



Ministry of Culture
Government of India



E-TENDER

FOR

SUPPLY, INSTALLATION, INTEGRATION, TESTING AND

COMMISSIONING

OF

8 METER DIGITAL PLANETARIUM PROJECTION SYSTEM

ALONG WITH PERFORATED ALUMINIUM DOME WITH

NECESSARY INFRASTRUCTURE

AT

SCIENCE LEARNING AND CREATIVITY CENTRE,

SHIMLA, HIMACHAL PRADESH

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**NATIONAL COUNCIL OF SCIENCE MUSEUMS
(MINISTRY OF CULTURE, GOVT OF INDIA)**

Disclaimer & Disclosures:

Bidders shall be deemed to have full knowledge of the requirements of the work. National Council of Science Museums (NCSM) will not accept any responsibility or liability for any errors, omissions, inaccuracies or errors of judgment with respect to information or materials provided by NCSM in this tender document or otherwise, with respect to this Project. Although such information and materials are to the best of NCSM's belief, however, their verification is the sole responsibility of Bidder.

NCSM has prepared this document to give background information on the captioned project to the interested bidders/agencies/contractors. While NCSM has taken due care in the preparation of the information contained herein and believe it to be accurate, neither NCSM nor any of its authorities or agencies nor any of their respective officers, employees, agents or advisors give any warranty or make any representations, express or implied as to the completeness or accuracy of the information contained in this document or any information which may be provided in association with it.

The information is not intended to be exhaustive. Interested agencies/contractors are required to make their own inquiries and respondents will be required to confirm in writing that they have done so and they do not rely only on the information provided by NCSM in submitting the tender. The information is provided on the basis that it is non-binding on NCSM or any of its authorities or agencies or any of their respective officers, employees, agents or advisors.

NCSM reserves the right not to proceed with the project or to change the configuration of the Project, to alter the time table 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 NCSM, whatsoever, shall arise from this document unless & until a formal contract is signed and executed by duly authorized officers of NCSM and the bidder in due course after the invitation of tenders.

NCSM may modify any / all of the terms of this tender documents giving due notification through the NCSM's website (www.ncsm.gov.in).

The preparation of Bidder's proposal will be made without obligation by NCSM to acquire any of the items included in the Bidder's product, or to 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 COUNCIL OF SCIENCE MUSEUMS

Tender No. I-18012/7/23(257)

NOTICE INVITING e - TENDER

Name of the work: Supply, Installation, Integration, Testing and Commissioning of 8-meter diameter Digital Planetarium (including hardware, software, content and all accessories) along with perforated dome as per the specifications laid out at Annexure - F

On-line Digitally signed e-tenders are invited in two bid System from competent Company/Firm/Agency, who satisfy the eligibility criteria enumerated in the Tender Documents for above said work for proposed Planetarium at **Village Shoghi, Anandpur, Shimla, Himachal Pradesh**. Vendors having proven experience and capability of executing the order may download the tender documents from the Central Public Procurement Portal (CPPP): <http://eprocure.gov.in/eprocure/app> as per the following schedule:

SCHEDULE			
Sl. No.	Process	Date	Time
1.	Bid Document Published Date	November 14, 2023	At 2.00 PM
2.	Bid Document Download & Bid Clarification Start Date	November 14, 2023	From 2.00 PM
3.	Pre-Bid meeting Date	November 22, 2023	At 12.00 PM
4.	Bid Submission Start Date	November 24, 2023	From 03.00 PM
5.	Bid Clarification End Date	November 21, 2023	Upto 12.00 PM
6.	Bid Document Download End Date	December 04, 2023	At 12.00 PM
7.	Bid Submission End Date	December 04, 2023	At 12.00 PM
8.	Technical (Techno-Commercial) Bid Opening	December 05, 2023	At 12.00 PM
9.	Intimation regarding technically qualified vendors	<i>To be notified later</i>	----
10.	Date of Technical Presentation (Qualified Vendors only)	<i>To be notified later</i>	----
11.	Financial Bid Opening Date (Technically Qualified Vendors only)	<i>To be notified later</i>	----
12.	Estimated Cost of Project	₹250 Lakhs	
13.	EMD	₹6,25,000/-	
Pre Bid Meeting Details (To be conducted online through video conferencing.)			
Date & Time: 22 nd November, 2023 at 12.00 PM			
Link for Video Conferencing: -			
https://meet.google.com/ctc-rajp-etr			
It is requested to connect through the above link for participation in the Pre-Bid meeting.			
Bid Clarification:			
Clarification, if any, may be addressed to the Curator, NSCD at nscd.vijav@gmail.com .			

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 at 100 dpi with a black and white option which helps in reducing the size of the scanned document.
5. **The validity of Bids: The Bids should remain valid for six months from the date of opening of the financial bid.**
6. **Rejection of Bids:** Canvassing by the Bidder(s) in any form, unsolicited letter and post-tender correction may invoke summarily rejection of their bid(s). Conditional tenders will also be rejected. Noncompliance of applicable General Information and Instructions will disqualify the Bid.
7. The Bidders should have a Digital Signature Certificate (DSC) for filling up the Bids. The person signing the tender documents should be authorized for submitting the online e-tender.
8. The Bidders shall fill up the Prescribed Format for submission of **Technical (Techno-commercial) 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.
9. The Financial Bid shall be filled in and signed by the authorized signatory online as per Format “**Annexure-I” available at Central Public Procurement Portal** e-tender system website <http://eprocure.gov.in/eprocure/app>. **Offline Financial Bid shall not be accepted.**
10. Tenders must be uploaded in two separate covers marked **Cover-1** (Technical Bid) and **Cover-2** (Financial Bid/BOQ and Cost breakup). The contents of Cover-1 and Cover-2 shall be as follows:-

Cover-1

- i. “Technical (Techno-Commercial) Bid” (as per **Annexure-A** format) duly filled in and digitally signed with an official stamp.
- ii. All relevant documents related to “Technical (Techno-commercial) Bid” as per “**Annexure-A**”.
- iii. The Technical Brochures of each equipment with technical explanation for every feature of the product offered by the bidders.
- iv. The scanned copy of “Scope of Work NIT, Specifications, Bill of Quantities, Terms & Conditions etc. 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 and Registration as MSME declaration Form (Annexure-B, C & D)/EMD details
- vi. Experience certificates of the relevant works done during the last 5 years supported by appropriate credentials
- vii. Scanned Copy of ITR filed acknowledgement issued by Income Tax Department for last 3 years.

Cover-2

- 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 Break-up” 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 NCSM 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.

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 submit 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>

A. REGISTRATION

- i. 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.
- ii. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- iii. 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.
- iv. 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.
- v. 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.
- vi. 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.

B. SEARCHING FOR TENDER DOCUMENTS

- i. 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.
- ii. 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 ‘MyTenders’ 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.
- iii. 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.

C. PREPARATION OF BIDS

- i. Bidders should take into account the original e-NIT/RFP and any subsequent corrigendum published on the tender document before submitting their bids.
- ii. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers 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.
- iii. 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 a black and white option which helps in reducing the size of the scanned document.

- iv. 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 the “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.

A. SUBMISSION OF BIDS

- i. Bidders should log-into 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.
- ii. The bidders have to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- iii. A standard Price Schedule format (BOQ) 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 blue coloured (unprotected) cells with their respective financial quotes and other details (such as the 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 file is found to be modified by the bidders, the bid will be rejected. In addition to the above, the **Cost Break-up** shall be submitted in tabular format duly digitally signed with an official stamp.
- iv. The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- v. 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 the 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.
- vi. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- vii. 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.
- viii. 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 meetings.

B. ASSISTANCE TO BIDDERS

- i. Any enquiries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority.
- ii. 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 18002337315.

NATIONAL COUNCIL OF SCIENCE MUSEUMS
33 Block GN, Sector-V, Bidhanagar
Kolkata 700091

Tender No. I-18012/7/23(257)

GENERAL TERMS AND CONDITIONS

GENERAL TERMS AND CONDITIONS FOR SUBMISSION of Supply, Installation, Integration, Testing and commissioning of 8-meter diameter Digital Planetarium (including hardware, software, content and all accessories) along with perforated dome at the proposed Planetarium at Village Shoghi, Anandpur, Shimla, Himachal Pradesh.

1. INTRODUCTION

National Council of Science Museums, Ministry of Culture, Government of India invites offers/ bids from reputed and experienced agencies in the field of setting up of Digital Planetarium hardware & software packages especially in public/ private museums for undertaking the work as per the tender at the upcoming Planetarium at Village Shoghi, Anandpur, Shimla, Himachal Pradesh.

2. ELIGIBILITY CRITERIA:

- i. Limited Company/Corporation/Agency/Consortium/JV etc. are allowed to bid for the work.
- ii. The bidder should have the experience of setting up a 2D digital dome projections system. The authorization letters from the OEMs of different equipment of the setup should be furnished with all the details by the bidder.
- iii. **General Eligibility:**
 - Valid GST, EPF and ESI Registration of the participating firm/lead partnership firm in case of consortium/JV
 - Valid PAN card and Agency must have filed IT returns for the last **FIVE** years
 - Valid electrical License of the /firm/lead firm
 - 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.

- iv. **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/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.

- v. **Turnover Eligibility:** The Average Annual Turnover of the Bidder (of the lead partner in case of consortium/JV) for the best three of last five financial years (2018-19, 2019-20, 2020-21, 2021-22 and 2022-23) should be minimum INR **5.00** 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 (2018-19, 2019-20, 2020-21, 2021-22, 2022-23) as per Annexure – E

- vi. **Work Experience Eligibility: The Bidder should have completed the similar works during the last 5 years from the date of the issue of this tender (only in India) 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 concept, design, supply, installation, testing & commissioning of Digital dome 2D immersive planetarium systems.
 - 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 NCSM's officials to ascertain the performance of the system.
 - Documents Required: The bidder should submit a copy/copies 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 7(B).**
- vii. NCSM 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.
- viii. 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.
- ix. **Proof of Concept (PoC)**
- A. 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.
 - B. The PoC should cover all aspects that are referred to in part 7(i.e. Technical presentation before the Technical Evaluation Committee) of clause 7(B).
 - C. 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 NCSM.**
- **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 NCSM. 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. 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.
- i. **Successful bidder to provide everything necessary**
The successful bidder shall provide everything necessary for the proper execution of the works 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.
- j. **RATES**

The rates quoted by the Successful bidder shall be paid at net rates. They should include in their rates allowance for increase or decrease in the prices due to market fluctuation. Bidders shall not be entitled to any separate amount on account of GST, other taxes, Labour Cess, duties etc. which are in force or will be enforced or enhanced by Government or local bodies during the contract period or after e-tendering. Accepted e-tender rates shall not be changed due to changes in wages of labour either.

k. 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. NCSM reserves the right to increase or decrease quantities to any extent.

4. SCOPE OF WORK:

This is a tender document for 2D digital planetarium system of 4K native resolution for projecting 2D digital dome film shows and digital planetarium shows to be screened at proposed Planetarium at Village Shoghi, Anandpur, Shimla, Himachal Pradesh.

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 a single projector, DLP and Laser Phosphor/ RGB Laser based technology with suitable fish eye lens, 4K native resolution or better, minimum 10700 ANSI lumens brightness, contrast ratio of 10000:1(dynamic) or better and minimum operational life of 20,000 hrs or more.

- 1) Special mountings and casing for the projector and all required alignments for final adjustments etc. shall remain within the scope. Video transmission shall be through fiber optics.
- 2) Edge blending and geometric correction for seamless display and accurate mapping to 8 mtr dome screen shall be available in the system.

- 3) Supply and installation of standard aluminum projection dome, 8 mtr diameter screen including all associated structures and including cost of scaffolding, mounting/hanging arrangements, labor etc., shall be in the scope of work.
- 4) A high performance media creation, image generator and playback system which can create as well as play high resolution- native 4K resolution, 2D dome shows and 2D planetarium 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) A 5.1 surround audio system suitable for 8 meter dome theater complete with amplifier, mixer and high quality speakers etc. shall be in the scope of work. The audio system will have an integrated public address system inside the theater for making announcements and for conducting live shows with necessary wiring & cabling work. Entire audio system will also be integrated with the iPad based show control system. Provision for one handheld and one collar mike may be considered for the purpose.
- 6) 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.
- 7) Touch panel based show control system shall be in the scope of work which will be located in a nearby room close to the theater with wireless iPad for operation and control of the show. The system should be manageable from the single control unit including audio, cove lighting, and projection system.
- 8) Soundproofing and acoustic treatment of the dome theater including ceiling & walls of the theater building, acoustic/insulation jacket for Dome Screen shall be under the scope of the work.
- 9) Entire system shall be provided with rugged, foolproof industrial grade online 3 phase UPS with backup of minimum thirty-minute duration including surge protection. The make and configuration of such a system will be finalized strictly as per the recommendation of the OEMs and the successful bidder will be responsible for any damage caused to the system due to power surges or any power related breakdowns during warranty/extended warranty.
- 10) 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.
- 11) 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.
- 12) All safety 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.
- 13) Preventive maintenance shall be carried out by the bidder at regular intervals during the warranty period (3 years) and post warranty period of two years and a logbook to this effect shall be maintained at site. The bidder shall submit a preventive maintenance schedule in the tender.
- 14) If any disparity in terms of projector intensity, color, alignment or otherwise is noticed and reported during the warranty period, immediate redressal of the issue through repair or replacement without any cost shall be taken up by the successful bidder.
- 15) Integration of all subsystems as indicated above to configure the “Digital Planetarium Projection system” shall be the responsibility of the bidder.
- 16) The bidders shall quote for charges for comprehensive annual maintenance of the installed facility for a period of two years post warranty period/DLP of three years on year to year basis.
- 17) The bidders shall also quote for annual charges for operation of the installed facility during warranty period of three years and post warranty period of two years on year to year basis. Tentative operational hours for the visitors shall be from 9:00 a.m. to 7:00 p.m. The timing may vary during the peak season and the show shall remain operational throughout the year. Deployment of at least two manpower may be considered for this purpose.
- 18) The bidder shall provide a drawing of seating arrangement indication of chairs required for best possible experience of the planetarium.

Note:

All civil and electrical works relating to the installation of the system/show, acoustic paneling, fabrication/installation of base steel structure for mounting of projectors array 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 acoustic treatment/dome structure /paneling and steel structure for installation of projectors array as described earlier.

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 electrical power for execution of the work.
- Providing lockable space for storage of materials by the selected vendor.

5. RETENTION MONEY:

Total : 10% as per the following details.

- i. a) **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 NCSM as per Annexure-H.
Note: 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.
- b) **Security Deposit:** 7% 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 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 NCSM for a period of 2 years post the Defects Liability Period of 3 years then balance 50% of the Retention Money shall be refundable after satisfactory completion of the Comprehensive Annual Maintenance Contract period with NCSM as detailed under TERMS OF PAYMENT else balance 50% of Retention Money shall be refundable to the agency after 3 years of warranty/ defect liability period.
- 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 NCSM.
- vi. In case, the successful bidder causes any damage to the property of the Client, the NCSM 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 two years post the Defect Liability Period.

6. 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.

7. PROPOSAL EVALUATION / SELECTION CRITERIA

A three-stage evaluation procedure will be adopted in evaluating the proposals.

- i. Eligibility Criteria Evaluation: Any shortcoming in the documents will lead to rejection of the bid and other envelopes will not be opened. The Centre reserves the right to seek any clarification in case of any ambiguity.
- ii. Thematic/Technical Presentation Evaluation: The agencies qualifying on the basis of eligibility criteria will only be called for Thematic /Technical Presentations which can be at a very short notice. A minimum of 3 days notice shall be given by the Centre.
- iii. Financial Evaluation: Only the bidders/firms securing the minimum 70 out of 100 marks will only be shortlisted and financial bids of these 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.

A. Technical Evaluation

The Evaluation Committee appointed by the competent authority shall carry out its evaluation applying the evaluation criteria specified in the bid document. Evaluation of the application would be done as per the documents submitted. Bidders/agencies who are in the trade and are fulfilling the eligibility criteria as per the documents required would only be called for presentation about the proposed system, which can be at a very short notice of even three days.

B. Technical Evaluation Marking Scheme

The Technical Bids will be evaluated on the basis of the indicated parameters in the table below:

Evaluation of bids found eligible as per eligibility criteria would be undertaken by the Technical Evaluation Committee Constituted by the competent authority as per parameters cited below.

Sl. No.	Parameter	Criteria	Max. Marks 100	Qualifying Marks, wherever applicable
1	Experience of applicant/agency in the tendered work	5 Years – 5 Marks	10	5
		More than 5 years upto 10 years - Bonus 3 Marks		
		More than 10 years Bonus 2 Marks Maximum Marks - 10 marks		
2	Financial Soundness (average annual turnover [of Lead Partner in case of consortium] during best three of the last five years (2018-19, 2019-20, 2020-21, 2021-2022, 2022-2023))	i. For average annual turnover above Rs.5.00 Crore -5 marks	10	5
		ii. For average turnover in excess of Rs. 5.00 Crore @ 1 mark per Rs. 1.00 Crore each Maximum Marks - 10 marks		

3	Similar Work Experience	<p>One similar work of value not less than 80% of estimated cost of the project. Note : 01 Mark for each additional similar project.</p> <p>Or</p> <p>Two similar works each of value not less than 50% of estimated cost of the project. Note : 01 Mark for each additional similar project.</p> <p>Or</p> <p>Three similar works each of value not less than 40% of estimated cost of the project Note : 01 Mark for each additional similar project.</p>	15	10
4	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)	<ul style="list-style-type: none"> ● Planetarium Dome -3 marks ● Projector/s & accessories- 3 marks ● Media Creation, Image Generator Server and Playback System including Show control system- 2 marks ● Integrated Audio System-2 marks <p>Maximum Marks – 10 marks</p>	10	6
5	Operation and Maintenance experience for 2D/ 3D dome shows during the last five years (2018-19, 2019-20, 2020-21, 2021-2022, 2022-2023)	<ul style="list-style-type: none"> ● Minimum 2 projects- 5 Marks ● 1 mark for each additional similar project <p>Maximum Marks - 10 Marks</p>	10	5
6	Upscaling of system for future readiness	<ul style="list-style-type: none"> ● Conversion to 3D planetarium system- 3 Marks ● Hardware setup for 6k or 8k ready- 2 Mark <p>Maximum Marks - 5 Marks</p>	5	
7	Technical presentation before the Technical Evaluation Committee	a. Design of dome 2D theatre and planetarium as per scope of work and technical specifications given in the tender document. It is preferable that vendor should do site visit for proposing accurate design	40	NA

		considering site condition.- 10 Marks		
		b. Technology adopted / quality of proposed equipment- 5 Marks		
		c. Acoustic treatment of the entire theatre including top surface of AI dome, inner surface of civil structure above AI dome, inner walls of the theatre to achieve best quality noise free audio – 5 Marks		
		d. Show designing capability using Stellarium software or equivalent with available libraries– 10 Marks		
		e. Offered films as specified keeping in mind the parameters Content relevance, release date, language, running time etc. – 5 marks		
		f. Concept design, clarity of thought, neatness in setup planning-5 marks Maximum Marks – 40 marks		

NOTE: The bidder will have to enclose a presentation on the concept note along with the technical proposal and a list of at least 2 nos. free 4k format films (at least 1 nos. on ‘Astronomy’ and others on science related infotainment topics), 3 nos. free 3k format films (at least 1 nos. on ‘Astronomy’ and others on science related infotainment topics) for Planetarium as well as dome Shows in English/ Hindi 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 as per parameter 7(e) above.

C. Financial Evaluation

Financial Bid:

- a) The Financial Bids of the technically qualified bidders will be opened online through CPP Portal.
- b) The lowest financial bid would be the best financial bid.
- c) Only fixed price financial bids indicating total price for all the work/services specified in this bid document will be considered.
- d) 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.
- e) 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 Committee. The date and time of the presentations will be conveyed to the eligible agencies.

8. COMPLETION TIME

The project / work is to be completed within a maximum of **12 Months** from the date of issuance of the work order/LOI or opening of letter of credit whichever is later.

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

- i. Defect Liability Period (DLP) shall be of THREE YEARS from the date of actual satisfactory completion & handing over of the entire job as certified by the authorities of NCSM/SSCP.
- ii. The Comprehensive Annual Maintenance Contract (CAMC) will be of TWO YEARS and will commence from the date of satisfactory completion of the Defect Liability Period.
- iii. During the Defect Liability Period and the Comprehensive Annual Maintenance Contract Period, the successful bidder within their quoted rates shall service & maintain the entire Digital Planetarium system installation with all its control units & other accessories, rectify any or all the observe defects or any or all the defects as pointed out to them within a reasonable time, as decided by the competent authority of NCSM/SSCP.
- iv. During the DLP (defect liability period) as well as the CAMC period, the successful bidder may be asked to perform the operation of the entire show as per the timings decided and finalised by SSCP authorities. The authorities of SSCP may change the frequency and the timing of the show as and when required.
- v. 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.
- vi. A register of such visits during DLP & CAMCP as well as a logbook of services rendered/ major works done shall be maintained wherein counter signatures of the authorised NCSM/SSCP representative shall be obtained from time to time.
- vii. A penalty in the form of deduction as deemed fit by NCSM/SSCP 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.
- viii. If the successful bidder fails to rectify the defects within 48 hours of its reporting, such defects will be rectified by NCSM/SSCP by engaging departmental staff or outside Agencies at their discretion, and the cost thereof, as decided by NCSM will be deducted from the Retention Money / Security Deposit of the successful bidder retained by NCSM/ money payable to the agency.
- ix. 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.

10. 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 satisfactory supply of equipment	50% of the value of the equipment based on the challan/proof of value submitted
2	On completion of total work as per BOQ	Balance amount of the tender
3	After completion of 3 years defect liability period and successful operation	Refund of 50% of Security Deposit
4	After completion of 2 years of CAMC and successful operation	Refund of balance 50% of Security Deposit

Note: An irrevocable and confirmed Letter of Credit shall be opened for 100% value of the imported items quoted in foreign currency immediately upon receipt of the order confirmation. The mode of payment shall be as mentioned above: -

In case if the work is carried out in phases, total payment admissible will be computed on a pro-rata basis based on completed percent of work vis-à-vis total work under consideration.

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.

11. 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 NCSM 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.

12. 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 NCSM 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 effected, 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 Council of Science Museums) 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 centres in or near Shimla 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 NCSM & SSCP 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 Council 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 Council.

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 COUNCIL OF SC SCIENCE MUSEUMS
33 Block GN, Sector-V, Bidhannagar
Kolkata-700091

Tender No. I-18012/7/23(257)
TECHNICAL (TECHNO-COMMERCIAL) BID

Sl.No.	Details	Details	Page Nos.
(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	Copy of valid electrical License of the /firm/lead firm Submitted/	Submitted/ Not Submitted	
11	State the Name of the Banker including IFSC Code and Account Number of the Bidder to follow digital mode of payment.	Submitted/ Not Submitted	
12	Enclose the contact details (including name, mobile/ landline no. etc.) of the person of operational maintenance of the setup		

Technical Eligibility Criteria			
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 eTender. 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 last three financial years (2018-19, 2019-20, 2020-21, 2021-22, 2022-23) should be minimum INR 5.00 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 (2018-19, 2019-20, 2020-21, 2021-22, 2022-23) (Annexure – E)	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 eTender 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	Operation and Maintenance for planetarium show(Annexure-G)	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-12 to 14 above.	Submitted/ Not Submitted	
19	Declaration of Registration as MSME (Annexure – D)	Submitted/ Not Submitted	
20	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	
21	Single point contact details for all post- installations service related issues with hierarchy levels (if any)	Submitted/ Not Submitted	
22	Detailed address and set up link from where support for maintenance during post warranty shall be offered by the firm at Shimla (Himachal Pradesh)	Submitted/ Not Submitted	
23	Shelf-life time of the Digital immersive 2D projection system (i.e. up to which period technical support as well as spare parts including consumables shall be available with the firm).	Submitted/ Not Submitted	

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 COUNCIL OF SCIENCE MUSEUMS
33 Block GN, Sector-V, Bidhanagar
Kolkata 700091**

Tender No. I-18012/7/23(257)

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 **Supply, Installation, Integration, Testing and Commissioning (SITC) of Digital Planetarium & onsite comprehensive warranty (three years), post warranty comprehensive maintenance (two years) and operation of the equipments of the entire setup for 5 years post installation at Science Learning and Creativity Centre, Shimla, Himachal Pradesh** 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 NCSM 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 Bidder / Constituted Attorney

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

Tender No. I-18012/7/23(257)

DECLARATION – II

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

(Signature of the tenderer)
With company seal/rubber stamp

Date:
Place:

ANNEXURE – D**DECLARATION ON REGISTRATION AS MSME**

(Following declaration to be provided by the Vendor 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):

I / we undertake to keep the National Council of Science Museums 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 NCSM as responsible for any issues related to MSME

Date:

Signature of Authorized Person with Company Seal

ANNEXURE-E

FORMAT FOR ANNUAL TURNOVER AS PER THE AUDITED ACCOUNTS

TOWARDS THE QUALIFYING EXPERIENCE

Sl. No.	Financial Year	Turnover in Indian Rupees (INR)/ other than INR(Provide supporting documents copy)
1	2018-19	
2	2019-20	
3	2020-21	
4	2021-22	
5	2022-23	

(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

DETAILED TECHNICAL SPECIFICATIONS AND INDICATIVE BILL OF QUANTITIES

Fully Integrated “8 METER DIGITAL PLANETARIUM SETUP” consisting of an 8 meter powder coated/painted aluminium dome with a hanging/ fixing arrangement, single projector with compatible fish-eye lens arrangement to project the film on the entire dome screen, Media Server/s for astronomy & playback simulation software/system, UPS system, 5.1 surround sound system, show control system etc. for the visitor area having 55-60 persons seating capacity with unidirectional seating arrangement in . The detailed technical specifications of the complete hardware system are provided below:

S.No.	Item	Detailed Technical Specs and description	Quantity
1.	Planetarium Dome	<p>The 8 m diameter dome design must incorporate perforated aluminum panels to be painted on site and prefabricated structural aluminum ribs, equally spaced. X-bracing shall be provided to maintain proper rib alignment of the dome screen. The panels of the dome must be shaped with a special stretch form machine. It is preferred not more than 60 panels on the dome to limit the number and appearance of seams/joints. The panel perforations should be made of maximum 1.6 mm diameter holes (smaller than star images). The holes should create a void area of approximately 22% of the screen. (may be around 20% after final coating). The dome must be installed horizontally. The aluminum panels must be connected to the supporting structure by low profile dome head rivets. The rivets must be the same colour as the screen.</p> <p>A 360 °Aluminum Cove Trough should be provided and fixed at the Horizon of the Dome (spring line) without compromising the projection Horizon.</p> <p>The dome must be strong enough to support audio speakers and special effects mounted behind the dome itself. This construction technique must provide for outstanding acoustic and visual properties.</p> <p>The dome must allow optimum air circulation.</p> <p>The projection surface is to be factory primed then painted-in-place, by a factory technician with a non-bridging flat coating. The overall reflectivity must be of 0.53.</p> <p>The seams where the panels join shall be overlapped by no more than 29 mm and shall have an opaque flat black material of minimum thickness between the layers. The panels shall be secured to the ribs using low profile aluminum rivets. Vertical and horizontal seams shall not be located where there are no structural elements available for support”.</p> <p>Acceptable OEMs: Astrotec, Spitz or equivalent</p>	1 No.
2.	Projection system	It must consist of a single projector, which will evenly cover the entire dome with a uniform image with the required image resolution.	As per proposed technology

		<p>The projector should be installed in the center of the planetarium at horizon level (spring line) of the screen.</p> <p>Stable mechanical structure should be provided to support and fix the projector. The mounting of the projector must be designed to allow for maintenance, servicing as well as the proper air/heat dissipation according to the requirement as specified by the manufacturer.</p> <p>The resolution should be of at least 4.5 million effective pixels on the dome in 4K UHD Resolution. More than 2600 pixels across the meridian on average. In native resolution WQXGA the system must obtain at least 2 million effective pixels on the dome in (i.e. more than 1750 pixels on the meridian on average). The Contractor 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 30 Lux when using native or 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> <p>Projector: The projection system must consist of 1 digital projector which has to offer a 3840 x 2160 resolution (4K UHD) The light source should be laser diode/ laser phosphor. The lifetime of the light source should be at least 20,000 hours. The projector should be DLP with Contrast (On/off) of the projector must be at least 10000: 1 The brightness of the projector must be at least 12,000 ISO lumens (Note: 1 ANSI lumens= 0.8xISO lumens conversion formula shall be used). If the projectors require additional cooling or air supply, it must be integrated with the installation.</p> <p>Lens Options: The projector must be fitted with a fish-eye lens specifically designed for single projector configurations on a dome-screen. Fisheye conversion lenses or mechanical adaptors will not be accepted. Lens installation must ensure adequate illumination and low distortion at the edge of the image. The vertical</p> <p>FOV should be minimum enough to position tip of the</p>	
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		<p>projector to avoid visual obstruction. A lens aperture (F/#) of F/2.5 and a transmittance of 81-89% are preferred.</p> <p>Accessories: All standard accessories including IR remote, Low loss video signal cables etc.</p> <p>Acceptable OEMs: Barco/Christie/Panasonic/Sony/NEC or equivalent</p>	
3.	Media Creation, Image Generator Server and Playback System with dome show and planetarium software	<p>Image Generator server/s complete with industrial grade components-</p> <p>CPU: Minimum of 8 cores, 16 threads, minimum 16 MB Cache or Higher processor. 32 GB RAM or higher @ 2900 MHz or more. Graphics card with at least 5880 CUDA Core, 1.5 GHz base frequency, 8 GB DDR6, 1.7 GHz boost frequency. 2 x SSD having minimum 1 TB size. Licensed OS and all necessary drivers. Backlit keyboard & mouse, joystick, cables & connectors as required.</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 * Obtained from an external source via streaming. <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. * Should provide synchronization of multilingual audio tracks with the projected film shows. * <i>Additional SSD and RAMs may be configured to meet the overall specifications, if necessary.</i> <p>Acceptable OEMs: Dell, HP or equivalent</p>	As per proposed system + 1 spare as standby
4.	Show Control System	<p>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 comprising of Table top control panel with Communication</p>	1 Set

		<p>protocols: RS 232, TCP/IP OR Table top control panel with Communication protocols: RS 232, TCP/IP & Apple iPad Pro 12.9 inch (256 GB) having following features:</p> <ul style="list-style-type: none"> •On/Off Control: Projectors, Illumination, Audio and Dimmer control for COVE lighting •Interactive screen for controlling DIGITAL PROJECTION SYSTEM •The screen for table top control panel should have following: Display size: 26 inch (diagonal), Display Resolution: 1920X1080 or better 	
6.	Interactive Planetarium Software with available libraries	<p>Latest version of the reputed OEM interactive planetarium and 2D playback software like Stellarium, OpenSpace & Worldwide Telescope, Skyexplorer etc. 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>Note: All details in this regard are to be provided.</p> <p>Show elements: Digital library/ Cloud access of the planetarium datasets for development of in-house planetarium shows.</p> <ul style="list-style-type: none"> - Software shall have built in backup feature so as to allow backup for all hard drives. - Wrap up software with bilingual (English & Hindi) text editor shall be supplied for creating 2D dome shows which shall include: volumetric milkyway galaxy in real time, dome videos, dome clips, audio clips, real movie strips, astronomy picture of the day by NASA, still images(regular, panoramas, all-skies) etc. having provision for online updating <p>Show Manager: should be capable of integrating user created artwork, video clips, sound etc. and compatible with rendering images on the entire dome.</p> <p>Show Player: reproduction & control of shows, image distribution to various channels, distortion correction, brightness and gamma adaptation and diaphragm calculations should be effective in real time in the software.</p> <p>Note: List of show elements for creating in house shows shall be provided.</p>	1 No.
7.	Integrated Audio System	a) 5.1 Surround Sound Audio System integrated with	1 Set

		<p>projection system inclusive of speakers, 8-channel audio mixer, power amplifier, installation, wiring, etc. for adequate coverage and even SPL of 85dBC +/- 3dB for video playback content for all 55-60 persons audience seats. Rates to be quoted inclusive of all software, hardware, electrical/data/necessary cables, network components and/or any supportive technologies required to make fully functional as per proposed system.</p> <p>Note: The equipments comprising the overall audio system shall include the following make: Harman/ D&B/ L-Acoustics/ Bose/ JBL/ AKG/ Yamaha</p> <p>b)The audio system should be integrated with digital cordless microphones (2 nos.) comprising of 1 no. cordless handheld microphone & 1 no. cordless lapel microphone complete sets including receiver unit, rechargeable Lithium-ion battery, battery charger docking station etc.</p> <p>Preferred Make: Shure, Sennheizer or equivalent</p> <p>The mixer, amplifier, mic etc. are to be placed in the control room area in a suitable rack or on a suitable table etc.</p>	
8.	U.P.S system with parallel redundancy	<p>a) U.P.S system: Three phase minimum 6 KVA True Sine wave IGBT based system with minimum 30 minutes backup time. Input isolation is needed.</p> <p>Preferred brand : APC, Schneider, Numeric, Emerson or equivalent</p> <p>b) Battery bank with suitable rack</p> <p>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 No.
9.	LED Cove Light (Cove lighting to be integrated with show control system)	<p>a) LED Cove Light: Beam Angle 120° x 120°, Lumens 16, LED Channels Red / Green / Blue, Mixing Distance 2 in (51 mm) to uniform light, Lumen Maintenance† 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.</p> <p>d) 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 site requirements
10.	Equipment & UPS Rack/ table and suitable chair for show operator	Supply, installation, testing and Commissioning of (i) suitable rack/ table for keeping the equipments in the control room space (ii) UPS battery bank rack etc. in the control room space (iii) Suitable chair for show operator	As per site requirements

11.	Cables & Connectors	Supply and laying of all necessary power cable and connector of ISI approved reputed brand.	1 Job
12.		Supply and laying of all necessary signal/control cable and connector of ISI approved reputed brand.	1 Job
13.		Supply and laying of all necessary Audio cable and connector of ISI approved reputed brand.	1 Job
14.	Miscellaneous	Supply and fixing of all Electrical and Signal accessories concealed in suitable conduit(No open wire should be visible)	1 Job
15.	Acoustic Treatment of Theatre	Acoustic treatment of entire planetarium/ theater including so as to achieve top quality noise free audio in the entire theater (Refer Annexure-F1)	1 Job
16.	Free 4k & 3k format films for Planetarium & dome film shows	The selected bidder shall provide at least 2 nos. free 4k format films (at least 1 nos. on 'Astronomy' and rest on science related infotainment topics) and 3 nos. free 3k format films (at least 1 nos. on 'Astronomy' and rest on science related infotainment topics) for Planetarium as well as dome Shows in English/ Hindi language.	1 Job
17.	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
18.	Onsite Comprehensive AMC	The comprehensive AMC shall be for a period of two years , after expiry of the warranty period of three years.	1 Job
19.	Show operation & Comprehensive AMC	First year of Operation of the shows for the entire year (Rate only: Will be executed separately)	1 Job
		Second year of Operation of the shows for the entire year (Rate only: Will be executed separately)	1 Job
		Third year of Operation of the shows for the entire year (Rate only: Will be executed separately)	1 Job
		Fourth year of Operation of the shows for the entire year (Rate only: Will be executed separately)	1 Job
		Fifth year of Operation of the show for the entire year (Rate only: Will be executed separately)	1 Job
20.	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
21.	User Training and Documentation	<ul style="list-style-type: none"> - Basic training of two days for 5 executives and 10 days of technical training for 5 participants is required to be organized at SSCS Planetarium. - Training material and complete installation manual in both hard and soft copies is to be provided (two sets of each). - The faculty providing training should be certified from parent company (OEM) or technical and experienced persons from system integrator. - 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 	1 Set

		procedures for field replacement, Special features of the show control software etc.	
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Note:

1. Must take prior approval for all the equipment where equivalent makes quoted.
2. Items, where the manufacturers are not mentioned should at least have BIS mark standards.
3. The planning of electrical distribution done considering power supply available at Site.
4. All these quantities may vary as per actual site requirements
5. Equipment delivered should be as per scope of work.
6. Complete system installation design should be full proof & protective against corrosion, dust, rain water and electric leakage current etc.
7. The sound system must be installed at site in such a way that the sound shall be clearly audible to all the people present there at the site without echo.
8. The show will be arranged during the opening hours of the Centre or as approved by SSCP. The show may be operated 364 days a year (365 days for leap year) or at the sole discretion of the Competent Authority. Bidders must build adequate ruggedness for it to be operated 365 days a year.
9. The above-mentioned requirements for the show are indicative and bare minimum; however, the agency has liberty to offer the best of industry installation.
10. Bidders may be required to make technical presentations explaining their offered scheme after opening of Technical & Commercial Bids (Cover-1), if decided by NSCD. The decision of the NSCD in respect of techno-commercial evaluation of Cover-1 of the tender and selection of eligible vendors for opening of Financial Bid (Cover-2) shall be final and binding on the bidders.
11. **Delivery Schedule:** The entire work shall be completed within **12 (TWELVE) months** from the date of placement of order or opening of Letter of Credit whichever is later. Vendor should submit Gantt chart showing critical path of the project.
12. **Warranty and AMC:** The successful bidder shall provide Single Window Onsite Comprehensive Warranty on all the items supplied under the purchase order. The **Warranty period** for the entire installation is for **three years** for all the components of the system from the date of issue of acceptance certificate by NCSM. The comprehensive AMC will be for a period of **two years**, after expiry of the warranty period of three years.
 - i. Bidders shall quote for SITC of the entire system, CAMC charges & Operation charges of the entire setup along with applicable taxes from the date of commissioning and handing over to NCSM on year to year basis. The tax break-up for all such rates shall be clearly spelt out as on the date of submission of the tender.
 - ii. During defect liability period and subsequent CAMC, the following terms shall be applicable.
 - a) Preventive Maintenance for all the equipment and peripherals supplied by the bidder. The bidders shall submit a schedule for such preventive maintenance and shall form part of the agreement.
 - b) Repair of faulty / defective parts and peripherals.
 - c) Replacement of faulty parts and peripherals. All replaced parts shall remain as property of SSCP, Shimla.
 - d) During the AMC period (when the life of the batteries is likely to be over) the selected bidder has to replace all the UPS batteries. The batteries shall be provided by SSCP.
 - e) All the parts including networking cables, connectors, etc. that may be required to maintain the system shall be supplied by the bidder at their own cost.
 - f) Any break-down, failure or malfunctioning of the system shall be attended to and put back in service within 48 hours. However, all round efforts must be made to set right the system in shortest possible time. Service shall be available for 364 days in a year.
 - g) The selected bidder will maintain the minimum essential spares at their own stores and the required tools / test equipments / software so as to reduce the break-down time.
 - h) Spare parts manufactured by Original Equipment Manufacturer (OEM) will be preferred.

However in unavoidable situations spares manufactured by equivalent manufacturers may be used with prior approval of NCSM.

- i) The titles of the 3k & 4k format films to be supplied free of cost shall be finalized by the officials of NSCD.
- j) Bidder shall submit the contact details including name, mobile no. etc. for the operational maintenance of the entire setup.

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

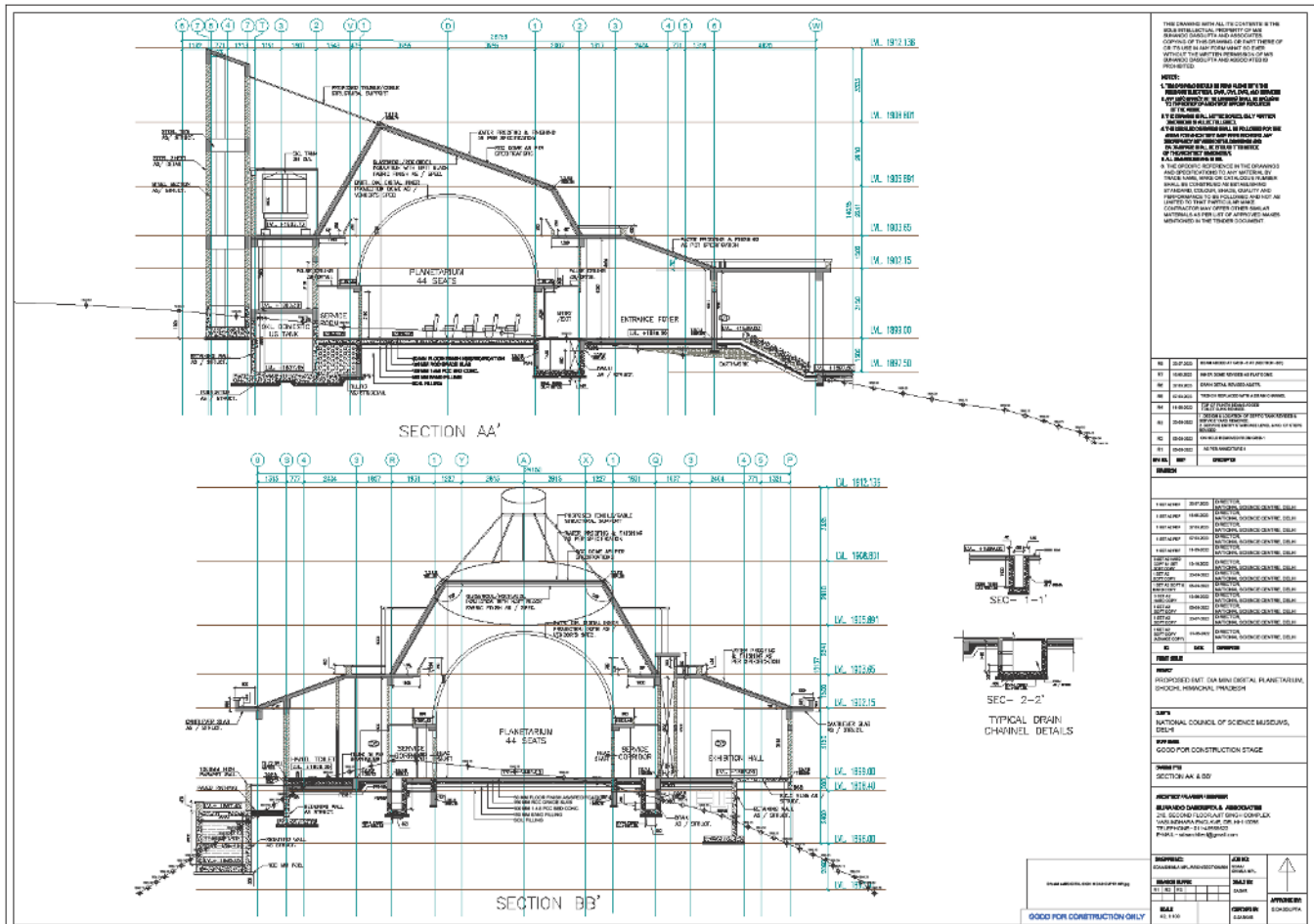
13. Operation of 2D dome planetarium and film shows for a period of 5 years:

Successful bidder may have to operate full dome shows from 9:00 a.m to 7:00 p.m for the visitors of SSCP, Shimla. This timing may vary during the peak seasons. The show shall remain operational for 364 days in a year (and 365 days in a leap year).

- Manning, operation and maintenance of the system shall be the sole responsibility of the successful bidder at their risk and cost by mobilising their resources and trained technical manpower. Adequate manpower shall be deployed for the complete duration of the operation of the theatre.
- Successful bidder shall operate the system in proper and professional manner without downtime and shall fulfil the statutory obligatory requirements on bidder's part for the purpose of contract.
- All necessary manpower, tools and tackles with allied requirements will be arranged by the successful bidder for operation of the system.
- The date for commencement of operation shall be communicated by NCSM at an appropriate time after successful commissioning of the entire installation. This shall be through a separate written communication after completion of Supply, Installation, Testing, Commissioning and successful completion of training and other compliances as may be applicable to commence operation.
- The bidder or its authorized agency will have to quote separately for operations part.
- The bidder company, if it is a foreign company, can authorize an Indian agency to take complete responsibility of O&M and payments of the O&M amount can be made to the authorized agency directly.

An overall remote supervision of the operations and maintenance should be observed by the foreign bidder in case the O&M responsibility is undertaken by their local agency.

PLANETARIUM BUILDING SPACE DRAWINGS:



THIS DRAWING WITH ALL THE CONTENTS IS THE PROPERTY OF THE ARCHITECT AND ASSOCIATES. NO PART OF THIS DRAWING OR ANY THEREOF IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT AND ASSOCIATES.

NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF ALL DIMENSIONS AND MATERIALS SPECIFIED IN THIS DRAWING.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.
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9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.

REVISIONS:

NO.	DATE	DESCRIPTION
01	20/03/2020	ISSUED FOR PERMIT
02	20/03/2020	ISSUED FOR PERMIT
03	20/03/2020	ISSUED FOR PERMIT
04	20/03/2020	ISSUED FOR PERMIT
05	20/03/2020	ISSUED FOR PERMIT
06	20/03/2020	ISSUED FOR PERMIT
07	20/03/2020	ISSUED FOR PERMIT
08	20/03/2020	ISSUED FOR PERMIT
09	20/03/2020	ISSUED FOR PERMIT
10	20/03/2020	ISSUED FOR PERMIT

PROJECT DATA:

PROJECT NAME: NATIONAL COUNCIL OF SCIENCE MUSEUMS, DUBLIN

CLIENT: NATIONAL COUNCIL OF SCIENCE MUSEUMS, DUBLIN

DESIGNER: ARCHITECT AND ASSOCIATES

DATE: 20/03/2020

SCALE: AS SHOWN

STATUS: GOOD FOR CONSTRUCTION ONLY

EXPERIENCE IN SUPPLY, INSTALLATION, TESTING, COMMISSIONING (SITC) OF AN INTEGRATED FUNCTIONAL DOME DIGITAL 2D IMMERSIVE PROJECTION SYSTEM ON BASIS OF FINALIZATION OF AGREEMENTS OF SIMILAR WORK EXECUTED DURING THE LAST 5 YEARS

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

S. No	Name of the project	Cost of the Order Executed in INR/ other than 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. I-18012/7/23(257)

FORMAT OF ALL MAJOR EQUIPMENT AND ACCESSORIES SUPPLIED FOR THE TENDER**Supply, Installation, Testing, Commissioning (SITC) Of An Integrated Functional Dome Digital 2D Immersive Projection System At Science Learning and Creativity Centre, Shimla, Himachal Pradesh.**

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
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Equipment

Free 3k & 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

BANK DETAILS OF NATIONAL COUNCIL OF SCIENCE MUSEUMS

Name of Bank : **Indian Overseas Bank**
Branch Address : **GN 34/2, Sector V, Saltlake, Kolkata – 700091**
SB A/c No. : **16420100000491**
IFSC Code : **IOBA0001642**

ANNEXURE – I

Tender No. I-18012/7/23(257)

FINANCIAL BID FORMAT**Rate NOT to be quoted here. To be quoted ONLY in excel sheet at CPP Portal**

Tender Inviting Authority: Director General, National Council of Science Museums							
Name of the Work: Supply, Installation, Integration, Testing and commissioning of 8 meter diameter Digital Planetarium (including hardware, software, content and all accessories) along with perforated dome at the proposed Planetarium at Village Shoghi, Anandpur, Shimla, Himachal Pradesh.							
Contact No.:							
Name of the Bidder / Bidding Firm/ Company:							
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	Units	Quoted Currency INR/ Other than INR	Amount	GST%	Total Amount including Taxes
1	2	3	4		5	6	7
1.01	Supply, Installation, Integration, Testing and Commissioning of Digital Planetarium hardware & software packages, interfaces, requisite projector/s, audio system & acoustics, 8 meter diameter perforated aluminium standard tilted dome screen for seamless projection of high resolution, 4K native resolution, 2D digital dome film shows and planetarium shows at SSC Planetarium, Shimla, Himachal Pradesh.	1	Job	Other than INR			
1.02	1 st year of Post warranty/DLP Comprehensive Annual Maintenance of entire facility (Payment to be made in half yearly post successful service)	1	Job	INR			
1.03	2 nd year of Post warranty/DLP Comprehensive Annual Maintenance of entire facility (Payment to be made in half yearly post successful service)	1	Job	INR			
1.04	Total Operation Charges during 1 st year	1	Job	INR			
1.05	Total Operation Charges during 2 nd year	1	Job	INR			
1.06	Total Operation Charges during 3 rd year	1	Job	INR			
1.07	Total Operation Charges during 4 th year	1	Job	INR			
1.08	Total Operation Charges during 5 th year	1	Job	INR			
Quoted Rate in Figures							
Quoted Rate in Words							

Note:

- A.** Bidders are required to quote for all the items mentioned in the Bill of quantities failing which their bids will not be considered and out rightly rejected.
- B.** Besides this BoQ, the bidders must fill up the cost break up sheet as per Annexure- J and upload the same in the CPP Portal as Cover II of the Financial Bid.
- C.** The total amount with GST of the BoQ and the total amount with GST of cost break up sheet should match.
- D.** Offline Financial Bid shall not be accepted under any circumstances.
- E.** The sum of the total amounts quoted by the bidder against S.No. 1.01,1.02 & 1.03 shall be considered to arrive at the lowest amount quoted in the financial bid.

Tender No. I-18012/7/23(257)

COST BREAKUP SHEET

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

S. No.	Description of Item as per BOQ	Qty.	Units	Quoted Currency INR/ Other Currency	Rate	Amount	GST Amount/ Tax Component	Total Amount including Taxes
1.	Supply and installation of Projection Dome Screen including all associated structures , minor civil work for installing the dome(all fasteners, grouting etc.) and including cost of scaffolding, labour etc.			Other than INR				
2.	Acoustics/ soundproofing work on top surface of Al dome, inside structure of civil structure above dome, inner side of the walls of theater etc. (Has to be quoted in INR only)			INR				
3.	SITC of Projector/s with necessary mounting brackets, cabling, casing etc.			Other than INR/ INR				
5.	SITC of Image Generator Server networked with Image generator workstations.			Other than INR				
6.	SITC of Interactive planetarium and dome configurator and playback software			Other than INR				
7.	SITC of Show control system			Other than INR				
8.	SITC of Automatic Calibration and alignment system			Other than INR				
9.	SITC of Integrated 5.1 surround sound system with all necessary mounting brackets, cabling, wiring etc.(Has to be quoted in			INR				

	INR only)							
10.	SITC of U.P.S System of appropriate capacity (at least 20% more than the full electrical load of the entire projection system) with parallel redundancy with 30 minute backup including electrical panel for distribution of power to the installed equipment. (Has to be quoted in INR only)			INR				
11.	SITC of LED Cove light, staircase lighting, step lights, exit and emergency exit signage etc.			INR				
12.	Training on Dome Projection System			INR				
13.	Any other items of work/equipment etc. not covered above, under Sl. No. 1 to 13 but required as per scope of work & for effective & efficient functioning of the system. <i>(add additional rows as may be required)</i>			Other than INR/ INR				

Total amount in INR of all the items taken together- Inclusive of GST (to be entered by bidder)	Rs.
Total amount in other than INR of taken together-Including Tax Component (to be entered by bidder)	

** Currency Conversion rate will be taken from RBI website on the date of opening financial Bids.

IMPORTANT NOTES:

1. The bidders 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 as per the following format:

S. No.	Description of item	Base rate (INR/ Other than INR)	Quantity	Total amount	Details of taxes and duties included with clear break-up of each tax considered	Any other cost with details	TOTAL
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2. The bidders may note that while arriving at the total cost, NCSM shall consider the total cost of initial installation and subsequent cost of operations and maintenance for a period of five years to decide on the lowest bidder.
3. 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 NCSM against submission of supporting documentary evidence.
4. The total cost provided in the cost breakup sheet should exactly match with the total cost quoted in the financial bid.
5. 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.

FORMAT FOR ARTICLES OF AGREEMENT

INSTRUCTIONS (not to be typed in Agreement)

(Articles of Agreement have to be typed on non-judicial stamp paper. The value of the stamp paper varies from state to state and is to be known from the particular place. The stamp paper will be purchased by the successful e-tenderer and the agreement may be typed by the Museum/Centre according to the format.)

ARTICLES OF AGREEMENT made at

(Place)
this..... day of

(Date) (Month & Year)
between the

(Name of the parent Museum/Centre)
(under the National Council of Science Museums, a Society registered under the Societies Registration Act of West Bengal, 1961), hereinafter referred to as the Museum/Centre which expression shall include its successors and assigns on the one part and

(Name of the successful e-tenderer)
trading in the name and style of

(Name and complete address of the successful e-tenderer)
hereinafter referred to as the successful e-tenderer which expression shall include his/their respective heirs, executors, administrators and assigns on the other part.

WHEREAS the Museum/Centre is desirous of getting the work oftherein 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.....

(Name and address of the Bidder).

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 e-tenderer 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 the Museum /Centre 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 e-tenderer shall upon and subject to the conditions herein contained execute and complete the work within months from the date of issue of letter of intent / Work Order (as defined in the scope of work 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. The Museum/Centre shall pay to the successful e-tenderer 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 e-tenderer 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 e-tenderer, he shall pay or allow the Museum/Centre to deduct from any money due to him a liquidated damage as per Clause 11(iii) of the 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. The Museum/Centre through the Engineer 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. 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 contract) shall be referred to arbitration as per Clause 12(xvi) of Annexure – A of the said 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 and the year and the place herein above written.

Signed by for and on behalf of the Museum/Centre

.....
(Dy. Controller of Administration)

In the presence of

1.

Seal

(Dy. Controller, Finance & Accounts)

2.

(Project Co-coordinator / Engineer)

Signed by the said Successful e-tenderer

In the presence of

1.

Seal

2.

Tender No. I-18012/7/23(257)

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. I-18012/7/23(257)

PRODUCT CATALOGUE CHECKLIST

Building space as per the drawing given shall be provided to the successful bidder. 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 (with parallel redundant system) including technical catalogues/brochures	1 Set	Submitted/ Not Submitted	
x.	Details of Sound proofing and Acoustic treatment required, if any to be executed at site may be submitted along with specifications of materials (locally available materials may be considered), schematic drawings with expected outcome.	1 Set	Submitted/ Not Submitted	

xi.	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	
xiii.	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	
xiv.	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	
xv.	List of 3k & 4k format films that are offered alongwith the project as per the Annexure-G1 format.	1 Set	Submitted/ Not Submitted	

Signature of the Bidder / Constituted Attorney