dBA e) Total harmonic distortion (THD) $\leq 0.9\%$ 	
	6h.	2 wireless handheld headphones	<ul style="list-style-type: none"> a) Sensitivity 2.1 mV/Pa b) Sound Pressure Level 154 dB SPL 	

		as well as the associated rack mountable receivers	<p>c) Cardioid</p> <p>d) Signal-to-noise ratio ≥ 110 dBA</p> <p>e) Total harmonic distortion (THD) $\leq 0.9\%$</p>	
7	UPS system with isolation transformer and 40 min. backup	APC, Schneider, Numeric, Emerson or approved equivalent	<p>U.P.S system: Suitable minimum 20 KVA 3Ph-1Ph with Isolation transformer, True Sine wave IGBT based system with minimum 30 minutes backup time. Input isolation is needed with surge protection.</p> <p>a) Battery bank with suitable rack Please specify the number and brand of SMF batteries as suggested by OEM with detailed specifications. All batteries supplied must be from the same batch of production.</p>	1 Set
8	LED Cove Light (Cove lighting to be integrated with show control system)	Phillips/ Chroma cove or approved equivalent	<p>a) LED Cove Light: Beam Angle $120^\circ \times 120^\circ$, Lumens As per BIS norms, LED Channels Red / Green / Blue, Mixing Distance 2 in (51 mm) to uniform light, Lumen Maintenance $\geq 50,000$ hours L50 @ 50° C (full output)</p> <p>b) Step Lighting: The lighting effect should be created using a fibre optic rod that is end-illuminated with high intensity LEDs with 50,000 hour life expectancy. (The unit should flush with 6mm Carpet)</p> <p>c) Entry & Exit Ramps Lighting: LED wall light should provide 2.2lux at 1.9m distance when mounted approx. 300mm above floor. Seat Row Indicators: Seat row indicators should be installed to identify the location of seating rows, to provide illumination for guidance (e.g. by emergency exits) or to illuminate the floor for safe movement in the theater when the main lighting is dimmed.</p>	As per the site requirement
9	Equipment & UPS Rack/ table and suitable chair for show operator		<p>(i) Supply, installation, testing and Commissioning of suitable rack/ table for keeping the equipment in the control room space</p> <p>(ii) UPS battery bank rack etc. in the control room space</p> <p>(iii) Suitable chair for show operator</p>	As per the site requirement
10	Cables & Connectors		<p>Supply and laying of all necessary power cable and connector of ISI approved reputed brand.</p> <p>Supply and laying of all necessary signal/control cable and connector of ISI approved reputed brand.</p> <p>Supply and laying of all necessary Audio cable and connector of ISI approved reputed brand.</p>	1 Job

11	Miscellaneous		Supply and fixing of all Electrical and Signal accessories concealed in suitable conduit(No open wire should be visible)	1 Job
12	Warranty		The entire setup including the aluminium dome, projector/s, server/s, ups, audio system, lighting etc. shall have warranty of three years from the date of acceptance certificate by NSCD.	1 Job
13	Onsite Comprehensive AMC		The comprehensive AMC shall be for a period of four years , after expiry of the warranty period of three years.	1 Job
14	Brochures & Engineering drawings		The brochures, documents and engineering drawings have to be provided along with the technical bid. The bidders have to respond within stipulated time for additional information/clarifications sought afterwards, if any.	1 Set
15	User Training and Documentation		<p>Basic training of two days for 5 executives and 10 days of technical training for 5 participants is required to be organized at RSCL.</p> <p>Training material and complete installation manual in both hard and soft copies is to be provided (two sets of each).</p> <p>The faculty providing training should be certified from parent company (OEM) or technical and experienced persons from system integrator.</p> <p>The training provided shall include Architecture, Hardware components, Administration (Hardware and Software Installation, Configuration, Troubleshooting and Maintenance procedure including preventative maintenance), Alignment and Calibration with usage of instrument and tools, Field replaceable components and applicable procedures for field replacement, Special features of the show control software etc.</p>	1 Set
16	Seating Arrangement		<p>Reclining Chair</p> <p>Tip-up and back push reclined chair</p> <ul style="list-style-type: none"> - Centre to Centre 21”. - ABS moulded housing for seat & back cushions - All sheet metal parts with powder coated - Arm rest in Polyurethane injection moulded. - Seat numbering on inner both the side of the chair stands with silicon fluorescent thin stickers. - Row number for seat along the aisles. - Provision for LED lights on sides along with aisles with the row and the seat number display. - For Noise Reduction Nylon components on moving parts. - Angle of tilt of the chairs shall be adjusted as per the location of the seat for easy and optimal viewing of the shows. 	240 Chairs + 5 Chairs

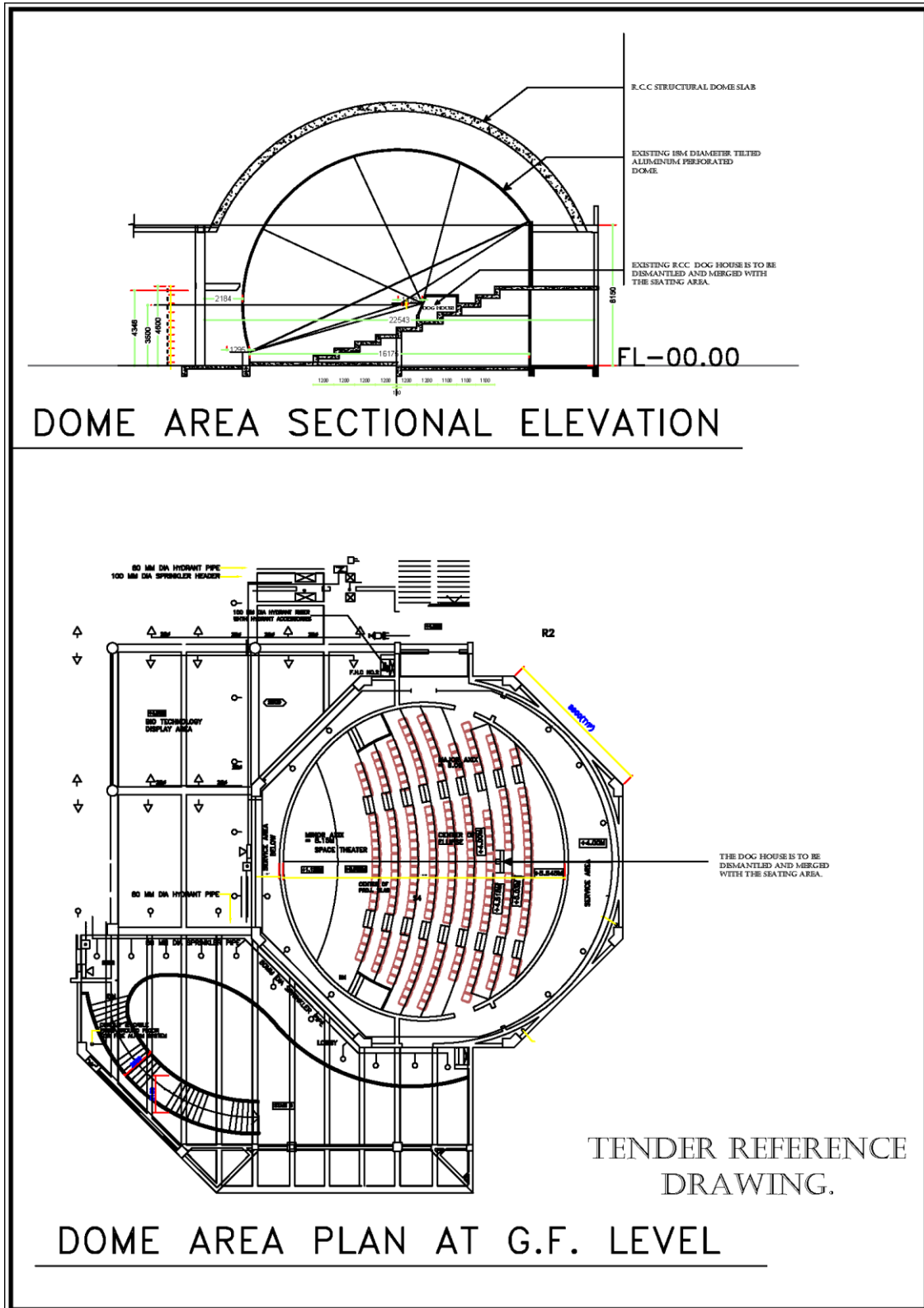
			<p>Frames 15 mm thick high-pressure steam pressed hard ply wood for seat and the back, out of which the back is of 12 mm bent ply.</p> <p>Fabric Colour to be approved by NSCD authorities. All fabric to be used shall be fire retardant. Test certificates should be submitted.</p> <p>Spring Spring for tip-up and back push mechanism shall be torsion spring with spring steel IS:4454-1 (2001) grade III.</p> <p>Sheet-metal component</p> <ul style="list-style-type: none"> - DRCA/CRCA Sheet metal IS:1079 1994 - Side stand 3mm (+/- 0.2 mm) thick, size: 415 mm(+/- 5 mm) x 345 mm (+/- 5 mm) both side bottom circular cutting with 140 mm radius. - 75mm x 25mm 16g 190 mm length tubular pipe form the leg welded to the 3 mm plate. - Flat for base of the stands 280 mm (+/- 2 mm) length 50 mm (+/- 2 mm) x 5 mm (+/- 0.2 mm). - Mechanism components 2 mm HRCA Back push box 180 mm(+/-2 mm) x 70 mm (+/-2 mm) & height of the box 15 mm (+/-2 mm), ear “L” bracket attached to be box 190 mm (+/-2 mm) x 135 mm (+/- 2 mm). With two slot holes for fixing the back. Tip-up box 180 mm (+/-2mm) x 70 mm (+/-2mm) & height of the box 15mm (+/- 2mm), ear “L” bracket attached to the box 35 mm (+/-2mm) x 125 mm (+/-2mm). With two slots holes to fix the seat. <p>Seat and Back cushion housing ABS moulded vacuum forming out of 2 mm sheet</p>	
17	Vinyl Flooring			
18	Carpet Flooring		<ul style="list-style-type: none"> ● Supply & laying of Nylon loop pile carpet over an under layer of 6 mm thick kini foam in 2D Digital Dome Projection at RSC, Lucknow as per following specifications: ● Specifications construction: 1/10” or 1/8” Tufted Cut & Loop pattern, Fiber: 100% Solution Dyed Nylon, 2-Ply Headset., Pile weight: can 1085g/sq.m (32oz/y2), Pile height: ca 6.5mm (+/-3%), total height: ca 8.5mm (+/-3%), total height: ca 8.5mm (+/-3%), Density: 4500, Primary Backing: PP woven cloth, Secondary Backing: Action Bac ● Standard Roll size: 3.66m x 30m 	As per the requirement

			<ul style="list-style-type: none"> ● Performance: Stain Resistance: 10 (AATCC-175-2003), 3M Scotch guard Treatment, Static Control: Build in Permanent, Tuft ● Bind 6.51bs (ASTM-D-1335), Dimensional stability: Max 0.2% change (AACHEN), Flammability Radiant Panel 0.12W/cm2 (ASTM-E-648), US Federal Flammability Std: Passed (GB20286 – 2006/Cfl-S1-T0), (ASTM-D-2859-96), Smoke density: Max 450 (ASTM-E-662-06), Colorfastness: to light 5 (AATCC-16E), to wet & dry cleaning 5 (AATCC-1654), to ozone: 5 (AATCC-129), Indoor Air Quality: CRI Green Label Plus No. GLP1350. ● Supply & fixing of 2” x 0.5” x 3mm Aluminum color anodized stair nosing of approved quality. 	
19	Site Modification		<ul style="list-style-type: none"> ● Site modification and preparation of existing Full Dome Space Theatre for installation of new equipment: Need based Analysis, Space Planning, Concept Design, Schematic Design, Detailed Design, Site Supervision, Set Up, Testing and Commissioning, Training, Audio Visual System Management, Illumination Management etc. shall all be under the scope of the work of the bidder. <ul style="list-style-type: none"> ○ Dismantling of the existing Goto AstroVision projection system including the DogHouse. Reconstruction of the DogHouse area and strengthening of the same using ISMB/ISMC section and casting with concrete to extend the seating area in this region. ○ Making cut-outs for the projector on the concrete peripheral wall (not on the aluminium dome). No load bearing area can be modified or damaged. The bidder may take approval from structural consultant before undertaking this work. ○ Special Mounting for projectors to be designed, fabricated and installed by the bidder. No major civil dismantling or modification will be allowed. 	1 Job on lumpsum basis as per the requirement

			<ul style="list-style-type: none">○ Repair of damaged parts of the Aluminium Dome screen, minor repair works of buckled or damaged panels and general cleaning of the dome shall be undertaken by the bidder.○ Dismantling of the existing Console area in order to accommodate new console with lesser foot-print.● Making good of all damages	
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Tender No.: NSCD/18011/E-Tender – 33/ 2024 – 25

2D DIGITAL DOME SPACE DRAWINGS



Link for the AutoCAD of the above: <https://nscd.gov.in/Dome%20Lucknow%2003-03-2025.dwg>

Tender No.: NSCD/18011/E-Tender – 33/ 2024 – 25

Experience in Supply, Installation, Testing and Commissioning of New/2D Digital Dome Projection System with Three Years Onsite Comprehensive Maintenance for Regional Science City, Lucknow

Agency Experience (Limited Company/ Corporation/ Agency/ Consortium/ JV Projects)

S.No.	Name of the Project	Cost of the Order executed in INR	Name of the Client	Phone of Contact Person of Client	Starting Date of Project	Completion Date of Project	Details/ Scope of Work

(Signature of Authorized Signatory)

Tender No.: NSCD/18011/E-Tender – 33/ 2024 – 25

FORMAT OF ALL MAJOR EQUIPMENT AND ACCESSORIES SUPPLIED FOR THE TENDER

Supply, Installation, Testing and Commissioning of 2D Digital Dome Projection System with Three Years Onsite Comprehensive Maintenance for Regional Science City, Lucknow							
Sl.No.	Offered equipment	Make & Model	Specification	Understood the scope of work for the installation and commissioning of the entire setup (Yes/No)	Project timeline (if not submitted)	System integration/ flowchart of execution of work	
Equipment							
Free 4k Format Films offered for Planetarium & Dome Film Shows							
S.No.	Film Title	Format	Release Date	Running Time	Language		
					English	Hindi	Both

Signature of Bidder/ Constituted Attorney

**FORMAT FOR ANNUAL TURNOVER AS PER THE AUDITED ACCOUNTS
TOWARDS THE QUALIFYING EXPERIENCE (Best Three of five will be considered)**

Sl. No.	Financial Year	Turnover in INR
01.	2023-2024	
02.	2022-2023	
03.	2021-2022	
04.	2020-2021	
05.	2019-2020	

(In case of Consortium, the Turnover of only lead partner needs to be mentioned)

(Signature of Authorised Signatory)

This is to certify that the above information has been examined by us on the basis of relevant documents; books of accounts & other relevant information and the information submitted above is as per record and as per details annexed.

Signature, Address, Seal & Membership No of Chartered Accountant.

(Signature of Authorized Signatory)

Tender No.: NSCD/18011/E-Tender – 33/ 2024 – 25

FINANCIAL BID FORMAT

Rate NOT to be quoted here. To be quoted ONLY in excel sheet at CPP Portal

Tendering Authority: National Science Centre, Delhi							
Name of the Work: SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 2D DIGITAL DOME PROJECTION SYSTEM WITH THREE YEARS ONSITE COMPREHENSIVE MAINTENANCE FOR REGIONAL SCIENCE CITY, LUCKNOW							
Name of the Bidder/bidding firm:							
Contact No.:							
PRICE SCHEDULE (This is just a format for the BOQ template and must not be filled here. The actual BOQ is available in Excel Sheet on CPP portal. Only the relevant columns of the BOQ available at CPP portal should be filled. No other format is accepted.)							
Sl. No.	Item Description	Qty.	Basic Rate in fig.	GST %	Total Amt. without GST	Total Amt. with GST	Total Amount in word
	Supply, Installation, Testing and Commissioning of 2D Digital Dome Projection System including all the accessories and other associated works with 03 years Onsite Comprehensive Maintenance for Regional Science City, Lucknow as per the Scope of work given in Annexure-D and Technical Specifications as per Annexure-F						
1.01	SITC of 2D Digital Dome Projection System along with THREE years onsite comprehensive warranty including all the accessories and other associated works with 03 years Onsite Comprehensive Maintenance for Regional Science City, Lucknow as per the Scope of work given in Annexure D and Technical Specifications as per Annexure-F	1 Job					
1.02	1st year of Comprehensive Annual Maintenance of entire facility Post 03 years warranty/ DLP. Order for CAMC will be given separately by NSC, Delhi. (Payment to be made in half yearly post successful service)	1 Job					

1.03	2nd year of Comprehensive Annual Maintenance of entire facility Post 03 years warranty/ DLP. Order for CAMC will be given separately by NSC, Delhi. (Payment to be made in half yearly post successful service)	1 Job					
1.04	3rd year of Comprehensive Annual Maintenance of entire facility Post 03 years warranty/ DLP. Order for CAMC will be given separately by NSC, Delhi. (Payment to be made in half yearly post successful service)	1 Job					
1.05	4th year of Comprehensive Annual Maintenance of entire facility Post 03 years warranty/ DLP. Order for CAMC will be given separately by NSC, Delhi. (Payment to be made in half yearly post successful service)	1 Job					
	Quoted Rate in Figures						
	Quoted Rate in Words						

Tender No.: NSCD/18011/E-Tender – 33/ 2024 – 25**COST BREAKUP SHEET**

Original cost break up sheet to be provided separately which should be filled and uploaded as cover II of Financial Bid

Name of the Bidder/bidding firm:

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Price Schedule							
Sl. No.	Item Description	Qty.	Basic Rate in fig.	GST%	Total Amt. without GST	Total Amt. with GST	Total Amount in word
1	SITC of Projector/s with necessary mounting brackets, cabling, casing etc.	1 Set					
2	SITC of Image Generator & Playback server	3 nodes + 1 Spare					
3	SITC of Automatic Calibration and alignment system	1 Set					
4	SITC of Show Control System and operator console	1 master and console set					
5	SITC of Interactive planetarium/projection and dome configurator and playback software	1 Set					
5	SITC of Integrated 5.1 surround sound system with all mounting brackets, cabling, wiring etc.	1 Job					
7	SITC of UPS system as per the required specifications	1 Job					
8	SITC of LED Cove light, staircase lighting, step lights, exit and emergency exit signage etc.	1 Job					
9	SITC of Chairs as per the specifications and quantity given in Annexure-F	1 Job					

10	Providing and laying of Vinyl flooring and carpet as per the specifications and quantity given in Annexure-F	1 Job					
11	Training on Digital planetarium and projection system	1 Set					
12	Interior related civil works such as wooden partition, flooring etc. along with the visual design, without disturbing the existing theme.	1 Job					
13	Any other expenses not mentioned above. In case the bidder thinks it's not necessary they may put zero for this column. If bidder puts some amount here, they need to specify the type of expenditure as per ANNEXURE M	1 Set					
14	Three years mandatory comprehensive warranty for the entire Digital Dome Projection System at RSC, Lucknow from the date of commissioning and handover of the system.	1 Job					
Total							

Total amount in the currency INR of all the items taken together- Excluding GST (to be entered by bidder)	Rs.
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Important Note:

The bidder shall along with ANNEXURE-J submit in their letterhead a detailed list of deliverables along with cost break-up of each item, break-up of taxes considered while arriving at the gross value of each item.

S. No.	Description of item	Base rate (INR)	Quantity	Total amount	Details of taxes included with clear break-up of each tax considered	Any other cost with details	Total

1. The bidders may note that while arriving at the total cost, NSCD shall consider the total cost of initial installation and subsequent cost of maintenance for a period of five years to decide on the lowest bidder. However, the same is not binding and the authorities reserve the right to decide the mode of deciding the lowest bidder.
2. The bidders shall consider the prevailing tax rates while quoting the rates. However, in the event of any changes in the statutory taxes and duties, the rates applicable at the time of payment shall be made by NSCD against submission of supporting documentary evidence.
3. The total cost provided in the cost breakup sheet should exactly match with the total cost quoted in the financial bid.
4. In case there is discrepancy in the cost breakup sheet and the cost quoted in the financial bid, the cost quoted in the financial bid will prevail.

BANK DETAILS OF NATIONAL SCIENCE CENTRE, DELHI

Name of the Account Holder	NATIONAL SCIENCE CENTRE, DELHI
Account No.	2417101004100
Bank Name	CANARA BANK
Branch Name and Address	6, Bhagwan Das Road, New Delhi
IFSC Code	CNRB0002417
MICR Code	110015045
Type of Account Saving Account	Saving Account
Branch Code	2417
GST No. of NSC, DELHI	07AAAAN2541C1Z5

Tender No.: NSCD/18011/E-Tender – 33/ 2024 – 25

DECLARATION-III

We do hereby declare that we have quoted the rate for all the items in the cost break up sheet of ANNEXURE- J and the total rate including GST quoted in the cost break up sheet is same as the rate quoted in item Rate BoQ of excel sheet (ANNEXURE- I).

Signature of the Bidder / Constituted Attorney

Tender No.: NSCD/18011/E-Tender – 33/ 2024 – 25**PRODUCT CATALOGUE CHECKLIST**

Any minor Civil/Electrical related work at site for installation of system shall be under the Scope of work of the bidder.

Details of each requirements to be provided as per the below format:

S. No	Details of Information Required	Qty.	Details	Page No.
			(To be filled by Bidder)	
i.	Details of Civil and electrical work for the projectors and servers enclosures to be taken up by the bidder.	1 Set	Submitted/ Not Submitted	
ii.	Details of Projector/ Projector Array with special mountings. This set should contain number of projectors proposed, its make, complete specifications, its weight, dimensions, details about lenses, heat load, noise generated etc.	1 Set	Submitted/ Not Submitted	
iii.	Image Generator Server, Interactive planetarium software and playback system details including specifications and product catalogues. Software for conversion of large format shows into dome and digital library and software for playback and creation of planetarium shows.	1 set	Submitted/ Not Submitted	
iv.	Display management, calibration and alignment system details	1 Set	Submitted/ Not Submitted	
v.	Show control System details	1 Set	Submitted/ Not Submitted	
vi.	Networking and data cabling schematic layout	1 Set	Submitted/ Not Submitted	
vii.	5.1 surround sound system details including product catalogues, location of speakers etc.	1 Set	Submitted/ Not Submitted	
viii.	LED cove lighting, exit and emergency exit signage and LED step lighting with all associated electrical wiring works	1 Set	Submitted/ Not Submitted	
ix.	Complete details of U.P.S with 30 minutes back up including technical catalogues/ brochures	1 Set	Submitted/ Not Submitted	
x.	Indicative list of documents/manuals/drawings that shall be provided to NSCD while handing over. Suggested training scheme, topics may also be included in this set.	1 Set	Submitted/ Not Submitted	
xi.	Timeline/ Gantt Chart for execution of the entire work from the date of placement of order indicating therein parallel activities and critical path to establish completion of the entire work within the stipulated time schedule	1 Set	Submitted/ Not Submitted	

xii.	List and quantity of each spare that shall be provided by the bidder initially to fulfill onsite comprehensive warranty of three years. This shall also include quantity of spare light source with housing that will be supplied along with the projector/ projectors initially. All the tools, tackles, gadgets, devices that shall be required for measuring, operation, maintenance, testing etc. shall be included in this list and shall form part of the initial supply.	1 Set	Submitted/ Not Submitted	
xiii.	List of films that are offered along with the project	1 Set	Submitted/ Not Submitted	

(Part of: Technical Bid)

**MAINTENANCE EXPERIENCE OF PLANETARIUM/ DIGITAL DOME PROJECTION
SYSTEM**

(To be issued by client of the Agency)

This is certified that M/s ----- (Name of the Agency) is/ had providing/ provided maintenance support to the Digital Dome Projection system installed at ----- (Organization/ Planetarium name) in a dome size of ----- (meters) since/ from ----- (date) to -----(date). The performance of the M/s ----- (Name of firm/ agency) during the contract period has been found to be -----.

Signature of Authorized Signatory with seal

Declaration on Registration as MSME

DECLARATION ON REGISTRATION AS MSME

(Following declaration to be provided by the Bidder on the Company letterhead)

This is to certify that our Company (Name of the Company) located at (Address of the Company) has registered as MSME. The details of registration are provided below:

Sl. No.	Particulars	Details
1	Vendor Code (allotted by BEL)	
2	Name of the Vendor / Company	
3	Date of incorporation	
4	Udyog Aadhaar Number	
5	GST Number	
6	PAN Number	
7	Type of Enterprise	Micro / Small / Medium
8	Major Activity	
9	Type of Organization	Proprietary / Hindu Undivided Family / Partnership / Co-operative / Private Limited Company / Public Limited Company / Self Help Group / Limited Liability Partnership / Society / Trust / Non-MSME (not a MSME)
10	Have your investment in plant and machinery crossed the prescribed limits of MSME Act	Yes / No Value (for MSME only):
11	Copy of Udyog Aadhaar	Yes / No (for MSME only):
12	Annual ceiling amount upto which they can take contract under MSME	
13	Value of orders already at hand as on date of application	

I / we undertake to keep the National Science Centre, Delhi informed if at any point in future, we cease to become MSME vendor or change in category as per the extant rules and such disclosures is entirely our responsibility. Until then, the company does not hold NSCD as responsible for any issues related to MSME

Date:

Signature of Authorized
Person with Company Seal

Bid Securing Declaration Form
(To be submitted on Agency's Letter Head)

Date -----

Tender No.-----

To

National Science Centre
 Near gate No. 4, Pragati Maidan
 Bhairon Marg, New Delhi – 110001

I/We. The undersigned, declare that:

I/We undersigned that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of one year from date of notification if I am/We are in a breach of any obligation under the bid conditions, because I/We

- a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or
- b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i)fail or refuse to execute the contract, if required, or (ii) fail or refuse to furnish the performance Security, in accordance with the instructions to bidders.

I/We undersigned this Bid Securing Declaration shall cease to be valid if I am/ we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my /our Bid.

Signed :

(insert signature of person whose name and capacity are shown)

In the capacity of

(insert legal capacity of person signing the Bid Securing Declaration)

Name:

(insert complete name of person signing the Bid Securing Declaration)

Duly authorized to sign the bid for and on behalf of (insert complete name of Bidder)

Dated on-----day of ----- (insert date of signing)

Corporate Seal (where appropriate)

(Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid)

**TENDER ACCEPTANCE LETTER
(To be given on Company Letter Head)**

[Department User may ask for Tender Acceptance Letter instead of asking Signed Tender Document from the Bidders. This is a sample format; User may revise it as per their Tender Conditions]

Date:

To,

Acceptance of Terms & Conditions of Tender.

Tender Reference No:

Name of Work:

Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned ‘ Tender/Work’ from the web site(s) namely:

as per your advertisement, given in the above mentioned website(s).

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc .), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/ organization too has also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.
5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking.
6. I / We certify that all information furnished by our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours faithfully,

(Signature of the tenderer/ bidder)

With company seal/rubber stamp