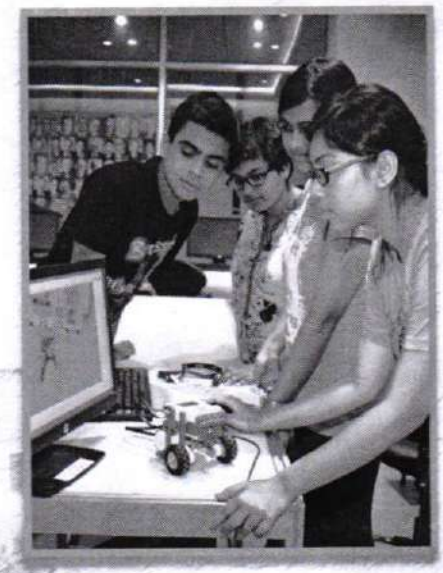
Ministry of Culture
Government of India

Annexure-I

SCHEME for PROMOTION of CULTURE of SCIENCE



by

Ministry of Culture
Government of India

Implemented by

National Council of Science Museums

03/11/2021

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02/11/2021

SCHEME FOR PROMOTION OF CULTURE OF SCIENCE (SPoCS)

GUIDELINES

1. Genesis

Considering the gradual decline in the interest level of young students to pursue careers in the field of S & T in the country, there is a pressing need to strengthen STEM (science, technology, engineering & mathematics) education by creating additional infrastructure for hands-on and engaging activities, especially in non-formal mode of education. There is also a need to have an adequate level of awareness of science and technology in society.

The successive science policies of the Government of India have emphasised the popularisation and awareness of science and technology and creation of infrastructure for activity-based learning for the masses, especially the young generation. There is also a need to broaden the knowledge base of the people on science, technology and current global issues for sustainable development of the society and considered decision making. Since India has to progress in the knowledge economy era, it has to develop an innovative society through creation of facilities for engagement, creativity and innovation.

Furthermore, as per 2011 census, youth (15-24 years) in India constitutes of one fifth of the total population and the future rests on its ability to harness their creative potential. There is a growing need to develop a culture of innovation and problem solving skills amongst the youth to enable them to engineer solutions in food, water, healthcare access, education and affordable housing; and find environment friendly energy sources. These solutions which are important to benefit a large section of society will be crucial for bridging the widening disparity in the country. A strong innovation eco-system is very important for creating an innovation society which facilitates the birth of new ideas and also provide platforms for the successful exploitation of these ideas.

Development of Science Cities/ScienceCentres and Innovation Hubs in different parts of the country has been a focus area of activities of Ministry of Culture. National Council of Science Museums (NCSM), an autonomous organization of Ministry of Culture is the implementing agency to set up science cities/centres and Innovation Hubs.

To enhance the Science Centre experience for students and general public Digital Planetarium/Space & Astronomy Education Centre is being added as a new component in the scheme. The Digital Planetarium/Space & Astronomy Education Centre may be co-located in the existing science centres or could be set-up in any institution of non-formal learning engaged in science communication activities. The principal objective of the Digital Planetarium/Space & Astronomy Education Centre will be twofold: To provide a fundamental concept about the celestial bodies, cosmic events and space science and to alleviate superstitions and misconceptions about planets, stars, eclipses etc.

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The National Education Policy (NEP) 2020 formulated and approved by the Govt. of India in July 2020, is the first education policy of the 21st century that aims to address the many growing developmental imperatives of our country. This Policy proposes the revision and revamping of all aspects of the education structure, including its regulation and governance, to create a new system that is aligned with the aspirational goals of 21st century education, while building upon India's traditions and value systems. As several objectives of SPoCS scheme are aligned with the goals of the NEP 2020, the scheme can play an important and active role in NEP implementation though its activities and programmes in the science centres/cities/innovation hubs and thus can help in a big way in nation building.

2. Preamble

Science City:

A Science City is aimed to be a popular tourist attraction of the location. It provides an experiment based immersive learning ambience to inculcate a spirit of inquiry, foster creative talent and create scientific temper in the community as a whole. It is characterised by its two-pronged channel of communication - exhibits and activities. While the exhibits, both indoor and outdoor, are mostly interactive, the demonstrations and training programmes are also fully participatory and help children and the adults alike to learn the basics of science through fun and enjoyment.

It will be large in dimension with a focus in frontier areas of Science and Technology and edutainment and shall be financially self-sustainable. It shall be conceptualized in such a manner that it is attractive and useful to students, families, tourist and general public. It will use state-of-the-art communication tools and technology in its presentation.

Science Centre:

A Science Centre provides the scope of 'doing science' adopting a hands-on approach which it offers to the visitor a number of experimental options through which they can discover the scientific concept themselves. Such mode of education has so far proved to be very effective in supplementing formal science education in our country.

Innovation Hubs:

Innovation Hubs would be co-located in the existing Science Cities/Science Centres, science museums and non-formal educational institutions that promote creativity & inspire innovations. This co-location would not only promote more effective utilization of these centres, but would redefine their usage and role in fostering problem solving and project based learning and provide hands on / practical learning and engagement in the process of science, technology and innovation. The hubs would serve as springboards for new ideas and innovation and thus helping the society and economy to face future challenges and meet rising aspirations of the growing population.

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Digital Planetarium/Space & Astronomy Education Centres (SAEC)

The Digital Planetarium/Space & Astronomy Education Centre creates an awareness about the sky, the space and about celestial phenomena. It also integrates astronomy education with physical, mathematical and weather science and helps eradicate superstitions associated with celestial bodies and phenomena. Digital Planetarium/Space & Astronomy Education Centres will either be collocated with existing Science Centres or be attached to them or it could be setup independently in other non-formal educational institutions which are engaged in science popularization activities. It will have the following three categories depending upon the Science Centre Category:

i. The Category I (with 12 m dome planetarium) could be set up at locations fulfilling the criteria for Science Centre - Category I.
ii. Category II could be set up at locations fulfilling the criteria for Science Centre - Category II (with 10 m dome planetarium) and
iii. Category III could be set up at locations fulfilling the criteria for Science Centre - Category III (with 8m dome planetarium).

Modernization / up-gradation of existing science cities / science centres / innovation hubs:

The existing science museums and centres developed in the past have varying architecture, facilities, content, infrastructure and some of which do not conform to the prevailing trends in the world. With rapid development in science and technology, communication techniques, digital technologies, the Science Centres/Cities/ Innovation Hubs require modernization/up-gradation commensurate with the modern trends and requirements. Modernization / Up-gradation plan may also include addition of a Mobile Science Exhibition unit to an existing Science City/Science Centre.

3. Objectives

The Science City/Science Centre will have primarily the following objectives:

- To portray the growth of science and technology and their application in industry and human welfare, with a view to develop scientific attitude and temper and to create, inculcate and sustain a general awareness amongst the people;

- To create awareness & enhance public understanding, appreciation & engagement of public in the process of Science & Technology;

- To popularise science and technology for the benefit of students and for the common man of the region by organising exhibitions, seminars, popular lectures, science camps and various other programmes;

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- To supplement science education given in schools and colleges and to organise various out-of-school educational activities to foster a spirit of scientific inquiry and creativity among the students;

- To design, develop and fabricate science museum exhibits, demonstration equipment and scientific teaching aids for science education and popularisation of science;

- To organise training programmes for science teachers / students/young entrepreneurs/ technicians/physically challenged/housewives and others on specific subjects of science, technology and industry.

The Innovation Hub will have primarily the following objectives:

- To equip and strengthen activities of the existing Science Cities/Science Centres/institutions to inspire innovations by young children;

- To catalyse creation of more innovation hubs in different parts of the country especially in rural areas;

- To provide appropriate environment to nurture creative and innovating ideas of young children.

The Digital Planetarium/Space & Astronomy Education Centre (SAEC) will have primarily the following objectives:

- To introduce the sky to the students and common public, with its innumerable celestial objects and their movement and thus to create an awareness about astronomy;

- To develop an understanding about the sky and the space and about the celestial phenomena;

- To integrate the astronomical knowledge with that of physics, mathematics, weather science, artificial satellites etc.;

- To nurture scientific temper by eradicating superstitions related to astronomical objects/events like planets, sun, moon, eclipses etc.;

- To correlate our heritage and culture with science.

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4. Categories

Ministry of Culture lays down the revised norms of the Scheme for setting up of the following types of Science Cities /Science Centres/Innovation hubs. The scheme also consists provision for the Modernization/Upgradation of existing science cities/science centres having satisfactory performance:

I. **Science City**
II. **Science Centres:**
   - **Science Centre (Category-I)**
   - **Science Centre (Category-II)**
   - **Science Centre (Category-III)**
III. **Innovation Hubs**
IV. **Modernization/Upgradation of existing science cities/science centres/Innovation Hubs**
V. **Digital Planetarium/Space & Astronomy Education Centre (SAEC)**
   - **Digital Planetarium/Space & Astronomy Education Centres(Category-I)**
   - **Digital Planetarium/Space & Astronomy Education Centres(Category-II)**
   - **Digital Planetarium/Space & Astronomy Education Centres(Category-III)**

(Please refer Annexures A, B, C &D for details)

5. Basic Criteria

i. Population:

Sr. No.	Category	Location
1.	Science City	To be located preferably in those places where no major Science Centre exists. However, in locations where footfall to the science centre is substantial the science centre could be upgraded to a Science City or a separate Science City could be set up in State capitals or the largest city of the State provided that the Science City is viable and financially self-sustainable.
2.	Science Centre (Category-I)	To be located in a city / town with a population of 15 lakhs or more
3.	Science Centre (Category-II)	To be located in a city/ town with a population between 5 and 15 lakhs.
4.	Science Centre (Category-III)	To be located in a city/ town/locations with a population **less than 5 lakhs.**
5.	Innovation Hubs	To be preferably co-located in the existing Science Cities/Science Centres, science museums, non-formal education institutions that promote creativity & inspire

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		innovations.
6.	Digital Planetarium/Space & Astronomy Education Centre (SAEC) –Cat. I	Could be set up at locations fulfilling the criteria for Science Centre - Category I
7.	Digital Planetarium/Space & Astronomy Education Centre (SAEC) –Cat II	Could be set up at locations fulfilling the criteria for Science Centre - Category II
8.	Digital Planetarium/Space & Astronomy Education Centre (SAEC) –Cat III	Could be set up at locations fulfilling the criteria for Science Centre - Category III

ii. **Land:**

Sr. No.	Category	Area required	Remarks
1.	Science City	At least 25.0 acres; However to do justice to exhibits, facilities especially those requiring open spaces and future expansion 30.0 acres would be preferable.	Preferably centrally located, easily accessible, fully developed, without any low-lying area and of fairly regular shape, secured (with boundary wall) without any encumbrances
2.	Science Centre (Category-I)	Minimum 7.0 acres	-do-
3.	Science Centre (Category-II)	Minimum 5.0 acres For NE region, hilly terrains and island territories. 2.5 to 3.0 acres will be acceptable provided the land is having good vicinity & accessibility.	-do-
4.	Science Centre (Category-III)	Minimum 2.0 acres	-do-
5.	Innovation Hub	Minimum 1.0 acres	To be preferably co-located in the existingScience Centres/ science museums/non-formal

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			education institutions that promote creativity & inspire innovations.
6.	Digital Planetarium/Space & Astronomy Education Centre(Category-I)	Minimum 2.0 acres (1.0 acre if the Planetarium is located inside the Science Centre Campus)	To be preferably co-located in the existing Science Centres/ science museums/non-formal education institutions that promote science communication specially astronomy education.
7.	Digital Planetarium/Space & Astronomy Education Centre(Category-II)	Minimum 2.0 acres (1.0 acre if the Planetarium is located inside the Science Centre Campus)	-do
8.	Digital Planetarium/Space & Astronomy Education Centre(Category-III)	Minimum 1.0 acre	-do-

PS: In case the land is located in the heart of city where land availability is scarce, the land requirement may be relaxed only in the case of science centres/innovation hubs. The building may be constructed in multiple stories utilizing the available FSR ratio of the location. However, Science Park shall be the integral part of the science centre.

iii. Project Cost

1. <u>Science City</u>

(Rs. In Crore)

Location	Capital cost	Corpus Fund	Total Project Cost
All locations (other than NER including Sikkim, Hilly Terrain and Island territories)	179.00	53.70	232.70
NER including Sikkim	214.80	64.50	279.30
Hilly Terrain and Island Territories other than location in NER including Sikkim	214.80	64.50	279.30

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2. **Science Centre (Category-I)**

(Rs. In Crore)

Location	Capital cost	Corpus Fund	Total Project Cost
All locations (other than NER including Sikkim, Hilly Terrain and Island territories)	31.50	9.50	41.00
NER including Sikkim	37.80	11.30	49.10
Hilly Terrain and Island Territories other than location in NER including Sikkim	37.80	11.30	49.10

3. **Science Centre (Category-II)**

(Rs. In Crore)

Location	Capital cost	Corpus Fund	Total Project Cost
All locations (other than NER including Sikkim, Hilly Terrain and Island territories)	17.10	5.15	22.25
NER including Sikkim	20.50	6.20	26.70
Hilly Terrain and Island Territories other than location in NER including Sikkim	20.50	6.20	26.70

4. **Science Centre (Category-III)**

(Rs. In Crore)

Location	Capital cost	Corpus Fund	Total Project Cost
All locations (other than NER including Sikkim, Hilly Terrain and Island territories)	5.10	1.55	6.65
NER including Sikkim	6.10	1.85	7.95
Hilly Terrain and Island Territories other than location in NER including Sikkim	6.10	1.85	7.95

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5. Innovation Hubs

(Rs. In Crore)

Location	Capital cost	Recurring Cost for 3 years (@0.20)	Total Project Cost
All locations(Category-I where space is to be constructed)	2.60	0.60	3.20*
All locations (Category-II where space is already constructed)	1.50	0.60	2.10*

* To be shared in 50:50 ratio between State/UT Govt. & MoC, GoI.

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6. Digital Dome Planetarium (Cat-I)

(Rs. In Crore)

Location	Capital cost	Corpus Fund	Total Project Cost
12.0Mtr. Dia Aluminium Dome Digital Planetarium (Total Built up Area = 800Sq.m. (approx.). All locations (other than NER including Sikkim, Hilly Terrain and Island territories)	18.00	5.40	23.40
NER including Sikkim	21.60	6.50	28.10
Hilly Terrain and Island Territories other than location in NER including Sikkim	21.60	6.50	28.10

7. Digital Dome Planetarium (Cat-II)

(Rs. In Crore)

Location	Capital cost	Corpus Fund	Total Project Cost
10.0Mtr. Dia Aluminium Dome Digital Planetarium (Total Built up Area = 600Sq.m. (approx.). All locations (other than NER including Sikkim, Hilly Terrain and Island territories)	10.00	3.00	13.00
NER including Sikkim	12.00	3.60	15.60
Hilly Terrain and Island Territories other than location in NER including Sikkim	12.00	3.60	15.60

8. Digital Dome Planetarium (Cat-III)

(Rs. In Crore)

Location	Capital cost	Corpus Fund	Total Project Cost
8.0Mtr. Dia Aluminium Dome Digital Planetarium (Total Built up Area = 450 Sq.m. (approx.). All locations (other than NER including Sikkim, Hilly Terrain and Island territories)	6.10	1.85	7.95
NER including Sikkim	7.30	2.20	9.50
Hilly Terrain and Island Territories other than location in NER including Sikkim	7.30	2.20	9.50

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9. Modernization/Up-gradation of Science Cities/Centres/Innovation Hubs

(Rs. In Crore)

Category	Total funding (Maximum)	Sharing of Funds between GOI & State Govt./UT /Society	Project/Scheme completion time (Maximum)
Science City (All locations (other than North East including Sikkim)	36.25	60:40	36 months
Science City in NE Region including Sikkim State	44.00	90:10	36 months
Science Centres -Category I (All locations (other than North East including Sikkim)	7.25	50:50	24 months
Science Centres - Category I in NER including Sikkim state	8.70	90:10	24 months
Science Centres -Category II (All locations (other than North East including Sikkim)	3.65	50:50	24 months
Science Centres - Category II in NER including Sikkim State	4.35	90:10	24 months
Science Centres -Category III (All locations (other than North East including Sikkim)	2.20	50:50	18 months
Science Centres - Category III in NER including Sikkim State	2.90	90:10	18 months
Innovation Hubs	1.50	50:50	12 months

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iv. Funding Pattern

The funding pattern of Science Cities, Science Centres and Innovation Hubs will be variable. Funds will be provided as per the three categories discussed below:

Type 'A': Full funding from MoC, GOI

Science City is not to be set up under Type 'A'. For Science Centres to be set up in locations /regions where the Science Centre activities have not yet started or in priority areas Ministry of Culture, Government of India may consider providing **full funding** for such Centres through NCSM. In no case, more than one Science Centre will be set up in any State/U.T. in future, under the scheme. In states/UTs where NCSM centres are already existing, such provision shall not be applicable.

Type 'B': Funding to be shared between GOI & State Govts./UTs

The capital cost for Science City will be shared on 60:40 basis and for Science Centre (Category I, II, III) will be shared on 50:50 basis except for NER including Sikkim for which the capital cost for Science City and for Science Centre (Category I, II, III) is to be shared in 90:10 basis. The corpus fund, if shared by Government of India, in no case shall exceed 20% of the total Corpus Fund and the balance 80% to be borne by the State Govts./UTs.

Sharing of funds between GOI and State Govts./UTs (under Type 'B' funding)

Sr. No.	Details	Location	Share of Capital Cost (GOI: State Govt./UT)	Share of Corpus Fund (GOI: State Govt./UT)
1.	Science City	All locations (other than North East including Sikkim)	60:40	20:80
		NER including Sikkim	90:10	
2.	Science Centre (Category-I)	All locations (other than North East including Sikkim)	50:50	20:80
		NER including Sikkim	90:10	

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3.	Science Centre (Category-II)	All locations (other than North East including Sikkim)	50:50	20:80
		NER including Sikkim	90:10	
4.	Science Centre (Category-III)	All locations (other than North East including Sikkim)	50:50	20:80
		NER including Sikkim	90:10	
5.	Innovation Hub	All locations	50:50*	No Corpus Fund, but Recurring grant for initial three years
6.	Digital Planetarium/Space & Astronomy Education Centre (Category I)	All locations (other than North East including Sikkim)	50:50	20:80
		NER including Sikkim	90:10	
7.	Digital Planetarium/Space & Astronomy Education Centre (Category II)	All locations (other than North East including Sikkim)	50:50	20:80
		NER including Sikkim	90:10	
8.	Digital Planetarium/Space & Astronomy Education Centre (Category III)	All locations (other than North East including Sikkim)	50:50	20:80
		NER including Sikkim	90:10	

*** Including recurring cost of Innovation hubs.**

Type 'C': **Full funding from the State Govt./UTs**

The State Govts./UTs shall fully fund science city/science centre project under this type and set up the science city/science centre with technical support from NCSM against payment of consultancy charges.

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6. Recurring Expenditure:

Science Cities/Science Centres:

The recurring expenditure of the Science City & Science Centres will be completely borne by the State/UT Government *except in cases where Govt. of India decides to fully fund the project and manage it through its professional agency like NCSM.* Every year provision for the annual recurring expenditure for maintenance of the centre and organising year round activities shall be made by the State/UT Government.

A corpus fund will be created to meet the Science City & Science Centres operational deficit funding. In no case, principal of the corpus fund will be utilized for any activity. Not more than 85% of the interest can be utilised to meet the operational deficit after inauguration and minimum 15% to be added back to the corpus fund to compensate the inflation on year to year basis. The corpus fund requirement will be projected as project cost & shall be shared between Government of India& State/UT Govt. as per norms.

The corpus fund shared by Government of India, in no case shall exceed 20% of the total Corpus Fund, *except in Cases where Government of India decides to fully fund the project and manage it.* The share of corpus fund of GOI and State Govt./UT to be released upfront after approval of the project and prior to commencement of the works.

The corpus fund shall be transferred to the Society formed by the State Govt./UT Govt. on handing over the Science Centre after the inauguration and will lie with the Society. However, the fund shall be managed by two members of the society, one of them being the representative of Ministry of Culture/National Council of Science Museums.

Estimated recurring costs for the Science Cities/Science Centres is attached at Annexure–A and B respectively.

Innovation Hubs:

The recurring cost for the first three years (@Rs. 10 Lakhs per year per hub as 50% share) after opening of the Innovation hubs shall be provided by MoC, Govt. of India and the balance 50% to be borne by the State Govts./UTs/Society. The State Govts./UTs/Society, institutions shall have to bear the gap funding and the recurring cost thereafter.

Digital Planetarium/Space & Astronomy Education Centres

The recurring expenditure will be completely borne by the State Government. Every year provision for the annual recurring expenditure for maintenance of the equipment and organizing new planetarium shows shall be made by the State Government.

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7. Operation& management:

Science City:

The new Science Cities shall be made independent autonomous bodies run and managed by societies with adequate representation of S &T and Science Communication professionals as members and representative from the administrative ministry of Govt. of India. The societies shall be formed by the respective State Govts./UTs in consultation with NCSM. If the project is undertaken by the Society, NCSM shall be paid consultancy fees for technical guidance and consultancy in exhibit development and manpower training during the execution of project. In that case NCSM shall be consulted for inputs for the project design & planning. These Societies are to be formed before start of execution of the project so that they are able to receive monetary grants from both Central and State/UT Govts., the private/ corporate/industry sources as well as raise loans from financial institutions. Gap funding for management & operation if any shall be provided by the State/UT Govts.

All Science Cities shall be maintained in the best possible way by generating enough funds by themselves and by recruiting adequate trained & professional staff to sustain all the operations. However capital grant for future developments may be raised from different sources. Corporate investments may be considered in two forms - either capital CSR grant or through Private Public Partnership if it is not forthcoming then through revenue support over the years against use of facilities and infrastructure. The State Govt. may also infuse capital grants for upgradation/modernization of the galleries/exhibitions/facilities from time to time.

Science Centres:

Based on the funding pattern, the Science Centres (Category –I, II, III) may be operated in any one of the following operational mode:

Type 'A': Science centres set up in priority areas or States/UTs where science centre activity has still not been initiated and set up with full funding from the Govt. of India shall be operated & maintained by the Ministry of Culture through NCSM.

Type 'B': State Governments /U.T. administration desirous of having more than one science centre or wanting accelerated development of Science Centres shall be given priority provided they agree to bear the entire operating cost of the centre after it is developed and handed over to the States/U.T.'s. These centres will be operated and managed by the respective state govt./UTs

Type 'C': Under this scheme, State Governments agreeing to fully fund the science centre project, provide land and other required facilities for the science centre

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and operate and manage them shall be accorded priority. State Govts./UTs desirous of having exhibits and technical support from NCSM shall have to bear separate cost towards these components which would be charged separately by NCSM.

Science Centres project under Type 'B' & 'C' as above shall be operated and managed by a Society with adequate representation of S&T and science communication professionals. The Society should be formed immediately after the approval of the project and release of funds by the State/UT Government towards its share of the capital cost & corpus fund of the project. A representative of the Ministry of Culture, GOI andNational Council of Science Museums shall be an ex-officio member of the Society or the Governing Council to maintain an organic link with MoC and NCSM. The Society shall ensure that the Science Centre functions as per the requirement of its objectives without any deviations.

Digital Planetarium/Space & Astronomy Education Centres

The Digital Planetarium/Space & Astronomy Education Centres will be operated and maintained by a Registered Society formed by the State Government for this purpose. The Society should be formed immediately after the release of the fund by the State Govts./UTs towards their share of the capital cost of the project. A representative of the National Council of Science Museums shall be an ex-officio member of this Society or its Governing Council. The Society shall ensure that the Planetarium functions as per the requirement of its objectives without any deviations from them.

The Digital Planetarium could be operated and managed under Type 'A', 'B' and 'C' as detailed above for science centres.

8. Implementation Strategy:

(i) Construction

Science Cities:

The project shall normally be undertaken by NCSM on turn-key basis. The funds for the project will be received by NCSM, both from Central Govt. & State Govts./UTs. NCSM shall set up the Science City and hand over to the State Govt./Society for operation & management. An MOU will be signed between NCSM & State Govt./UT for implementation of the Science City Project.

In case of a State/UT Govt. seeking financial support from Government of India for a new Science City project to be implemented by themselves, a society should be formed for the purpose by the respective State/UT Govts. The project will be vetted and processed by NCSM for approval of competent authority in Ministry of Culture,

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Govt. of India. In the case funds will be released by Govt. of India to the society based on the recommendations of a Project implementation committee constituted by Ministry of Culture, Govt. of India with representatives of Ministry of Culture, NCSM, experts in the field and the State Govt.

Science Centres:

- Science Centre being set up under Type 'A'& Type 'B':

  NCSM will complete the Science Centre on a turn-key basis (including construction and commissioning of the Science Centre) and handover the project after completion to the State Government/U.T. NCSM shall start the construction work only after the share of funding is received from the State/UT Govt.

- Science Centre being set up under Type 'C':

  The State Government/U.T. shall do the construction of the building of the Science Centre as per inputs from NCSM and develop the Science Park etc. as per advice of NCSM. NCSM shall provide technical & professional support at cost and consultancy charges to the State/UT Govt. for the project.

Innovation Hubs:

The State Governments/UTs/Institutions shall do the construction of the building/space for the Innovation hub as per inputs from NCSM. NCSM shall provide technical & professional support at cost and consultancy charges to the State/UT Govt. for the project.

Digital Planetarium/Space & Astronomy Education Centre:

- Digital Planetarium/Space & Astronomy Education Centres being set up under Type 'A', 'B' and 'C' as detailed above for science centres:

  Normally, the digital planetarium will be set up by NCSM on a turn-key basis (including construction and commissioning of the equipment) and handover the project after completion to the State Government/U.T. The construction work shall start only after the share or funding is received from the State/UT Govt. Preferably the construction of the building shall be undertaken by the State Govt. / UT / agency within the allocated budget as per inputs and supervision by NCSM.

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In case of a State/UT Govt. seeking financial support from Government of India for a new Science City project to be implemented by themselves, a society should be formed for the purpose by the respective State/UT Govts. The project will be vetted and processed by NCSM for approval of competent authority in Ministry of Culture, Govt. of India. In the case funds will be released by Govt. of India to the society based on the recommendations of a Project implementation committee constituted by Ministry of Culture, Govt. of India with representatives of Ministry of Culture, NCSM, experts in the field and the State Govt.

(ii) Recruitment of Staff

The Registered Society so formed by the State/UT Government will complete the recruitment of the required core staff members within 6 months of the release of funds. NCSM shall provide professional support to the EC for recruitment and training of staff. The cost of training shall be borne by the Society.

For Science Centres to be operated by NCSM, staff shall be recruited by NCSM. The required core staff strength for the science centre shall be sanctioned by the Ministry and requisite fund shall be allocated annually to NCSM.

For Innovation Hubsand digital planetariums, the Science Cities/Science Centres/Institutions shall deploy adequate manpower from the existing staff for the operation of the Innovation Hub and induct mentors for guiding the students. In case it is set-up by a Society, the Registered Society so formed by the State/UT Government will complete the recruitment of the required core staff members within 6 months of the release of funds. NCSM shall provide professional support to the EC for recruitment and training of staff. The cost of training shall be borne by the Society.

9. Time Schedule:

Sr. No.	Type	Completion time from the date of issue of LOI for the construction work
1.	Science City	60 months
2.	Science Centre (Category-I)	42 months
3.	Science Centre (Category-II)	36 months
4.	Science Centre (Category-III)	30 months
5.	Innovation Hub	24 months
6.	Digital	24 months

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	Planetarium/Space & Astronomy Education Centre (Category-I)	
7.	Digital Planetarium/Space & Astronomy Education Centre (Category-II)	24 months
8.	Digital Planetarium/Space & Astronomy Education Centre (Category-III)	24 months

10. Year wise allocation/utilization of Funds(Capital & Corpus)

The year wise allocation/utilization of funds for the Science Cities/Science Centres/Innovation hubs and Digital Planetariums are detailed in **Annexure-A, B, C and D**respectively.

11. Content

The contents of Science City/Science Centres/Innovation Hubs and Digital Planetariums are detailed in **Annexure-A, B, C and D** respectively.

12. Staff Structure:

The staff structure of Science City/Science Centres and Digital Planetariums are detailed in **Annexure-A, B and D** respectively.

13. Monitoring

Science City:

Monitoring of Science Cities set up as individual Autonomous Societies shall be done by an Executive Council (high level committee) set up by the respective State/UT Governments with due representation from the Ministry of Culture, Government of India, NCSM, concerned State Government, their private/corporate partners (if any), and at least five eminent personalities in the fields of education, culture, S&T, industry, Science Communication and museology for **recruitment of staff, budgeting, planning and execution of the Annual Plan of activities of the science city**.

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Science Centres:

Monitoring of Science Centres set up as individual Autonomous Societies under Type 'B' & 'C' shall be done by an Executive Council set up by the respective State/UT Governments with due representation from the Ministry of Culture, Government of India, NCSM, concerned State Government, their private/corporate partners (if any), and at least five eminent personalities in the fields of education, culture, S&T, industry, Science Communication and museology for **recruitment of staff, budgeting, planning and execution of the Annual Plan of activities of the science centre/city**.

Innovation Hubs:

The Innovation hubs shall be monitored by a local board constituted with representatives from Industry associations, academia, civil society, research organisations and so forth (minimum 5 members) and with representative from NCSM.

Digital Planetarium/Space & Astronomy Educations Centres:

Monitoring of Digital Planetariums set up as individual Autonomous Societies under Type 'B' & 'C' shall be done by an Executive Council set up by the respective State/UT Governments with due representation from the Ministry of Culture, Government of India, NCSM, concerned State Government, their private/corporate partners (if any), and at least five eminent personalities in the fields of education, Astrophysics, S&T, industry, Science Communication for **recruitment of staff, budgeting, planning and execution of the Annual Plan of activities of the digital planetarium**. In case the planetarium is set-up in the existing science centres, the existing Executive Council shall monitor the working of digital planetarium.

14. Outcome evaluation indicators:

The Science Cities/Science Centres/Innovation hubs/digital planetariums set up under the scheme shall be monitored on the basis of the following Outcome Evaluation indicators:

Science Centres/Cities:

The science centres/cities should strive to achieve the following over a period of 5 years from opening:

a. Generate at least 50% of their operating cost;

b. Achieve an annual visitors footfall in the Science Centres as follows:
   i. Category – I around 250,000 (for NE Region - 200,000);
   ii. Category- II around 150,000 (for NE Region - 75,000);

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iii. Category-III around 30,000;
iv. Science Cities around 10.00 Lakhs (for NE Region – 5.00 Lakhs);

c. Organize a minimum of 25 Science communication activities, in house and outreach, annually including activities on climate change, biodiversity, nature conservation, topical issues, skill development etc.

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Innovation Hubs:

After opening, the innovation hubs should strive to achieve the following:

a. Enroll at least 300 active innovation members annually;
b. Increase the number of exposure visits to innovation hubs by school/college students and teachers (Approx. 10,000 annually);
c. Filing of patents/copyrights on successful innovative prototypes;
d. Set up at least 10 Innovation clubs in nearby schools.

In addition, the IHs should also strive to:

- Organize activities such as idea contests, innovation festivals including contests on design and idea challenges on local problems periodically. This will help in involving and engaging youth at the grass-root level in innovative activities, fostering creativity and identification and analysis of local problems.
- Develop strong linkages with IITs/NITs/Universities/Research Institutions and Industry;
- Develop synergy with Atal Tinkering Labs (ATL) by collaborating with such labs in the school/institutions across the country by way of exposure visits of student participants to the innovation hub facilities, sharing of success stories and training of mentors.

Digital Planetariums/Space & Astronomy Education Centres

- The Digital Planetariums & Astronomy Education Centres should strive to achieve the following over a period of 5 years from opening:
- Generate at least 50% of their operating cost;
- Achieve an annual visitors footfall in the Digital Planetariums & Astronomy Education Centres as follows:
    - Category – I around 100,000 (for NE Region - 75,000);
    - Category- II around 75,000 (for NE Region - 50,000);
    - Category-III around 25,000;
- Organize a minimum of 5-10 astronomy education programmes in a year.

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15. Clearances from the Government/Requirements/Commitments to be fulfilled by the State Govts./UTs:

i. Any new proposal submitted by the State Govt. /UTs under the scheme shall be considered on the basis of challenge method guidelines, as and when issued by the Government of India and per the criteria/parameters prescribed for the purpose in the scheme.

ii. For setting up the Science City/Science Centres/Innovation hubs/Digital Planetariums/modernization of existing science city/centre/innovation hub under the scheme, approval is required from Government of India.

iii. All other statutory clearances and approvals required by the local authorities of the Central/State/UT Government/other bodies etc. shall be obtained by the State Govts./UTs.

iv. State/UT Govt. shall give commitment to provide free land and funds as per norms and employ adequate professional staff for operation and management of Science Cities/Science Centres/Innovation Hubs/Digital Planetariums.

v. The land once offered for setting up of New Science City/Centre/Inn. Hub/Digital Planetarium project cannot be changed subsequently by the applicant State/UT/Society. If any such incident is noticed after release of grant by the Ministry, the released amount shall be recovered from the organization with applicable rate of interest.

vi. An MOU will be signed between NCSM & State/UT Govt. for implementation of the Science Cities/Science Centres/Innovation Hub/Digital Planetariums Projects, if undertaken and implemented by NCSM.

vii. It would be mandatory for the implementing agency to provide provisions for the solar roof top in the DPR for setting up of Science City/Science Centre/Innovation Hubs/Digital Planetariums.

viii. The land of the science city/science centre/digital planetariums shall be chosen in consultation and approval of NCSM.

ix. The land earmarked for the science centre should be free from all encumbrances and encroachment. It should be fully developed and secured (with boundary wall) land with electricity, water, sewerage connection and telecommunication facility available in the nearby vicinity. The land should have good road connectivity for easy access and transport.

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x. Apart from the core staff (As per Annexures**A, B, C&D**), other essential services may be outsourced by the Society/Executive/Governing Council.

xi. The Science City/Science Centre building will be developed in modular form to provide scope for future expansion, if need be, based on the growth of local population and visitor figures to the centre.

xii. In the construction of the building,priority/preference may be given to local material, labour, expertise. Also, wherever possible community participation may be encouraged. Cleanliness and sanitation must be ensured inside the Science City/Science Centre/Innovation Hub/Digital Planetariums building, in the premises of the Complex and around it. Use of renewal energy, energy saving devices may be given top preference.

xiii. All the buildings constructed under the scheme should be designed keeping applicable fire safety norms of the location and National Building Code (NBC).

xiv. All disputes arising out of the scheme shall be subject to jurisdiction of Courts of Delhi/New Delhi only.

16. Pre-requisites for approval by the Ministry of Culture, GOI

i. **Detailed Project Report (DPR)**: State Govt./UTs desirous of having a Science City/Science Centres/Digital Planetariumsshall submit a DPR. The DPR should include feasibility report, demand survey for need of science city/science centre at the location, commitment of land free of cost and the recurring cost, projected footfall, expected revenue generation to determine whether the proposed Science City/Science Centre/Digital Planetarium is viable and financially self-sustainable. A DPR format is enclosed at **Annexure 'E'**.

The Science Centres/institutions desirous of having Innovation hubs shall submit a DPR in the format enclosed at **Annexure F**.The DPR for the Innovation Hub will be appraised by the National Level committee constituted by MoC.

The Science Cities/Centres/innovation hubs desirous of modernization/upgradation of existing facilities as per **Annexure G** are required to submit a DPR in the format enclosed at **Annexure H**.

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ii. The DPR submitted for Science City/Centres/Digital Planetariums once submitted by the State Govt./UT Adm. will be appraised by a Project Appraisal Committee (PAC) and for further recommendation to obtain approval of competent authority. It will comprise of the following members:

a. JS (M), MoC, GoI
b. Director/DS (Museums), MoC
c. Representative from IFD, MoC
d. DG, NCSM
e. Director, NCSM dealing with SPoCS.

17. Relaxation of Criteria:

The following eligibility criteria may be relaxed and/or modified in special cases/circumstances by the HCM, Government of India.

i. Population
ii. Land
iii. Funding Pattern
iv. Feasibility and Financial Viability of the project considering the intangible outcome of the facility in terms of knowledge gain.

18. Who are eligible for financial assistance?

State Governments/Union Territories and the Societies / Authorities promoted by the State/UT Govts. for the purpose of Science City/Science Centre/Innovation hubs/Digital Planetarium shall be eligible for financial assistance from the GOI as per the norms.

19. How to submit the proposal?

Proposals with DPR may be submitted for consideration to:

Joint Secretary (Museums)
Ministry of Culture,
Government of India,
Shastri Bhawan,
New Delhi-110001

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Annexure-A

SCIENCE CITY

1. Contents

The exhibits and activities of a Science City shall have the right mix of scientific values and novelty in presentation so as to be able to attract the common people from every walk of life. Edutainment shall be the key concept in designing the exhibit and activities of the Science City. It will provide wide opportunities for visitors' participation in activities related to science and technology. The following major areas may be considered:-

A) Face to face with science and technology

- A science exposition hall to provide an exposure on cutting edge areas of science and technology and their impact on the society through interesting and enjoyable thematic presentation, experience based and immersive exhibits like large format films, 3D presentations, virtual reality experiences, simulators and many more hi-tech systems; the thematic presentation shall highlight Indian endeavour.

- The exhibits shall be multidisciplinary in theme and of hands-on minds-on in nature to the extent possible showcasing frontier areas of S & T. The topics change over a period of time with emergence of new areas in S&T. However, in the present context, subjects like Nano-technology, Space technology, Bio-technology, Robotics and Optical fibres, AR/VR, Computing Science, Information technology, Earth Science, Human Body, Bio-informatics, Heavy industries, Agriculture, Environment and recent understanding of scientific concepts etc. may be considered.

- A dedicated infrastructure shall be provided for corporate bodies, R&D institutions, scientific departments etc. to showcase current status of science and technology and R & D initiatives in respective areas of their activity.

- A 600–1000 seated auditorium for multipurpose use viz. science education programmes and science film shows, organising educational, cultural, industrial/ corporate programmes; (the capacity of the auditorium has been fixed keeping in view that one million visitors would visit the Science City).

Other institutions shall be encouraged to organise their conferences, lectures, meetings, exhibitions and cultural events in the Science City on payment of rental charge to cover all expenses for regular running and operation of the auditorium including electricity charges, municipal taxes etc. Although the State Governments shall be approached to provide electricity at concessional rates and ensure municipal tax at non-commercial rate, all taxes and royalties for conducting such programmes shall be borne by the organisers.

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B) Experimentation and curriculum supplement

- Interactive exhibits supplementing science education in schools and to explain basic principles of science and technology in an interesting and entertaining manner will be developed and set up here.

- Hands on activity based laboratories for the visitors and students with the intention to foster public awareness, engagement and understanding of cutting edge science and engineering like Biotechnology, Nanotechnology and Photonics etc. shall be set up. Such labs shall aim to link science centres and educational institutions with research institutions engaged in active cutting edge science and technology experimentation and research.

C) Learning science outside the four walls

Science Park aims to facilitate **"edutainment"**, i.e., education through entertainment. It would be designed to make science relevant to everyday lives through a non-formal, "hands on, mind on" approach. Characterized by its two-pronged channel of communication – exhibits and activities, the exhibits will be mostly interactive and help children and the adults alike to learn the basics of science through fun and enjoyment in natural and non-coercive situations. It would have something of interest to everyone regardless of social strata, education or age group and create a culture of learning. Science Park will provide a bridge to unite business, industry and community.

D) Visitors' recreational facilities/amenities

This area will include water bodies, a nature trail, road train, fountains, food plaza, gift and souvenir shops, restaurants, rest rooms and such other facilities which shall not only satisfy the needs of the visitors but increase the holding time.

E) Infrastructure

- The Science City will have following main facilities for the public:
- Science Exploration hall consisting of 5-7 large interactive science exhibitions
- Space Odyssey consisting of digital dome theatre, 3D show, simulator and space science exhibitions
- Demonstration areas to explain science through activities & experiments
- Outdoor Science Park
- Evolution Park
- Auditorium
- Workshop
- Public utilities consisting of cafeteria, gift store, visitor interpretation area etc.

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- Car parking
- Gate Plaza with ticketing, security & visitor reception and interpretation area.

F) Activity area for Innovative and creative activities

This will be used for innovative experiments (tod-fod-jod), thematic projects and science activity camps for students.

2. Exhibition area

A. Floor area for indoor exhibitions (minimum)

(a)	Science Exposition Hall	-	10000 sq.mt.
(b)	Open laboratory and interactive exhibits hall	-	2500 sq.mt.
(c)	Entrance Plaza and visitor's facilities	-	1500 sq.mt.
			Total: 14,000 sq.mt.

B. Outdoor expositions

(a)	Science Park	20,000 sq.mt.

While developing the permanent infrastructure care must be taken to maintain a ratio of 25:75 for covered and open areas so that the visitors are not confined in a particular place and there is enough space to accommodate a large gathering on special days of the year.

Provision for future extension shall also be made. A portion of the land area may be developed as visitor's services zone which may beautified by other agencies for raising funds to meet the operational costs of the Science City in order to make it self-sustaining.

3. Budget Estimate

Total estimated Project cost for implementation of a new Science City project is approx. Rs.232.70 Crore(Capital cost is Rs. 179 Crore and corpus fund is Rs. 53.70 Crore). For NE region, hilly terrains and island territories, the project cost of Science Cities will be Rs.279.30 Crore (Capital cost is Rs. 214.80 Crore and corpus fund is Rs. 64.50 Crore). However, detailed estimate for an individual project element needs to be prepared depending upon site condition, building design, foreign currency value and local cost of construction.

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A suggestive break up of different items of expenditure is as below:

REVISED ESTIMATE UNDER SPoCS FOR CONSTRUCTION OF SCIENCE CITY

(As per PAR-2019)

SL. No.	DESCRIPTION OF ITEM	AREA	UNIT	RATE	TOTAL (in Crore)
A)	**Expenditure on Building construction works**				
a)	Cost of land.*State Govt. shall provide it free of cost as part of its share for the project.				0.00
b)	Science Centre building 14,000 Sq. m. (Minimum) with indoor exhibition halls				
	i) R.C.C frame structure.	14000.0	Sq.m.	25,500.00	35.70
	ii) Stronger structural members to take heavy load above 500 kg/Sq.m.upto 1000 kg/Sq.m.	14000.0	Sq.m.	1,660.00	2.32
	iii) Resisting earth quake forces.	9000.0	Sq.m.	1,200.00	1.08
	iv) Every 0.3m Additional height of floor above normal floor height of 3.6 M **For building** (5.2m - 3.6m) = 1.6m/0.3m= 5.33 nos. say 6no's (additional ht.) **@ 335.00/- per 0.3m i.e (335.00x6)= 2010.00/-**	14000.0	Sq.m.	2,010.00	2.81
	v) Every 0.3 m higher plinth over normal plinth height of 0.45m (on GF area only) **For building** (0.9m - 0.45m) = 0.45m/0.3m= 2no's (additional ht.) **@ 335.00/- per 0.3m i.e (335.00x2)= 670.00/-**	9000.0	Sq.m.	670.00	0.60
	vi) Pile foundation on GF area only	9000.0	Sq.m.	16,600.00	14.94
	vii) Land development cost (levelling, Horticulture development, Strom water drainage, Sewer etc.)	89000.0	Sq.m.	745.00	6.63
				SUB TOTAL =	**64.08**

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c)	Internal electrification work including power wiring & plugs, central call bell system, lighting conductor and telephone conduits @ 17.5%				11.21
d)	External LED light / high mast / landscape lighting / for entire campus **(For 25.0 acre land excluding building location)**	89000.0	Sq. m.	150.00	1.34
e)	Internal Water supply and Sanitary Installation @4%				2.56
f)	Firefighting with wet riser & Sprinkler system and Automatic fire alarm system	14000.0	Sq. m.	1,800.00	2.52
g)	Car and bus parking areas / internal roads & paths / Rain Water Harvesting etc. **(For 25.0 acre land excluding building location)**	89000.0	Sq. m.	435.00	3.87
h)	Under Ground reservoir with static fire Tank (2,50,000 Litre)	250000.0	Litre	18.00	0.45
i)	Passenger Lift (8 Passenger)	6.0	Nos.	16,00,000.00	0.96
j)	Passenger Lift (20 Passenger)	2.0	Nos.	27,00,000.00	0.54
k)	Goods Lift (2 Ton)	2.0	Nos.	33,00,000.00	0.66
l)	Escalator (4 Flight)	4.0	Per Flight	35,00,000.00	1.40
m)	Air-Conditioning Work	700.0	TR	85,000.00	5.95
n)	Silent type DG set with AMF Panel, UPS, Misc. electrical equipment				4.00
o)	IP based CCTV system for indoor surveillance	14000.0	Sq.m.	200.00	0.28
p)	IP based CCTV system for external surveillance	89000.0	Sq.m.	200.00	1.78
q)	Chairs and Carpet				1.00
				TOTAL =	**102.60**
r)	Contingency @ 3% as per CPWD norms				3.08
s)	Architect Fee				5.13
				GRAND TOTAL (A) =	**110.81**
B)	**Expenditure on Exhibits, Equipment and Stores**				
a)	Large format film projection unit with laser projectors & accessories				25.00
b)	Simulator and 3D Film Theatre				4.00
c)	Exhibits and artefacts				
	i) Thematic exhibits for Face to Face with S & T				8.00

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	ii) Interactive exhibits for experimentation & curriculum supplement	2.00
d)	Projection equipment, audio-visuals, electrical installations etc.	
	i) For Auditorium	1.00
	ii) For Digital Panorama with laser projectors	22.00
e)	Misc. Equipment	
	i) Workshop tools and machineries	1.00
f)	Development of Science park exhibits including cost of exhibits	1.50
g)	Salary of Project Staff	2.50
h)	TA/DA for Project staff	0.40
i)	Other Adm. Expenses	0.40
j)	Advt. & Publicity	0.20
	GRAND TOTAL (B) =	**68.00**
	GROSS AMOUNT (A + B) =	**178.81**
	SAY =	**179.00**
	Towards Corpus Fund for the Operational Deficit funding of Science City after inauguration (@ 30% of Project cost)	**53.70**
	GRAND TOTAL =	**232.70**
	For NE region, Hilly Terrains and Island territories (Project Cost with an increase of 20%)	**214.80**
	For NE region, Hilly Terrains and Island territories (Corpus Fund with an increase of 20%)	**64.50**
	GRAND TOTAL =	**279.30**

Note:
1) Pile foundation, if required, will be considered after getting Soil Test Report. The additional cost shall have to be entirely borne by the State Government.
2) In case third party quality assurance, charges @ 1% of the estimated cost shall have to be entirely borne by the State Government.
3) Escalation of project cost shall be governed by successive cost index over DPAR-2019 as published by CPWD at the time of the project work. The extra cost on this account to be borne by the State government / local authority.

(The above estimate is for budgetary purpose only. Detailed cost estimates for individual projects are to be worked out based on the master plan prepared for the project.)

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4. Year wise utilization of capital expenditure

a. For all locations (other than North East including Sikkim/hilly terrain & island territories)

(Rs. in Crore)

Source	Project Cost (to be shared between GoI & State Govt. in 60:40)						Corpus fund	Grand Total
	1st Year (15%)	2nd Year (25%)	3rd Year (25%)	4th Year (25%)	5th Year (10%)	Total		
Govt. of India	16.11	26.85	26.85	26.85	10.74	107.40	10.74# (Maximum)	118.14
	26.85**	**44.75****	**44.75****	**44.75****	**17.90****	**179.00****	**53.70****	**232.70****
State/UT Govt.	**Rs. 114.56 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 42.96 Crore.**							
**** In case of Govt. of India fully funded project.** # Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT								

b. For NE regions including State of Sikkim

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 90:10)						Corpus fund	Grand Total
	1st Year (15%)	2nd Year (25%)	3rd Year (25%)	4th Year (25%)	5th Year (10%)	Total		
Govt. of India	29.00	48.33	48.33	48.33	19.33	193.32	12.90# (Maximum)	206.22
	32.22**	**53.70****	**53.70****	**53.70****	**21.48****	**214.80****	**64.50****	**279.30****
State/UT Govt.	**Rs. 73.08 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 51.60 Crore.**							
**** In case of Govt. of India fully funded projects.** # Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT								

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c. For hilly terrains, island territories other than 'b' above.

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 60:40)						Corpus fund	Grand Total
	1st Year (15%)	2nd Year (25%)	3rd Year (25%)	4th Year (25%)	5th Year (10%)	Total		
Govt. of India	19.33	32.22	32.22	32.22	12.89	128.88	12.90# (Maximum)	141.78
	32.22**	**53.70****	**53.70****	**53.70****	**21.48****	**214.80****	**64.50****	**279.30****
State/ UT Govt.	**Rs. 137.52 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 51.60 Crore.**							

**** In case of Govt. of India fully funded projects.**

Corpus fund to be provided upfront prior to starting of the project from GoI & State Govt./UT

6. Project Time line:

	Programme Schedule	From the date of placing of order for the construction of building
a	Construction of Building including space theatre, science exploration hall, panorama etc.	48 months
b	Development of Entrance Plaza	12 months
c	Development of Science Park	36 months
d	Fabrication of exhibits	30 months
e	Installation of exhibits	12 months (after completion of other facilities)
f	Opening of the centre	60 months (approx.)

20. Schedule of Recruitment

Sl. No.	To be recruited and posted within 6 months from the release of the fund by the State Govt.		To be recruited and posted within two year from the release of the fund by the State Govt.	
01	Director	01	Curator	03
02	SPA	01	Technical Assistant	02
03	Curator	02	Education Assistant	02
04	Executive Engineer	01	Technician	04
05	Technical Assistant (Civil)	02	Assistant (Gen)	05
06	Education Assistant	02	Upper Division Clerk	01

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07	Administrative Officer	01	Lower Division Clerk	04
08	Finance & Accounts Officer	01	Driver	01
09	Assistant (Gen)	03		
10	LDC	04		
11	Technicians	04		
	Total	22	Total	22
				Grand Total - 44

7. Expected Annual Expenditure after inauguration of a Science City

(Rs. in Crore)

Sl. No.	Item of expenditure	1st year	2nd year	3rd year
1.	Salary of regular staff	2.34	2.57	2.83
2.	Security/Conservancy contract	0.30	0.35	0.40
3.	Electricity (at concessional rate)	1.20	1.40	1.80
4.	Exhibit maintenance	0.25	0.40	0.50
5.	Equipment maintenance	0.15	0.15	0.20
6.	Building maintenance	0.10	0.10	0.15
7.	Paid publicity	0.10	0.15	0.20
8.	Space Odyssey film lease etc.	0.50	0.50	0.50
9.	Misc. office expenses	0.10	0.12	0.15
10.	Contingencies	0.10	0.12	0.15
11.	New Developments & Activities	0.15	0.30	0.90
12.	TA/DA	0.20	0.25	0.30
13.	Medical	0.05	0.06	0.10
14.	Books, Films etc.	0.005	0.0075	0.01
	Total:	**5.545**	**6.4775**	**8.19**

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8. Staff Requirement for Science City

Sl. No.	Designation and Pay Matrix (As per 7th CPC)**	Level (Cell)	No of posts	Total Yearly Remuneration (Rs. in Lakhs)
1.	Director (Rs.1,23,100 – 2,15,900)	13(1)	1	18.62
2.	Curator (Rs.56,100 – 1,77,500)	10(1)	5	43.70
3.	Executive Engineer (Rs. 67,700 – 2,08,700)	11(1)	1	10.45
4.	Education Assistant (Rs. 29,200 – 92,300)	5(1)	4	18.00
5.	Technical Assistant (Rs. 29,200 – 92,300)	5(1)	4	18.00
6.	Technician (Rs. 19,900 – 63,200)	2(1)	8	24.42
7.	Administrative Officer (Rs. 67,700 – 2,08,700)	11(1)	1	10.45
8.	Finance & Accounts Officer (Rs. 56,100 – 1,77,500)	10(1)	1	8.74
9.	Assistant (Gen) (Rs. 35,400 – 1,12,400)	6(1)	8	43.60
10.	SPA (Rs. 44,900 – 1,42,400)	7(1)	1	6.86
11.	Upper Division Clerk (Rs. 25,500 – 81,100)	4(1)	1	3.99
12.	Lower Division Clerk (Rs. 19,900 – 63,200)	2(1)	8	24.40
13.	Driver (Rs. 19,900 – 63,200)	2(1)	1	3.10
		Total	44*	234.33 ~ 234.00

** Security, housekeeping, gardening work shall be outsourced; hence staff recruitment for this category has not been projected.*

*** Equivalent pay scale/pay matrix to be adopted by the respective SGs/UT Admin.*

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Annexure – B

SCIENCE CENTRES

There will be 3 categories of Science Centres depending largely on population to be serviced:

I. Science Centre (Category-I)

1. Content:

The building will have a covered area of 4000 Sq. mtrs. (approx.) of which 1800 Sq. mtrs will be used as exhibit display halls, 1200 Sq. mtrs. as visitors' activity area and remaining 1000 Sq. mtrs as exhibit development laboratory, office etc. Scope will be provided for future extension of floor area.

Generally the following galleries and facilities will be set up in a Science Centre:

Permanent Galleries:

- Thematic Galleries: The Centre will have two thematic galleries. The galleries of the centre will be multidisciplinary in nature on themes of scientific importance as well as social relevance. The exhibits will be mostly interactive. These will be supplemented with visuals, illustrations and artefacts. The galleries will reflect all aspects of the chosen themes in a way easily comprehensible by students as well as common people.

- Fun Science: A group of interactive exhibits on Physical Science, Mathematics, Geography, Geology, Electronics, Life Science, Chemistry, Computer Science and Information Technology will form this gallery. The exhibits will be providing curriculum support to the students as well as make science learning a fun to the visitors.

Temporary Exhibition Hall:

In this hall various temporary exhibitions on important themes will be organised periodically and on different occasions.

Activity area for Innovative and creative activities:

This will be used for innovative experiments (tod-fod-jod), thematic projects and science activity camps for students.

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Outdoor Science Park:

Science brought outside the boundary of four walls. Interactive exhibits placed aesthetically in the lush greenery of the park. Children play with them while learns the fundamentals of science. Water body, Aviary, Herbal and Medicinal plant corner, Picnic area for visitors etc. are added attractions.

Taramandal:

The inflatable dome planetarium can provide an excellent way of interactive learning of astronomy. The programme will be held regularly at the centre.

Exhibit Development Lab:

This will be used for regular maintenance of exhibits and development of exhibits and kits in future. The Lab will be equipped with tools and machinery for fitting, carpentry, sheet metal, welding, electrical, electronics and painting works.

Mobile Science Exhibition (Optional):

The Mobile Science Exhibition (MSE) bus of the Centre will travel to schools situated in remote areas and will conduct exhibitions on relevant science and environmental topics throughout the year.This facility will be added to the Science Centre, on allotment of separate budget by the State Govt./UT.

Other facilities:

Computer Training Room, Science Library, Conference Room, Office, Store etc.

Educational and Training Programmes:

The centre will hold regular educational programmes like Science Demonstration Lecture, Popular lecture, Creative Ability Programme, Sky observation through telescopes, Computer awareness programmes, Science Quiz, Science Seminars and Science Fairs, Teachers' Training Programme, Community Awareness Programme, Anti-superstition Programme, Science Film Show etc. for students, teachers and common people. A training hall and a 150-seater auditorium will be used for these purposes.

There will be a Science Curriculum based activity corner/Innovation corner where students will learn the basic principles of science through experimentation in science and fabrication of science models, which can be used as teaching aids. This will supplement the formal science education imparted in the schools. The Innovation corner will help in nurturing innovation, creativity in the young minds. There will also be a children's activity corner.

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2. **Budget Estimate:**

Total estimated Project cost needed for implementation of a new Science Centre (Category-I) is Rs.41.00 Crore (Capital cost is Rs. 31.50 Crore and Corpus Fund is Rs. 9.50 Crore). However, for NE region, hilly terrains and island territories, the capital cost of science centres will be Rs. 49.10 Crore (Capital cost is Rs. 37.80 Crore and corpus fund is Rs.11.30 Crore). The required land for the science centre shall be made available free of cost by the State Govt./UT or the local body. However, detailed estimate for an individual project element needs to be prepared depending upon site condition, building design, foreign currency value and local cost of construction.

A suggestive break up of different items of expenditure is as below:

REVISED ESTIMATE UNDER SPoCS FOR CONSTRUCTION OF SCIENCE CENTRE
(Category- I)

(As per PAR-2019)

SL. NO	DESCRIPTION OF ITEM	AREA	UNIT	RATE	TOTAL (in Crore)
A)	**Expenditure on Building construction works**				
a)	Cost of land. *State Govt. shall provide it free of cost as part of its share for the project.				0.00
b)	Science Centre **Total = 4,000 Sq.m. (Minimum)**				
	i) R.C.C frame structure. a) GF: 2000 Sq.m. b) 1st Floor: 2000 Sq.m.	4000.0	Sq.m.	25,500.00	10.20
	ii) Stronger structural members to take heavy load above 500 kg/Sq.m.upto 1000 kg/Sq.m.	4000.0	Sq.m.	1,660.00	0.66
	iii) Resisting earth quake forces.	4000.0	Sq.m.	1,200.00	0.48
	iv) Every 0.3m Additional height of floor above normal floor height of 3.6 M				
	For building (5.2m - 3.6m) = 1.6m/0.3m= 5.33 nos. say 6no's (additional ht.) **@ 335.00/- per 0.3m i.e (335.00x6)= 2010.00/-**	4000.0	Sq.m.	2,010.00	0.80
	v) Every 0.3 m higher plinth over normal plinth height of 0.45m (on GF				

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	area only)				
	For building (0.9m - 0.45m) = 0.45m/0.3m= 2no's (additional ht.) **@ 335.00/- per 0.3m i.e (335.00x2)= 670.00/-**	2000.0	Sq. m.	670.00	0.13
	vi) Every 0.3 m deeper over normal depth of 1.2 m (on GF area only) **For building** (1.8m - 1.2m) =0.6m/0.3m= 2no's (additional depth) **@ 160.00/- per 0.3m i.e (160.00x2)= 320.00/-**	2000.0	Sq.m.	320.00	0.06
				SUB TOTAL =	**12.33**
c)	Internal electrification work including power wiring & plugs, central call bell system, lighting conductor and telephone conduits @ 17.5%				2.16
d)	External LED light / high mast / landscape lighting / for entire campus **(For 7.0 acre land excluding building location)**	24350.0	Sq.m.	150.00	0.37
e)	Internal Water supply and Sanitary Installation @4%				0.49
f)	Firefighting with wet riser & Sprinkler system and Automatic fire alarm system	4000.0	Sq.m.	1,800.00	0.72
g)	Car and bus parking areas / internal roads / landscaping / water body / Sewer / Strom drainage /Rain Water Harvesting tank **(For 7.0 acre land excluding building location)**	24350.0	Sq.m.	1,005.00	2.45
h)	Under Ground reservoir with static fire Tank (1,50,000 Litre)	150000.0	Litre	18.00	0.27
i)	Passenger Lift (8 Passenger)	1.0	Nos.	16,00,000.00	0.16
k)	Air-Conditioning Work (VRV / VRF System) (Galleries, Auditorium, Conference room etc.)	275.0	HP	55,000.00	1.51
l)	Silent type DG set with AMF Panel	300.0	KVA	11,000.00	0.33
m)	IP based CCTV system for indoor surveillance	4000.0	Sq.m.	200.00	0.08
n)	IP based CCTV system for external	24350.0	Sq.m.	200.00	0.49

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	surveillance		
		TOTAL =	**21.36**
o)	Contingency @ 3% as per CPWD norms		0.64
p)	Architect Fee		1.07
		GRAND TOTAL (A) =	**23.07**
B)	**Expenditure on Exhibits, Equipment and Stores**		
a)	Three Thematic Galleries of app. 600 Sq. m. with 50 exhibits each		3.75
b)	Science Park of approx. 4 acres area with pathway and required exhibits (50 nos.)		1.00
c)	Inflatable dome planetarium system (Taramandal)		0.10
d)	Fully function exhibit development lab		0.25
e)	Other facilities like Computer training area, Library, Conference Room, Stores and Office etc. with all required infrastructures.		0.80
f)	Training of required staff members and other miscellaneous expenses		0.15
g)	3D theater facility with equipment, furniture etc.		1.00
h)	Misc. (Building / Auditorium furnishing, signage, murals etc.		0.25
i)	Salary & TA/DA of Project Staff		1.130
		GRAND TOTAL (B) =	**8.43**
		GROSS AMOUNT (A + B) =	**31.50**
	Towards Corpus Fund for the Operational Deficit funding for Science Centre (Category -I) after inauguration (@ 30% of Project cost)		**9.50**
		GRAND TOTAL =	**41.00**
	For NE region, Hilly Terrains and Island territories (Project Cost with an increase of 20%)		**37.80**
	For NE region, Hilly Terrains and Island territories (Corpus Fund with an increase of 20%)		**11.30**
		GRAND TOTAL =	**49.10**

Note:

1) Pile foundation, if required, will be considered after getting Soil Test Report. The additional cost shall have to be entirely borne by the State Government.

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2) In case third party quality assurance, charges @ 1% of the estimated cost shall have to be entirely borne by the State Government.

3) Escalation of project cost shall be governed by successive cost index over DPAR-2019 as published by CPWD at the time of the project work. The extra cost on this account to be borne by the State government / local authority.

**The cost of the project is based on the current DPAR rates and shall be subject to revision as per RBI cost indices from time to time.*

3. Year wise utilization of capital expenditure

a. For all locations (other than North East including Sikkim/hilly terrain & island territories) (Rs. In Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 50:50)				Corpus fund	Grand Total
	1st Year (40%)	2nd Year (40%)	3rd Year (20%)	Total		
Govt. of India	6.30	6.30	3.15	15.75	1.90# (Maximum)	17.65
	12.60**	**12.60****	**6.30****	**31.50****	**9.50****	**41.00****
State/UT Govt.	**Rs. 23.35 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 7.60 Crore**					

**** In case of Govt. of India fully funded project.**

Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT

b. For NE region including Sikkim.

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 90:10)				Corpus fund	Grand Total
	1st Year (40%)	2nd Year (40%)	3rd Year (20%)	Total		
Govt. of India	13.61	13.61	6.80	34.02	2.26# (Maximum)	36.28
	15.15**	**15.15****	**7.50****	**37.80****	**11.30****	**49.10****
State/UT Govt.	**Rs. 12.82 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 9.04 Crore**					

**** In case of Govt. of India fully funded project.**

Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT

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c. **For hilly terrains & island territories other than locations in 'b' above.**

(Rs. in Crore)

Source	Project Cost (to be shared between GoI & State Govt. in 50:50)				Corpus fund	Grand Total
	1st Year (40%)	2nd Year (40%)	3rd Year (20%)	Total		
Govt. of India	7.56	7.56	3.78	18.90	2.26# (Maximum)	21.16
	15.12**	**15.12****	**7.56****	**37.80****	**11.30****	**49.10****
State/UT Govt.	**Rs. 27.94 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 9.04 Crore**					

**** In case of Govt. of India fully funded project.**

Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT

4. **Project Time line:**

	Programme Schedule	From the date of placing of order for the construction of building
a	Construction of Building	27 months
b	Development of Science Park	12 months
c	Fabrication of exhibits.	30 months
d	Installation of exhibits	09 months (after completion of other facilities)
e	Opening of the centre	42 months (approx.)

5. **Schedule of Recruitment**

Sl. No.	To be recruited and posted within 6 months from the release of the fund by the State Govt.		To be recruited and posted within one year from the release of the fund by the State Govt.	
01	Curator	02	Assistant (General)	01
02	Education Assistant	02	Upper Division Clerk	01
03	Technical Assistant	01	Junior Steno	01
04	Technicians	08	Lower Division Clerk	02
	Total	13	Total	05
				Grand Total - 18

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6. Expected Annual Expenditure after inauguration of a Science Centre (Category-I)

(Rs. in Crores)

Sl. No.	Item of expenditure	1st year	2nd year	3rd year
1.	Salary of regular staff	0.75	0.82	0.91
2.	Security/Conservancy contract	0.084	0.09	0.095
3.	Electricity (at concessional rate)	0.015	0.02	0.025
4.	Exhibit maintenance	0.034	0.037	0.04
5.	Equipment maintenance	0.034	0.037	0.04
6.	Building maintenance	0	0.01	0.015
7.	Contingencies	0.04	0.045	0.05
	Total:	**0.957**	**1.059**	**1.175**

7. Staff Requirement for Science Centre (Category-I)

Sl No.	Designation and Pay Matrix (As per 7th CPC)**	Level (Cell)	No of posts	Total Yearly remuneration (Rs. in Lakhs)
1.	Curator (Rs.56,100 –1,77,500)	10(1)	2	17.48
2	Education Assistant (Rs. 29,200 – 92,300)	5(1)	2	9.00
3.	Technical Assistant (Rs. 29,200 – 92,300)	5(1)	1	4.50
4.	Technician (Rs. 19,900 – 63,200)	2(1)	8	24.42
5.	Assistant (Gen) (Rs. 35,400 – 1,12,400)	6(1)	1	5.45
6.	Upper Division Clerk (Rs. 25,500 – 81,100)	4(1)	1	3.99
7.	Jr. Stenographer (Rs. 25,500 – 81,100)	4(1)	1	3.99
8.	Lower Division Clerk (Rs. 19,900 – 63,200)	2(1)	2	6.10
	Total		18*	74.93

** Security, housekeeping, gardening work shall be outsourced; hence staff recruitment for this category has not been projected.*

*** Equivalent pay scale/pay matrix to be adopted by the respective SGs/UT Admin.*

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II. Science Centre (Category II)

1. Content:

The building will have a covered area of 2000 Sq. Mtrs. (approx.) of which 1000 Sq. Mtrs. will be used as exhibit display halls, 300 Sq. Mtrs. for Temporary Exhibition area, 700 Sq. Mtrs. as visitors' activity area, exhibit development laboratory, office, Auditorium, Taramandal (Inflatable dome planetarium), Children Activity Area, stores, conference room/library and adult activity area, visitor's amenities etc.

Generally the following galleries and facilities will be installed in a Science Centre:

Permanent Galleries:

- Thematic Gallery: The main gallery of the centre will be on a theme of scientific importance as well as of social relevance such as Environment, Forest, Mountain, Natural Resources, Indigenous Technology highlighting the local resources and their apt utilisation. The exhibits will be mostly interactive and supplemented with visuals, illustrations and artefacts.

- Fun Science: A group of interactive exhibits on Physical Science, Mathematics, Geography, Geology, Electronics, Life Science, Chemistry, Computer Science and Information Technology will form this gallery. The exhibits will be providing curriculum support to the students as well as make science learning a fun to the visitors.

Outdoor Science Park:

Science brought outside the boundary of four walls. Interactive exhibits placed aesthetically in the lush greenery of the park. Children play with them while they learn the fundamentals of science. Water body, Aviary, Herbal and Medicinal plant corner, Picnic area for visitors etc. are added attractions.

Taramandal:

The inflatable dome planetarium can provide an excellent way of interactive learning of astronomy. The programme will be held regularly at the centre.

Exhibit Development Laboratory:

This will be used for regular maintenance of exhibits and development of exhibits and kits in future.

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Other facilities:

Temporary exhibition hall, Science Library, Conference Room, Office, Store etc.

Educational and Training Programmes:

The centre will hold regular Educational Programmes like Science Demonstration Lecture, Popular lecture, Creative Ability Programme, Sky observation through telescopes, Computer awareness programmes, Science Quiz, Science Seminars and Science Fairs, Teachers' Training Programme, Community Awareness Programme, Anti-superstition Programme, Science Film Show etc. for students, teachers and common people. A Training Hall and a 150-seat Auditorium will be used for these purposes.

There will be a Science Curriculum based activity corner/Innovation corner where students will learn the basic principles of science through experimentation in science and fabrication of science models, which can be used as teaching aids. This will supplement the formal science education imparted in the schools. The Innovation corner will help in nurturing innovation, creativity in the young minds. There will also be a children's activity corner.

Activity area for Innovative and creative activities::

This will be used for innovative experiments (tod-fod-jod), thematic projects and science activity camps for students.

2. Budget Estimate:

Total estimated Project cost needed for implementation of a new Science Centre (Category-II) is Rs.22.25 Crore (capital cost is Rs. 17.10 Crore and Corpus Fund is Rs. 5.15 Crore). However, for NE region, hilly terrains and island territories, the project cost of science centres will be Rs. 26.70 Crore (project cost is Rs. 20.50 Crore and corpus fund is Rs.6.20 Crore). The required land for the science centre shall be made available free of cost by the State Govt. or the local body. However, detailed estimate for an individual project element needs to be prepared depending upon site condition, building design, foreign currency value and local cost of construction.

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A suggestive break up of different items of expenditure is as below:

REVISED ESTIMATE UNDER SPoCS FOR CONSTRUCTION OF SCIENCE CENTRE
(Category- II)

(As per PAR-2019)

SL.NO	DESCRIPTION OF ITEM	AREA	UNIT	RATE	TOTAL (in Crore)
A)	**Expenditure on Building construction works**				
a)	Cost of land. *State Govt. shall provide it free of cost as part of its share for the project.				0.00
b)	Science Centre **Total = 2,000 Sq. m. (Minimum)**				
	i) R.C.C frame structure. a) GF: 1000 Sq. m. b) 1st Floor: 1000 Sq. m.	2000.0	Sq. m.	25,500.00	5.10
	ii) Stronger structural members to take heavy load above 500 kg/Sq. m. upto 1000 kg/Sq. m..	2000.0	Sq. m.	1,660.00	0.33
	iii) Resisting earth quake forces.	2000.0	Sq. m.	1,200.00	0.24
	iv) Every 0.3m Additional height of floor above normal floor height of 3.6 M				
	For building (5.2m - 3.6m) = 1.6m/0.3m= 5.33 nos. say 6no's (additional ht.) **@ 335.00/- per 0.3m i.e (335.00x6)= 2010.00/-**	2000.0	Sq. m.	2,010.00	0.40
	v) Every 0.3 m higher plinth over normal plinth height of 0.45m (on GF area only)				
	For building (0.9m - 0.45m) = 0.45m/0.3m= 2no's (additional ht.) **@ 335.00/- per 0.3m i.e. (335.00x2)= 670.00/-**	1000.0	Sq. m.	670.00	0.07
	vi) Every 0.3 m deeper over normal depth of 1.2 m (on GF area only)				
	For building (1.8m - 1.2m) = 0.6m/0.3m = 2no's (additional depth) **@ 160.00/- per 0.3m i.e (160.00x2)= 320.00/-**	1000.0	Sq. m.	320.00	0.03
				SUB TOTAL =	**6.17**
c)	Internal electrification work including power wiring & plugs, central call bell system, lighting conductor and telephone conduits @ 17.5%				1.08

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d)	External LED street light / high mast / landscape lighting for entire campus **(For 5.0 acre land excluding building location)**	18250.0	Sq. m.	150.00	0.27
e)	Internal Water supply and Sanitary Installation @4%				0.25
f)	Firefighting with wet riser & Sprinkler system and Automatic fire alarm system	2000.0	Sq. m.	1,800.00	0.36
g)	Car and bus parking areas / internal roads / landscaping / water body / Sewer / Strom drainage /Rain Water Harvesting tank **(For 5.0 acre land excluding building location)**	18250.0	Sq. m.	1,005.00	1.83
h)	Under Ground reservoir with static fire Tank (1,50,000 Litre)	150000.0	Litr.	18.00	0.27
i)	Passenger Lift (8 Passenger)	1.0	Nos.	16,00,000.00	0.16
k)	Air-Conditioning Work (VRV / VRF System) (Galleries, Auditorium, Conference room etc.)	120.0	HP	55,000.00	0.66
l)	Silent type DG set with AMF Panel	200.0	KVA	11,000.00	0.22
m)	IP based CCTV system for indoor surveillance	2000.0	Sq. m.	200.00	0.04
n)	IP based CCTV system for external surveillance	18000.0	Sq. m.	200.00	0.36
				TOTAL =	**11.67**
o)	Contingency @ 3% as per CPWD norms				0.35
p)	Architect Fee				0.58
				GRAND TOTAL (A) =	**12.60**
B)	**Expenditure on Exhibits, Equipment and Stores**				
a)	Two Thematic Galleries of app. 250 Sq. m. with 25 exhibits				2.00
b)	Science Park of approx. 3 acres area with pathway and required exhibits				0.80
c)	Inflatable dome planetarium system (Taramandal)				0.10
d)	Fully function exhibit development lab				0.20
e)	Other facilities like Computer training area, Library, Conference Room, Stores and Office etc. with all required infrastructures.				0.40
f)	Salary & TA/DA of Project Staff				1.00
				GRAND TOTAL (B) =	**4.50**
				GROSS AMOUNT (A + B) =	**17.10**

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	Towards Corpus Fund for the Operational Deficit funding for Science Centre (Category -II) after inauguration (@ 30% of Project cost)	**5.15**
	GRAND TOTAL =	**22.25**
	For NE region, Hilly Terrains and Island territories (Project Cost with an increase of 20%)	**20.50**
	For NE region, Hilly Terrains and Island territories (Corpus Fund with an increase of 20%)	**6.20**
	GRAND TOTAL =	**26.70**
	Note:	
	1) Pile foundation, if required, will be considered after getting Soil Test Report. The additional cost shall have to be entirely borne by the State Government.	
	2) In case third party quality assurance, charges @ 1% of the estimated cost shall have to be entirely borne by the State Government.	
	3) Escalation of project cost shall be governed by successive cost index over DPAR-2019 as published by CPWD at the time of the project work. The extra cost on this account to be borne by the State government / local authority.	

3. **Year wise phasing of capital expenditure**

a. For all locations (other than North East including Sikkim/hilly terrain & island territories)

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 50:50)				Corpus fund	Grand Total
	1st Year (40%)	2nd Year (40%)	3rd Year (20%)	Total		
Govt. of India	3.42	3.42	1.71	8.55	1.03# (Maximum)	9.58
	6.84**	**6.84****	**3.42****	**17.10****	**5.15****	**22.25****
State/UT Govt.	**Rs. 12.67 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 4.12 Crore**					

**** In case of Govt. of India fully funded project.**

Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT

***** In case of Govt. of India fully funded project.***

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b. For NE regions including Sikkim.

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 90:10)				Corpus fund	Total (100%)
	1st Year (40%)	2nd Year (40%)	3rd Year (20%)	Total		
Govt. of India	7.38	7.38	3.69	18.45	1.24# (Maximum)	19.69
	8.20**	**8.20****	**4.10****	**20.50****	**6.20****	**26.70****
State/UT Govt	**Rs. 7.01 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 4.96 Crore**					

**** In case of Govt. of India fully funded project.**

Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT

c. For hilly terrains, island territories other than 'b' above.

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 50:50)				Corpus fund	Total (100%)
	1st Year (40%)	2nd Year (40%)	3rd Year (20%)	Total		
Govt. of India	4.10	4.10	2.05	10.25	1.24# (Maximum)	11.49
	8.20**	**8.20**	**4.10****	**20.50****	**6.20****	**26.70****
State/UT Govt	**Rs. 15.21 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 4.96 Crore**					

**** In case of Govt. of India fully funded project.**

Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT

4. Project time Line:

	Programme Schedule	From the date of placing of order for construction of building
a	Construction of Building	21 months
b	Development of Science Park	12 months
c	Fabrication of exhibits.	24 months
d	Installation of exhibits	06 months (after completion of other facilities)
e	Opening of the centre	36 months (approx.)

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5. Schedule of Recruitment:

Sl. No.	To be recruited and posted within 6 months from the release of the fund by the State Govt.		To be recruited and posted within one year from the release of the fund by the State Govt.	
01	Curator	01	Lower Division Clerk	02
02	Education Assistant	01		
03	Technicians	04	-	-
	Total	06		02
				GRAND TOTAL - 08

6. Expected Annual Expenditure after inauguration of a Science Centre (Category-II)

(Rs. in Crores)

Sl. No.	Item of expenditure	1st year	2nd year	3rd year
1.	Salary of regular staff	0.31	0.34	0.37
2.	Security/Conservancy contract	0.062	0.063	0.066
3.	Electricity (at concessional rate)	0.01	0.012	0.015
4.	Exhibit maintenance	0.025	0.0275	0.03
5.	Equipment maintenance	0.025	0.0275	0.03
6.	Building maintenance	0	0.005	0.01
7.	Contingencies	0.025	0.03	0.035
	Total:	**0.457**	**0.505**	**0.556**

7. Staff Requirement for Science Centre (Category-II)

Sl No.	Designation and Pay Matrix (As per 7th CPC)**	Level (Cell)	No of posts	Total Yearly remuneration (Rs. in Lakhs)
1.	Curator (Rs.56,100 –1,77,500)	10(1)	1	8.74
2.	Education Assistant (Rs. 29,200 – 92,300)	5(1)	1	4.50
3.	Technician (Rs. 19,900 – 63,200)	2(1)	4	12.21
4.	Lower Division Clerk (Rs. 19,900 – 63,200)	2(1)	2	6.10
	Total		8*	31.55

** Security, housekeeping, gardening work shall be outsourced; hence staff recruitment for this category has not been projected.*

*** Equivalent pay scale/pay matrix to be adopted by the respective SGs/UT Admin.*

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III. Science Centre (Category III)

1. Content:

The building will have a covered area of 450 Sq. Mtrs. (approx.) of which 100 Sq. Mtrs. will be used as exhibit display halls, 100 Sq. Mtrs. for Temporary Exhibition cum multipurpose hall with activity area, office,, 250 Sq. Mtrs. as Innovation activity hall etc.

Generally the following facilities will be installed in a Science Centre (Category-III):

Gallery:

- Fun Science: A group of interactive exhibits on Physical Science, Mathematics, Electronics, Life Science, Chemistry, Computer Science and Information Technology etc. will form this gallery. The exhibits will be providing curriculum support to the students as well as make science learning a fun to the visitors.

Temporary exhibition cum Multipurpose Hall:

This will be used for periodic science exhibitions, science demonstrations, competitions, debates, quizzes, seminars, for students and teachers training etc.

Activity area for Innovative and creative activities:

This will be used for innovative experiments (tod-fod-jod), thematic projects and science activity camps for students.

Other facilities:

Office, Store, public utilities etc.

Educational and Training Programmes:

The centre will hold science exhibitions, science demonstrations, competitions, debates, quizzes, seminars, for students and teachers training etc.

There will be a hands on activity corner/Innovation corner where students will conduct innovative experiments/science projects on various ideas. The Innovation corner will help in nurturing innovation, creativity in the young minds

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2. Budget Estimate

Total estimated Project cost needed for implementation of a new Science Centre (Category-III) is Rs.6.65 Crores (capital cost is Rs. 5.10 Crore and Corpus Fund Rs. 1.55 Crore). However, for NE region, hilly terrains and island territories, the project cost of science centres will be Rs 7.95 Crores (capital cost is Rs. 6.10 Crore and corpus fund Rs. 1.85 Crore). The required land for the science centre shall be made available free of cost by the State Govt. or the local body. However, detailed estimate for an individual project element needs to be prepared depending upon site condition, building design, foreign currency value and local cost of construction.

A suggestive break up of different items of expenditure is as below:

REVISED ESTIMATE UNDER SPoCS FOR CONSTRUCTION OF SCIENCE CENTRE (Category- III)

(As per PAR-2019)

SL.NO	DESCRIPTION OF ITEM	AREA	UNIT	RATE	TOTAL (in Crore)
A)	**Expenditure on Building construction works**				
a)	Cost of land. *State Govt. shall provide it free of cost as part of its share for the project.				0.00
b)	Science Centre **Total = 500 Sq. m. (Minimum)**				
	i) R.C.C frame structure.	500.0	Sq. m.	25,500.00	1.28
	ii) Stronger structural members to take heavy load above 500 kg/Sq. m.upto 1000 kg/Sq. m..	500.0	Sq. m.	1,660.00	0.08
	iii) Resisting earth quake forces.	500.0	Sq. m.	1,200.00	0.06
	iv) Every 0.3m Additional height of floor above normal floor height of 3.6 M				
	For building (5.2m - 3.6m) = 1.6m/0.3m= 5.33 nos. say 6no's (additional ht.) @ **335.00/- per 0.3m i.e (335.00x6)= 2010.00/-**	500.0	Sq. m.	2,010.00	0.10
	v) Every 0.3 m higher plinth over normal plinth height of 0.45m (on GF area only)				
	For building (0.9m - 0.45m) = 0.45m/0.3m= 2no's (additional ht.) @ **335.00/- per 0.3m i.e (335.00x2)= 670.00/-**	500.0	Sq. m.	670.00	0.03
	vi) Every 0.3 m deeper over normal depth of 1.2 m (on GF area only)				
	For building (1.8m - 1.2m) = 0.6m/0.3m = 2no's (additional depth) @ **160.00/- per 0.3m i.e (160.00x2)= 320.00/-**	500.0	Sq. m.	320.00	0.02
				SUB TOTAL =	**1.57**

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c)	Internal electrification work including power wiring & plugs, central call bell system, lighting conductor and telephone conduits @ 17.5%				0.27
d)	External LED street light / high mast / landscape lighting for entire campus **(For 2.0 acre land excluding building location)**	7000.0	Sq. m.	150.00	0.11
e)	Internal Water supply and Sanitary Installation @4%				0.06
f)	Manual fire alarm system	500.0	Sq. m.	250.00	0.01
g)	Firefighting system (fire extinguisher & down comer with terrace tank)				0.15
h)	Car and bus parking areas / internal roads / landscaping / water body / Sewer / Strom drainage / Rain Water Harvesting tank **(For 2.0 acre land excluding building location)**	7000.0	Sq. m.	1,005.00	0.70
k)	Air-Conditioning Work (VRV / VRF System) (Galleries, Conference room etc.)	25.0	HP	5,000.00	0.14
l)	Silent type DG set with AMF Panel	100.0	KVA	11,000.00	0.11
m)	IP based CCTV system for indoor surveillance	500.0	Sq. m.	200.00	0.01
n)	IP based CCTV system for external surveillance	7000.0	Sq. m.	200.00	0.14
				TOTAL =	**3.27**
o)	Contingency @ 3% as per CPWD norms				0.10
p)	Architect Fee				0.18
				GRAND TOTAL (A) =	**3.55**
B)	**Expenditure on Exhibits, Equipment and Stores**				
a)	One Fun Science Gallery of appx. 100 Sq. m. with 20 exhibits				0.50
b)	Setting up of Temporary Exhibition cum Multipurpose hall (appx. 100 Sq. m.)				0.40
c)	Innovation and Activity Centre				0.50
d)	Salary & TA/DA of Project Staff				0.15
				GRAND TOTAL (B) =	**1.55**
				GROSS AMOUNT (A + B) =	**5.10**
	Towards Corpus Fund for the Operational Deficit funding for Science Centre (Category -III) after inauguration (@ 30% of Project cost)				**1.55**
				GRAND TOTAL =	**6.65**
	For NE region, Hilly Terrains and Island territories (Project Cost with an increase of 20%)				**6.10**
	For NE region, Hilly Terrains and Island territories (Corpus Fund with an increase of 20%)				**1.85**
				GRAND TOTAL =	**7.95**

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	Note:	
1) Pile foundation, if required, will be considered after getting Soil Test Report. The additional cost shall have to be entirely borne by the State Government.		
2) In case third party quality assurance, charges @ 1% of the estimated cost shall have to be entirely borne by the State Government.		
3) Escalation of project cost shall be governed by successive cost index over DPAR-2019 as published by CPWD at the time of the project work. The extra cost on this account to be borne by the State government / local authority.		

3. **Year wise utilization of capital expenditure**

a. **For all locations (other than North East including Sikkim/hilly terrain & island territories)**

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 50:50)			Corpus fund	Grand Total
	1st Year (60%)	2nd Year (40%)	Total		
Govt. of India	1.53	1.02	2.55	0.31# (Maximum)	2.86
	3.05**	**2.05****	**5.10****	**1.55****	**6.65****
State/UT Govt.	**Rs. 3.79 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 1.24 Crore**				
**** In case of Govt. of India fully funded project.** # Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT					

b. **For NE regions including Sikkim.**

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 90:10)			Corpus fund	Grand Total
	1st Year (60%)	2nd Year (40%)	Total		
Govt. of India	3.30	2.19	5.49	0.37# (Maximum)	5.86
	3.66**	**2.44****	**6.10****	**1.85****	**7.95****
State/UT Govt.	**Rs. 2.09 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 1.48 Crore**				
**** In case of Govt. of India fully funded project.** # Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT					

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c. **For hilly terrains, island territories other than 'b' above.**

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 50:50)			Corpus fund	Grand Total
	1st Year (60%)	2nd Year (40%)	Total		
Govt. of India	1.83	1.22	3.05	0.37# (Maximum)	3.42
	3.66**	**2.44****	**6.10****	**1.85****	**7.95****
State/UT Govt.	**Rs. 4.53 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 1.48 Crore**				

**** In case of Govt. of India fully funded project.**

Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT

4. **Project time Line:**

	Programme Schedule	From the date of placing of order for construction of building
a	Construction of Building	21 months
b	Fabrication of exhibits	18 months
c	Installation of exhibits/Innovation and creative corner facility	08 months (after completion of other facilities)
d	Opening of the centre	30 months (approx.)

5. **Schedule of Recruitment:**

Sl. No.	To be recruited and posted within 6 months from the release of the fund by the State Govt.		To be recruited and posted within one year from the release of the fund by the State Govt.	
01	Curator	01	Office Assistant	01
02	Education Assistant	01		
03	Technician	01	-	-
	Total	03		01
			GRAND TOTAL -	**04**

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6. Expected Annual Expenditure after inauguration of a Science Centre (Category-III)

(Rs. in Crores)

Sl. No.	Item of expenditure	1st year	2nd year	3rd year
1.	Salary of staff	0.19	0.21	0.23
2.	Security/Conservancy contract	0.03	0.04	0.05
3.	Electricity (at concessional rate)	0.005	0.007	0.009
4.	Exhibit/Equipment maintenance	0.005	0.01	0.015
5.	Building maintenance	0	0.005	0.01
6.	Purchase of consumables etc. for Innovation hub	0.01	0.015	0.02
7.	Contingencies	0.02	0.03	0.040
	Total:	**0.26**	**0.317**	**0.374**

7. Staff Requirement for Science Centre (Category-III)

Sl No.	Designation and Pay Matrix (As per 7th CPC)**	Level (Cell)	No of posts	Total Yearly remuneration (Rs. in Lakhs)
1.	Curator (Rs.56,100 –1,77,500)	10(1)	1	8.74
2.	Education Assistant (Rs. 29,200 – 92,300)	5(1)	1	4.50
3.	Technician (Rs. 19,900 – 63,200)	2(1)	1	3.05
4.	Lower Division Clerk (Rs. 19,900 – 63,200)	2(1)	1	3.05
	Total		4*	19.34

** Security, housekeeping, gardening work shall be outsourced; hence staff recruitment for this category has not been projected.*

*** Equivalent pay scale/pay matrix to be adopted by the respective SGs/UT Admin.*

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Annexure-C

INNOVATION HUBS

1. Content & facilities:

The Innovation Hub will have following facilities for students/mentors:

- *Hall of Fame*
- *Innovation Resource Centre*
- *Idea Lab*
- *Design Studio*
- *Tod Fod Jod/Break & Make Corner*
- *Kabad se Jugad (Making useful things from scraps) Corner*
- *Idea Box*

2. Physical requirements

Innovation hubs could be set up in approx. 1 acre of land in the science centre/institutions which shall be would be provided by the host institution/State Government **free of cost**.

Approximately 300 sq metres built up area would be required for setting various facilities as per details below:

Innovation Hubs Facilities	Space Requirement (Approx.)	Objectives/Contents/Activities
Discovery Hall	100 M^2	This area will have 10 to 15 interactive science exhibits/experiments to create excitement about science through exploration and discovery of underlying principles. This will help promote logical thinking.
Innovation Resource Centre and Hall of Fame- *Celebrating Inventions & Innovation*	50 M^2	This space will be used to showcase innovative ideas/products/implements that have transformed our world or have made significant impact on the way we conduct our lives along with respective inventors & innovators. Stories or inspirations behind such innovations/inventions will also be mentioned through appropriate modes. Besides these, implements/ samples of appropriate technology and traditional knowledge systems, art and craft and other areas of importance in public life in the respective regions shall be exhibited.

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Idea Lab (Innovation Laboratory) with following components: ➢ ThodPhod Jod (Break &Remake) Corner ➢ Kabbad Se Jugad (Build from scraps) ➢ Idea Box	100 M^2	This lab will have necessary basic facilities to pursue creative and innovative hobbies/activities that involve model making, basic science experimentation, design & fabrication of useful gadgets of practical use, teaching/learning kits or aids for better classroom transactions, testing of samples like soil, water, food items etc. Students learn to do things with their own hands, dismantle, reassemble and remake devices/gadgets. Students learn more by doing things practically using day to day scrap. Students generate their own innovative ideas and create an idea bank. The best ideas are chosen for experimentation/model making/project work.
Design Studio	50 M^2	
Public Utilities	-	Toilets/drinking water outlets/mentor's room etc.
Mentors / Guides	At least one dedicated mentor on contract basis. Additional mentoring support may be provided by NCSM centres	As far as possible, each institution shall try to provide mentoring and guidance support for innovation activities in its own centres. But that may not always be possible and hence external experts in different fields will also be engaged on honorarium basis. It would, however, be appropriate to engage on contract basis at least one core mentor, who shall be primarily responsible for coordinating and conducting the innovation centre activities.

Even though support for constructing the 300 sq. metre space is available within the scheme, priority shall be given to institutions/science centres/museums who could offer ready built space for the Innovation Hub.

3. Capital Expenditure:

The capital cost for setting up of the Innovation Hubs (new) shall be **Rs. 2.60 Crore** (Category-I). **In case built up space (approx. 300 Sq. mtrs) is available** (Category-II)**, the capital cost would be Rs. 1.50 Crore.**

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4. Recurring Expenditure

The expected expenditure*after inauguration of the **Innovation Hubswould be** Rs. 20.00 lakh per year.

**The share of recurring cost of the Govt. of India shall be available for initial three years of operation as incentive under the Scheme. After initial three years of operation, the State Govt./UTs/Institutions will undertake to continue the activities.*

5. Sharing of Funds

The Capital and the recurring cost of new Innovation Hubs shall be shared in the ratio 50:50 between GOI & the State Govt./UT/Institutions.

6. Operation & Management

The respective Science Cities/Science Centres/institutions/State Govts. shall be responsible for operating and maintaining the Innovation Hubs, deployment of required staff. The recurring expenditure including the salary component will be completely borne by the respective organizations. NCSM shall train the staff members on operation and maintenance of the Innovation Hubs.

The Hub should also develop a network of supporting institutions for adequate knowledge sharing. This would ensure community participation and ownership, which are essential for the growth and sustenance of these Innovation Hubs.

7. Time schedule:

The times required for implementation of the Innovation Hub project will be 24 months from the start of the construction work where space is to be created and 18 months where no space is required to be created.

8. Suggested activities

The Innovation Hubs would add innovation, creativity and enjoyment factors in learning. These would serve as springboards for new ideas and innovation helping the society and economy to face future challenges and meet rising aspirations of the growing population.

Normally the Innovation hub will target school/college going students in following manner:

- Group exposure/sessions of 2-3 hours for school/college students. This way about 10000 students would be targeted per year.

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- Enrolment of students as 'Innovation Hub Members' and allow them to work on innovative projects or participate in activities after school, weekends or on holidays. Atleast 300 members should be enrolled annually. Students from Govt. schools/colleges should be encouraged by giving concessional membership.
- Engagement in developing designs of products and participation in annual design competition.
- Periodic regional and eventually national level activities/fairs and competitions would be held so as to keep the spark of creativity, innovation and design alive and thriving in students.
- Periodic interaction of the participants with Innovators/Inventors & researchers.
- Periodic workshops on problem solving, generation of new ideas and solutions
- Periodic film shows on inventions & innovators.
- Organization and participation in Innovation fairs with their projects to collectively work on innovative ideas.
- To provide technical support to schools and colleges interested in setting up Innovation Clubs on their premises and through them promote a culture of innovation in the schools and colleges.
- To encourage and engage young people in the design studio to conceive new designs and fabricate new items, products, craft and so forth.
- To encourage discussion and interaction among students from different schools and geographic regions. This would ensure formal and informal knowledge exchange among communities of students, with Hubs acting as nerve centres.

9. Selection of sites/institutions

A National Level Committee will scrutinize the applications/DPR received along with necessary commitments from the respective State Government/parent organisation and recommend potentially viable projects. Mere applying for the grant-in-aid will not guarantee allocation. Innovative approach, sustenance plan, activities will decide the merit of each proposal.

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Annexure D

I. Digital Planetarium/Space & Astronomy Education Centre (Category I)

Content

The Planetarium will have the following features:

Main Opto-mechanical Star field Projector capable of projecting 8,500 stars down to 6.5 magnitude on tilted/ horizontal Projection Dome. The Projector will have Space / Earth mode system OR a Full dome digital planetarium projector system OR Both depending upon available fund.

- Dome Size: 12-meter diameter
- Seating Capacity – 120 to 125 (unidirectional).

Additional Items:

- Special Effect Projectors & Attachments
- Complete sound system for the Planetarium Theatre
- Projection dome
- Cove lights

Additional Facilities:

- Interactive exhibition on astronomy and space science
- Activity area for students on astronomy
- Sky observation through a GPS enabled telescope
- Lecture hall for astronomy lectures by specialists
- Office/ maintenance workshop/ show development room

Estimated cost of the project work for Setting up of 12.0 Meter Diameter (Aluminium) Dome Digital Planetarium

Total Built up Area = 800 Sq. m. (approx.).

(A) Civil & allied works based on DPAR-2019

Sl. No.	Description	Area Sq. m.	Rate / Sq. m..	Amount (in Crore)INR
1	Civil works including RCC Dome (16.0M dia).			
i.	RCC frame structure floor height 3.6 M.	800.0	25,500.00	2.04
ii.	Extra for additional floor area above FF level considering dome portion only	215.0	25,500.00	0.55

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iii	Extra for additional floor hight for dome portion i.e. 8.00 M-3.6 M=4.40 mtr. (area considering dome portion only)=4.4/0.3= 14.66 say 15 @335 per Sq. m.=Rs.5025 per Sq. m..	215.0	5,025.00	0.11
iv	Every 0.3 m. higher plinth over normal plinth height of 0.45 m. (on G.F. area only)	800.0	335.00	0.03
v	Every 0.30 m. deeper foundations over normal depth of 1.20 m. (on G.F. area only) considering 1.8 mtr depth: (0.6/0.3=2@160/-=320/-)	800.0	320.00	0.03
vi	Resisting Earthquake forces	800.0	1,200.00	0.10
vii	Additional cost for RCC Dome shuttering	420.0	2,273.85	0.10
	Total of 1 above:	-	-	**2.96**
2	**SERVICES**	-	-	-
i	Internal Water Supply & Sanitary Installations @4%			0.12
ii	Civil External service connections @1.25%			0.04
iii	Electrical External Service Connections @ 3.75%			0.11
iv	Internal electric installations @12.5%			0.37
3	EXTRA FOR			
i	Power wiring and plugs @4%			0.12
ii	Lightning conductors @0.25%			0.02
iii	Telephone conduits @ 0.25%			0.02
4	Underground water sump Reservoir (15000 ltrs)	15000	18.00	0.03
5	Acoustic treatment, False ceiling etc.			0.12
	Sub Total =			3.90
	Contingency @3% as per CPWD norms			0.12
(A)	Civil and allied works =			4.02
NB: Excluding Sanction Fees, Other Statutory fees & Consultancy Fees.				

Sl. No.	Description	Amount (in Crore)INR
(B)	Chairs	0.15
(C)	Air Conditioning of Planetarium theatre and exhibition areas only	0.50
(D)	Carpet in planetarium theatre	0.06
(E)	Firefighting System	0.25

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(F)	Pure Digital Full-dome solution with High Contrast LED/Solid State light source projection system with effective resolution of 4.5K after blending including cost of 12.0 Mtr. Dia inner Aluminium Dome	10.00
(G)	UPS	0.15
(H)	Telescope and accessories for sky observations	1.00
(I)	Office furniture furnishing and tools etc.	0.25
(J)	Exhibits on Astronomy (within the circular passage around the planetarium theatre with exhibition space of 350 Sq. m.. Approx.)	1.00
(K)	Transportation, Installation and Commissioning of Exhibits at site	0.20
(L)	TA/DA, Training and Misc. Expenditure	0.20
(M)	Architects Fee	0.22
	Total =	18.00
	Corpus Fund	**5.40**
	Total	**23.40**
	For NE region, Hilly Terrains and Island territories (Project Cost with an increase of 20%)	**21.60**
	For NE region, Hilly Terrains and Island territories (Corpus Fund with an increase of 20%)	**6.50**
	GRAND TOTAL =	**28.10**

Note:

1. For Hilly Region, Island Territory & North Eastern Region, 20% Extra on entire Capital Cost has been considered.

2. The building construction cost is considered based on normal foundation. If any special foundation is required to be done based on Soil Test Report, the additional cost will have to be borne by State Govt.

3. Escalation of project cost shall be governed by successive cost index over DPAR-2019 as published by CPWD at the time of the project work. The extra project cost on this account to be borne by the State Govt./Local Authority.

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6. Year wise utilization of capital expenditure

a. For all locations (other than North East including Sikkim/hilly terrain & island territories)

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 50:50)			Corpus fund	Grand Total
	1st Year (60%)	2nd Year (40%)	Total		
Govt. of India	5.40	3.60	9.00	1.08# (Maximum)	10.08
	10.80**	**7.20****	**18.00****	**5.40****	**23.40****
State/UT Govt.	**Rs. 13.32 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 4.32 Crore**				
**** In case of Govt. of India fully funded project.** # Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT					

b. For NE regions including Sikkim.

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 90:10)			Corpus fund	Grand Total
	1st Year (60%)	2nd Year (40%)	Total		
Govt. of India	11.67	7.77	19.44	1.30# (Maximum)	20.74
	12.96**	**8.64****	**21.60****	**6.50****	**28.10****
State/UT Govt.	**Rs. 7.42 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 5.20 Crore**				
**** In case of Govt. of India fully funded project.** # Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT					

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c. **For hilly terrains, island territories other than 'b' above.**

(Rs. in Crore)

Source	Project Cost (to be shared between GoI & State Govt. in 50:50)			Corpus fund	Grand Total
	1st Year (60%)	2nd Year (40%)	Total		
Govt. of India	6.48	4.32	10.80	1.30# (Maximum)	12.10
	12.96**	**8.64****	**21.60****	**6.50****	**28.10****
State/UT Govt.	**Rs. 16.00 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 5.20 Crore**				

**** In case of Govt. of India fully funded project.**

Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT

Time Schedule:

The project can be completed in 24 months' time from the date of commencement of construction.

Operation

The Planetarium shall be run by an agency or society formed for this purpose or by a suitable Society.

Recurring Expenditure:

Recurring expenditure of Rs. 50 lakh (Rs. 30 lakh salary, Rs.15 lakh maintenance, Rs. 5.0 lakh activities and spares approximately) per annum for operating the planetarium shall be borne by the agency/society running the Planetarium or by the State Government.

Revenue Generation:

Considering 60 per cent occupancy (60% - public; 40% - students) and 5 shows a day the planetarium will generate revenue as follows:

Audience	Revenue from Tickets (Rs.. in lakh) per year
Public (60% of 360 persons a day X Rs. 30 per person X 300 days in a year)	**19.44**
Students (40% of 360 students a day X Rs. 20 per student X 300 days in a year)	**08.64**
Total :	**28.08**

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Required staff strength:

To be recruited and posted within 3 months after the commencement of the project		
Sl. No	**Designation**	**No. of staff**
01	Curator/Education Officer (M. Sc.)	01
02	Education assistant (B. Sc.)	01
03	Lower Division Clerk	01
To be recruited and posted during the installation of the equipment in the planetarium		
04	Technical Assistant (Diploma)	01
05	Technicians (Electronics:01, Electrical:01)	02
	Total: 06	

- Security & Conservancy shall be run on contract.
- NCSM shall provide organic link for the activities & upgradation.
- NCSM will train the staff members recruited by the Society for the Centre

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II. Digital Planetarium/Space & Astronomy Education Centre (Category II)

Content

The Planetarium will have the following features:

Main Opto-mechanical Star field Projector capable of projecting 8,500 stars down to 6.5 magnitude on tilted or horizontal Projection Dome. The Projector will have Space / Earth mode system OR a Full dome digital planetarium projector system OR Both depending upon available fund.

- Dome Size: 10-meter diameter
- Seating Capacity – 80 to 85 (unidirectional).

Additional Items:

- Special Effect Projectors & Attachments
- Complete sound system for the Planetarium Theatre
- Projection dome
- Cove lights

Additional Facilities:

- Interactive exhibition on astronomy and space science
- Activity area for students on astronomy
- Sky observation through a GPS enabled telescope
- Lecture hall for astronomy lectures by specialists
- Office/ maintenance workshop/ show development room

Estimated cost of the project work for Setting up of 10.0 Mtr. Dia (Aluminium) Dome Digital Planetarium

Total Built up Area = 600 Sq.m. (approx).

(A) Civil and allied works based on DPAR-2019

Sl. No.	Description	Area Sq.m.	Rate / Sq. m.	Amount (in Crore)INR
1	**Civil works including RCC Dome (14.0M dia).**			
i.	RCC frame structure floor height 3.6 Meter	**600.0**	**25,500.00**	1.53

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ii.	Extra for additional floor area above FF level considering dome portion only	**165.0**	**25,500.00**	0.42
iii	Extra for additional floor hight for dome portion i.e. 7.00 M-3.6 M=3.40 mtr. (area considering dome portion only)=3.4/0.3= 11.33 say 12 @335 per Sq. m.=Rs.4020 per Sq. m..	**165.0**	**4,020.00**	0.07
iv	Every 0.3 m. higher plinth over normal plinth height of 0.45 m. (on G.F. area only)	**600.0**	**335.00**	0.02
v	Every 0.30 m. deeper foundations over normal depth of 1.20 m. (on G.F. area only) considering 1.8 mtr depth: (0.6/0.3=2@160/-=320/-)	**600.0**	**320.00**	0.02
vi	Resisting Earthquake forces	**600.0**	**1,200.00**	0.07
vii	Additional cost for RCC Dome shuttering	**320.0**	**2,273.85**	0.07
	Total of 1 above:	-	-	**2.20**
		-	-	-
2	**SERVICES**	-	-	-
i	Internal Water Supply & Sanitary Installations @4%			0.09
ii	Civil External service connections @1.25%			0.03
iii	Electrical External Service Connections @ 3.75%			0.08
iv	Internal electric installations @12.5%			0.28
3	**EXTRA FOR**			
i	Power wiring and plugs @4%			0.09
ii	Lightning conductors @0.25%			0.02
iii	Telephone conduits @ 0.25%			0.02
4	Underground water sump Reservoir(15000 ltrs)	15000	18.00	0.03
5	Acoustic treatment, False ceiling etc.			0.08
	Sub Total =			**2.91**
	Contingency @3% as per CPWD norms			0.09
(A)	**Civil and allied works =**			**3.00**
NB: Excluding Sanction Fees, Other Statutory fees & Consultancy Fees.				

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Sl. No.	Description	Amount (in Crore) INR
(B)	Chairs	0.01
(C)	Air Conditioning of Planetarium theatre and exhibition areas only	0.35
(D)	Carpet in planetarium theatre	0.04
(E)	Firefighting System	0.20
(F)	High Contrast LED/Solid state light source projection system with effective resolution of 3K after blending.	3.00
(G)	10M Dia Inner Aluminium Dome	1.25
(H)	UPS	0.05
(I)	Telescope and accessories for sky observations	0.10
(J)	Office furniture furnishing and tools etc.	0.15
(K)	Exhibits on Astronomy (within the circular passage around the planetarium theatre with exhibition space of 275 Sq. m. approx.)	1.25
(L)	Transportation, Installation and Commissioning of Exhibits at site	0.15
(M)	TA/DA, Training and Misc. Expenditure	0.20
(N)	Architects Fee	0.16
	Total=	**10.00**
	Corpus Fund (@30%)	**3.00**
	Total	**13.00**
	For NE region, Hilly Terrains and Island territories (Project Cost with an increase of 20%)	**12.00**
	For NE region, Hilly Terrains and Island territories (Corpus Fund with an increase of 20%)	**3.60**
	GRAND TOTAL =	**15.60**

Note:

1. For Hilly Region, Island Territory & North Eastern Region, 20% Extra on entire Capital Cost has been considered.

2. The building construction cost is considered based on normal foundation. If any special foundation is required to be done based on Soil Test Report, the additional cost will have to be borne by State Govt.

3. Escalation of project cost shall be governed by successive cost index over DPAR-2019 as published by CPWD at the time of the project work. The extra project cost on this account to be borne by the State Govt./Local Authority.

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7. Year wise utilization of capital expenditure

a. For all locations (other than North East including Sikkim/hilly terrain & island territories)

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 50:50)			Corpus fund	Grand Total
	1st Year (60%)	2nd Year (40%)	Total		
Govt. of India	3.00	2.00	5.00	0.60# (Maximum)	5.60
	6.00**	**4.00****	**10.00****	**3.00****	**13.00****
State/UT Govt.	**Rs. 7.40 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 2.40 Crore**				
**** In case of Govt. of India fully funded project.** # Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT					

b. For NE regions including Sikkim.

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 90:10)			Corpus fund	Grand Total
	1st Year (60%)	2nd Year (40%)	Total		
Govt. of India	6.48	4.32	10.80	0.72# (Maximum)	11.52
	7.2**	**4.8****	**12.00****	**3.60****	**15.60****
State/UT Govt.	**Rs. 4.08 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 2.88 Crore**				
**** In case of Govt. of India fully funded project.** # Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT					

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c. **For hilly terrains, island territories other than b above.**

(Rs. in Crore)

Source	Project Cost (to be shared between GoI & State Govt. in 50:50)			Corpus fund	Grand Total
	1st Year (60%)	2nd Year (40%)	Total		
Govt. of India	3.60	2.40	6.00	0.72# (Maximum)	6.72
	7.2**	4.8**	12.00**	3.60**	15.60**
State/UT Govt.	Rs. 8.88 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 2.88 Crore				
** In case of Govt. of India fully funded project. # Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT					

Time Schedule:

The project can be completed in 24 months' time from the date of commencement of construction.

Operation

The Planetarium shall be run by an agency or society formed for this purpose or by a suitable Society.

Recurring Expenditure:

Recurring expenditure of Rs 40 lakh (Rs. 25 lakh salary, Rs.10 lakh maintenance, Rs. 5.0 lakh activities and spares approximately) per annum for operating the planetarium shall be borne by the agency/society running the Planetarium or by the State Government.

Revenue Generation:

Considering 60 per cent occupancy (60% - public; 40% - students) and 5 shows a day the planetarium will generate revenue as follows:

Audience	Revenue from Tickets (Rs.. in lakh) per year
Public (60% of 240 persons a day X Rs. 30 per person X 300 days in a year)	**13.00**
Students (40% of 240 students a day X Rs. 20 per student X 300 days in a year)	**5.76**
Total :	**18.76**

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Required staff strength:

To be recruited and posted within 3 months after the commencement of the project		
Sl. No	**Designation**	**No. of staff**
01	Curator/Education Officer (M. Sc.)	01
02	Education assistant (B. Sc.)	01
03	Lower Division Clerk	01
To be recruited and posted during the installation of the equipment in the planetarium		
04	Technical Assistant (Diploma)	01
05	Technicians (Electronics:01, Electrical:01)	02
	Total: 06	
• Security & Conservancy shall be run on contract. • NCSM shall provide organic link for the activities & upgradation. • NCSM will train the staff members recruited by the Society for the Centre		

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III. Digital Planetarium/Space & Astronomy Education Centre (Category III)

Content

The Planetarium will have the following features:

Mini Digital Projection System.

- Dome Size: 8-meter diameter
- Seating Capacity – 50 (unidirectional).

Additional Items:

- Special Effect Projectors & Attachments
- Complete sound system for the Planetarium Theatre
- Projection dome
- Cove lights

Additional Facilities:

- Activity area for students on astronomy
- Sky observation through a GPS enabled telescope
- Lecture hall for astronomy lectures by specialists
- Office/ maintenance workshop/ show development room

Estimated cost of the project work for Setting up of 10.0 Mtr. Dia (Aluminium) Dome Digital Planetarium

Total Built up Area = 450 Sq. m. (approx).

(A) Civil and allied works based on DPAR-2019				
-				-
Sl. No.	**Description**	**Area Sq. m.**	**Rate / Sq. m..**	**Amount (in Crore)INR**
1	**Civil works including RCC Dome (12.0M dia).**			
i.	RCC frame structure floor height 3.6 Mtr.	**450.0**	**25,500.00**	1.15
ii.	Extra for additional floor area above FF levelconsidering dome portion only	**120.0**	**25,500.00**	0.31

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iii	Extra for additional floor hight for dome portion i.e. 6.00 M-3.6 M=2.40 mtr. (area considering dome portion only)=2.4/0.3= 8 @335 per Sq. m.=Rs.2680 per Sq. m..	**120.0**	**2,680.00**	0.03
iv	Every 0.3 m. higher plinth over normal plinth height of 0.45 m. (on G.F. area only)	**450.0**	**335.00**	0.02
v	Every 0.30 m. deeper foundations over normal depth of 1.20 m. (on G.F. area only) considering 1.8 mtr depth :(0.6/0.3=2@160/-=320/-)	**450.0**	**320.00**	0.01
vi	Resisting Earthquake forces	**450.0**	**1,200.00**	0.05
vii	Additional cost for RCC Dome shuttering	**230.0**	**2,273.85**	0.05
	Total of 1 above:	-	-	**1.62**
2	**Services**	-	-	-
i	Internal Water Supply & Sanitary Installations @4%			0.06
ii	Civil External service connections @1.25%			0.02
iii	Electrical External Service Connections @ 3.75%			0.06
iv	Internal electric installations @12.5%			0.20
3	**EXTRA FOR**			
i	Power wiring and plugs @4%			0.06
ii	Lightning conductors @0.25%			0.01
iii	Telephone conduits @ 0.25%			0.01
4	Underground water sump Reservoir (15000 ltrs)	15000.00	18.00	0.03
5	Acoustic treatment, False ceiling etc.			0.08
	Sub Total =			**2.16**
	Contingency @3% as per CPWD norms			**0.06**
(A)	**Civil and allied works =**			**2.22**
NB: Excluding Sanction Fees, Other Statutory fees.				
(B)	Chairs			0.06
(C)	Air Conditioning of Planetarium theatre and exhibition areas only			0.30

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(D)	Carpet in planetarium theatre	0.02
(E)	Firefighting equipment (standalone using portable fire extinguisher)	0.20
(F)	Single projector fish eye lens equipment with effective resolution 2K	1.00
(G)	8M Dia Inner Aluminium Dome	1.00
(H)	UPS	0.05
(I)	Telescope and accessories for sky observations	0.06
(J)	Office furniture furnishing and tools etc.	0.10
(K)	Exhibits on Astronomy (within the circular passage around the planetarium theatre with exhibition space of 200 Sq. m.. approx.)	0.75
(L)	Transportation, installation and commissioning of exhibits at site	0.10
(M)	TA/DA, Training and Misc. expenditure	0.12
(N)	Architects Fee	0.12
	Total=	**6.10**
	Corpus Fund (@30%)	**1.85**
	Total	**7.95**
	For NE region, Hilly Terrains and Island territories (Project Cost with an increase of 20%)	**7.30**
	For NE region, Hilly Terrains and Island territories (Corpus Fund with an increase of 20%)	**2.20**
	GRAND TOTAL =	**9.50**

Note:

-

1. For Hilly Region, Island Territory & North Eastern Region, 20% Extra on entire Capital Cost has been considered.

2. The building construction cost is considered based on normal foundation. If any special foundation is required to be done based on soil test report, the additional cost will have to be borne by State Govt.

3. Escalation of project cost shall be governed by successive cost index over DPAR-2019 as published by CPWD at the time of the project work. The extra project cost on this account to be borne by the State Govt./Local Authority.

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8. Year wise utilization of capital expenditure

a. For all locations (other than North East including Sikkim/hilly terrain & island territories)

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 50:50)			Corpus fund	Grand Total
	1st Year (60%)	2nd Year (40%)	Total		
Govt. of India	1.83	1.22	3.05	0.37# (Maximum)	3.42
	3.66**	**2.44****	**6.10****	**1.85****	**7.95****
State/UT Govt.	**Rs. 4.53 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 1.48 Crore**				
**** In case of Govt. of India fully funded project.** # Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT					

b. For NE regions including Sikkim.

(Rs. in Crore)

Source	Project Cost (to be shared between GoI& State Govt. in 90:10)			Corpus fund	Grand Total
	1st Year (60%)	2nd Year (40%)	Total		
Govt. of India	3.94	**2.63**	**6.57**	**0.44# (Maximum)**	**7.01**
	4.38**	**2.92****	**7.30****	**2.20****	**9.50****
State/UT Govt.	**Rs. 2.49 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 1.76 Crore**				
**** In case of Govt. of India fully funded project.** # Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT					

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c. **For hilly terrains, island territories other than b above.**

(Rs. in Crore)

Source	Project Cost (to be shared between GoI & State Govt. in 50:50)			Corpus fund	Grand Total
	1st Year (60%)	2nd Year (40%)	Total		
Govt. of India	2.19	1.46	3.65	0.44# (Maximum)	4.09
	4.38**	**2.92****	**7.30****	**2.20****	**9.50****
State/UT Govt.	**Rs. 5.41 Crore to be released by State/UT Govt. upfront prior to starting of the project including the minimum share of corpus fund of Rs. 1.76 Crore**				

**** In case of Govt. of India fully funded project.**

Corpus fund to be provided upfront prior to starting of the project from GOI & State Govt./UT

Time Schedule:

The project can be completed in 24 months' time from the date of commencement of construction.

Operation

The Planetarium shall be run by an agency or society formed for this purpose or by a suitable Society.

Recurring Expenditure:

Recurring expenditure of Rs 40 lakh (Rs. 25 lakh salary, Rs.10 lakh maintenance, Rs. 5.0 lakh activities and spares approximately) per annum for operating the planetarium shall be borne by the agency/society running the Planetarium or by the State Government.

Revenue Generation:

Considering 60 per cent occupancy (60% - public; 40% - students) and 5 shows a day the planetarium will generate revenue as follows:

Audience	Revenue from Tickets (Rs. in lakh) per year
Public (60% of 150 persons a day X Rs. 30 per person X 300 days in a year)	**8.1**
Students (40% of 150 students a day X Rs. 20 per student X 300 days in a year)	**3.6**
Total :	**11.7**

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Required staff strength:

To be recruited and posted within 3 months after the commencement of the project		
Sl. No	**Designation**	**No. of staff**
01	Education Officer (M. Sc.)/Education Asst. (BSc)	01
02	Lower Division Clerk	01
To be recruited and posted during the installation of the equipment in the planetarium		
03	Technicians (Electronics:01, Electrical:01)	02
Total: 04		

- Security & Conservancy shall be run on contract.
- NCSM shall provide organic link for the activities & upgradation.
- NCSM will train the staff members recruited by the Society for the Centre

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Annexure E

Format for preparation of a Detailed Project Report (DPR) for Setting up of New Science Cities/Science Centres/Digital Planetarium

The Detailed Project Report (DPR) needs to be structured in accordance with the format given below. The DPR should be complete and the required information in all the sections provided irrespective of whether a part of it or whole of it was submitted with any of the earlier correspondence or the initial application. In other words the DPR will be a single document for assessing the application. An incomplete DPR will render the application liable for rejection.

The DPR will preferably be a hard bound volume in A4 size and in portrait alignment. Drawings for inclusion can be in A3 size, however integrated as a foldout within the volume.

The Drawings, Details, Views, Sketches and supporting Photographs may also be submitted in addition on Pen drive.

The DPR, in the prescribed format, will be submitted by all applicants.

The cues and/ or instructions against each Section/ Sub-section are given in *Italics*.

Contents of the DPR

1. **Cover Sheet:**
2. **Abstract and Executive Summary:**
3. **Profile Sheet (This sheet will contain the following) :**

   i. Name of the Applicant (*The State Govt. / UT/Regd. Society set up by Govt.)*
   ii. Name of the Nodal Agency *(the State /UT Govt. department):*
   iii. Registered Address of the Applicant:
   iv. E-Mail ID and Telephone Number:
   v. Year of Establishment of the Organisation (*in case of Regd. Society set up by Govt.):*
   vi. Type of Organization (State Govt. /UT/Society/Trust/Pvt. Etc.)*:*
   vii. Details of Registration (if applicable): *(copy to be provided as annexure)*
   viii. PAN Number (if applicable):
   ix. Service Tax Number (if applicable)
   x. Authorised Contact Person & Designation: (with telephone, mobile numbers and E – Mail ID)
   xi. Annual Budget:

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xii. Source of Funding (Self/Govt./Others):

4. Mandatory Documents:

i. Copy of Registration
ii. Memorandum of Association or Trust Deed
iii. Letter of Support from State Government
iv. Letter of Recommendation from District Authority
v. Authorisation Certificate
vi. Commitments for space, operation (sustenance of the facility)
vii. Audited Statement of Accounts for last three years

5. Background information:

i. History of the Department/Organisation
ii. Aims & Objectives of the Department/Organisation
iii. Organisational Structure and Management
iv. Support Base, Benefactors
v. Financial Resources & Summary Balance Sheets
vi. Additional /Special /Specific Information

6. The Proposal:

(This section should provide the complete extent and details of the proposal for which Financial Assistance is being sought. Qualitative and Quantitative justifications should be well supported by rationale and measurements respectively. The elaboration should clearly bring out the estimate of costs for Buildings and Infrastructure as separate from estimate of costs for other requirements. The proposal should bear in mind the limits of Financial Assistance set out for the scheme. No proposal should aim to seek funding with a view to use it for achieving a partial fulfilment of goals without any plan for completing the remainder.)

i. Science Centre/Digital Planetarium Category I / II / III (In case of Science Centres/Digital Planetarium only):
ii. Whether located in NE region or Hilly Terrain/Island territory? (Yes or No)
iii. Funding Pattern (Type A/Type B/Type C) :
iv. State/UT share of funding:
v. Population Details:

a. Type of location: City/Town (*strike out whichever is not applicable*)
b. Population of the above location (presently as per Census 2011);
c. Population of the District where the said location exists (presently as per Census 2011):

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vi. Whether any demand survey was conducted for the need of Science City/Science Centre at the proposed location: Yes / No
vii. If yes, a copy of the same to be included:
viii. Physical report on the site:
(Please fill the enclosed Annexure-E-I and attach with DPR):
ix. Building & Infrastructure: (Enclose a Design Brief)
x. Facilities of Science City/Science Centre/Digital Planetarium:
    a. Galleries/Exhibition (Proposed)
    b. Other Facilities
xi. Space Planning:
xii. Estimate of Costs:
xiii. Implementation Strategy:
xiv. Staff Requirement and Planning for Recruitment/Training:
xv. Outcome Evaluation Indicators:
xvi. Operation & Maintenance:
xvii. Special Provisions (if any):

7. Questionnaire to be filled up:

i. Whether all other statutory clearances and approval required by the local authorities of the Central/State/UT Government/other bodies etc. have been obtained by the State Govts./UT?
ii. Whether the State/UT Govt. has given commitment to provide free land and funds as per norms and employ adequate professional staff for operation and management of Science City/Science Centre/Digital Planetarium?
iii. Whether the implementing agency has provided provisions for the solar roof top in the DPR for setting up of Science City/Science Centre/Digital Planetarium?
iv. Whether the land earmarked for the science centre/Digital Planetarium is free from all encumbrances and encroachment?
v. Whether it is fully developed and secured (with boundary wall) land with electricity, water, sewerage connection and telecommunication facility available in the vicinity.
vi. Whether the land has good road connectivity for easy access and transport?
vii. Whether the buildings proposed to be constructed under the scheme are designed keeping applicable fire safety norms of the location and National Building Code (NBC)?

8. Sustenance and Growth

i. Present scenario of institutional financing
ii. Financial sustenance plan for the Science City/Science Centre/Digital Planetarium including projected visitor footfall, revenue generation etc.

02/11/2024

9. **Conclusions:** *(The conclusions should clearly bring out the anticipated impact of the project both in terms of quantitative and qualitative aspects. Local Innovation that will be brought about in the project may be indicated).*

Annexures *(if any)*

References

Acknowledgements

03/11/2021

Annexure E- I

Physical Report on Site
for setting up of
Science City/Science Centre/Digital Planetarium at .....

Sl. No.	Parameters	Site
1	Location	
2	Area of Land	
3	Distance from City centre	
4	Distance from nearest Railway Station	
5	Distance from Airport	
6	Distance from bus route	
7	Availability of Public transport (nearest distance)	
8	Level of site: Average elevation of site with respect to adjacent road.	
9	Physical appearance of site: Rocky/otherwise	
10	Frontage (Whether the site is visible from the main road?)	
11	Location of other Scientific/Educational Institutions nearby	
12	Encumbrances(pl. furnish a non-encumbrance certificate from local revenue officials)	
13	Ground water level- (Whether any tube well is available in the site or adjoining site.)	

Vadodara
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14	Availability of Municipal water	
15	Nearest high tension electrical line	
16	Nearest low tension electrical line	
17	Whether any High or Low tension electric line is passing through the site? (Yes/No)	
18	Nearest telephone line	
19	Availability of approach road	
20	Requirement of embankment (for site near river, Nullah, other water body)	
21	Availability of Sewage line	
22	Presence of any nulla or water body	
23	Any other place of interest nearby	
24	Tree Cover at the site	

(Signature of official)

P.S.: Please attach Site Map and Google Map.

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Annexure – F

Application & DPR for setting up of Innovation Hubs:

I. Application Form for Grants-in-aid for setting up of Innovation Hub

1. Name of the organization
2. Complete Address (With Telephone & Mobile No., e-mail)
3. Availability of Built Up Space (300 Sq m.): Yes/No
4. Organization's profile including its Objectives, Status and Activities (to be annexed)
5. Category of Innovation Hub applied for – I/II (I – Without built up Space, II-With built up space)
6. Details of the income from other sources including foreign sources during the last three financial years
7. Estimated cost of the event/programme (indicate total here and annex the details) for which funding is being sought
8. Details of own resources of the organization to carry out the proposed activity
9. Amount of grant-in-aid sought
10. Details of grants-in-aid sought/received from other bodies
11. Location of Site
12. Past experience in the related activities
13. Details of projects taken up in the last 10 years
14. Organization and management of work (Please give details of the organizational structure to implement the project)
15. Additional information, if any

It is certified that the information given above is correct and I undertake to abide by them on behalf of our organization.

Signature of applicant/Head of Organization
Name (In block letters)
Designation
Office Stamp

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Format for preparation of a detailed project report (DPR) for Innovation Hubs

Introduction:

The Detailed Project Report (DPR) needs to be structured in accordance with the format given below. The DPR will need to be complete and the required information in all the sections provided irrespective of whether a part of it or whole of it was submitted with any of the earlier correspondence or the initial application. In other words the DPR will be a single document for assessing the application. An incomplete DPR will render the application liable for rejection.

The DPR will preferably be a hard bound volume in A4 size and in portrait alignment. Drawings for inclusion can be in A3 size, however integrated as a fold out within the volume.

The Drawings, Details, Views, Sketches and supporting Photographs may also be submitted in addition on a CD/ DVD/Pen drive.

The DPR, in the prescribed format, will be submitted by all applicants.

The cues and/ or instructions against each Section/ Sub-section are given in *Italics*.

CONTENTS OF THE DPR

1. Cover Sheet
2. Abstract
3. Profile Sheet (This sheet will contain the following)

i. Name of the Organisation:
ii. Registered Address:
iii. E-Mail ID and Telephone Number:
iv. Year of Establishment of the Organisation:
v. Type of Organisation:*(Government/ State Government/ Private/Society/ Trust etc.)*
vi. Details of Registration (if applicable): *(copy to be provided as annexure)*
vii. PAN Number *(if applicable)*:
viii. Service Tax Number *(if applicable)*:
ix. Authorised Contact Person & Designation:
x. Annual Budget:
xi. Source of Funding *(Self/ Govt./ Others)* :
xii. Authorised Contact Person & Designation: (with telephone, mobile numbers and e-mail id)

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4. Mandatory Documents

i. Copy of Registration(In case of Societies)
ii. Memorandum of Association or Trust Deed(In case of Societies)
iii. Letter of Support from State Government
iv. Letter of Recommendation from District Authority
v. Authorisation Certificate
vi. Audited Statement of Accounts for Last Three Years
vii. Commitments for space, operation & sustenance of the facility

5. Background Information: Organisation *(where the present organization is a part of a larger organization)*

i. History of the Organisation
ii. Aims & Objectives of the Organisation
iii. Organisational Structure and Management
iv. Support Base, Benefactors
v. Financial Resources & Summary Balance Sheets
vi. Additional/ Special/ specific Information

6. The Proposal

(This section should provide the complete extent and details of the proposal for which Financial Assistance is being sought. Qualitative and Quantitative justifications should be well supported by rationale and measurements respectively. The elaboration should clearly bring out the estimate of costs for Buildings and Infrastructure as separate from estimate of costs for other requirements. The proposal should bear in mind the limits of Financial Assistance set out for the scheme. No proposal should aim to seek funding with a view to use it for achieving a partial fulfilment of goals without any plan for completing the remainder.)

7. Sustenance and Growth

i. Present Scenario of institutional financing
ii. Financial sustainable plan for the innovation hub

8. Conclusions: *(The conclusions should clearly bring out the anticipated impact of the proposal both in terms of quantitative and qualitative. Local Innovation that will be brought about in the project may be indicated.*

Annexure *(additional ones if any)*
References
Acknowledgements

03/11/2021

ANNEXURE G

MODERNIZATION/UP-GRADATION OF EXISTING SCIENCE CITIES/SCIENCE CENTRES/INNOVATION HUBS UNDER THE SCIENCE CITIES SCHEME

1. INTRODUCTION

India has over 50-60 Science Museums/Centres/Cities functioning in different States/UT's. 49 of them have been developed by NCSM since 1959. 25 centres are managed by NCSM and remaining 24 have been handed over to respective States/UT's/Societies for operation and management. Some Science Centres have been developed by State Govt./UT's and are operated and managed by Societies formed by them.

The existing science museums and centres developed in the past are having varying architecture, facilities, content, infrastructure and some of which do not conform to the prevailing trends in the world. With rapid development in science and technology, communication techniques, digital technologies, the Science Centres/cities require modernization/up-gradation commensurate with the modern trends and requirements.

2. OBJECTIVES

The scheme aims to provide grant/funds to modernize/upgrade and create a congenial spatial setting for diverse exhibitions/galleries/visitor amenities in the existing science cities/science centres/Innovation hubs developed with funding from MoC, GOI or developed by the State Govt./UTs with full funding.

3. ELIGIBILITY CRITERIA:

The Science Cities/Science Centres/Innovation Hubs who have completed **at least 5 years of operation and satisfactory performance** shall be eligible for receiving the grant under the scheme.

4. PRE-REQUISITES FOR APPROVAL BY THE MINISTRY OF CULTURE:

Detailed Project Report (DPR): The Science Cities/Science Centres/Innovation Hubs desirous to receive the grant from MoC, GOI shall submit the DPR in the approved format (Refer Annexure-H) to Ministry of Culture. The DPR shall be evaluated and vetted by NCSM or a committee constituted by Ministry of Culture with representation from NCSM.

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5. FACILITIES TO BE ADDED IN THE MODERNIZATION/UPGRADATION:

The existing science cities/science centres may be modernized/upgraded with the following facilities subject to availability of space and spare land within the funds sanctioned under the scheme:

a. Modernization of Galleries/Exhibitions & Halls/Science Parks/visitor's amenities.

b. Addition of galleries frontiers areas of Science & Technology and topics related to current issues in Science.

c. Digital panoramic thematic presentations based on important scientific topics as well as on science and culture inter-relationship.

d. Addition of open labs on Frontier Areas of Science & Technology to provide real scientific exploration by the public.

e. Presentations on social issues with scientific solutions after proper contextualization.

f. Addition of virtual and immersive experiences.

g. Creation of new facilities such as Tropical Forests, Outdoor Amphi-Theatre, Solar powered park, Holography theatre, Hall of Fame to celebrate inventions and inventors, Digitally recreated archaeological sites, Spark Theatre, Dark Rides, Simulators, Robotics corner, 3D facility, Interpretation centres etc.

h. Addition of a mobile science exhibition van/bus on a suitable theme for travelling in rural and nearby region of the location.

P.S.: In no case the funds provided under modernization/Up-gradation scheme shall be utilized for acquiring land/office vehicle etc. for the Science Centre/City.

6. BUDGET:

The actual budget will depend upon facilities identified for up- gradation/modernization. Total estimated cost for implementation for modernization/up gradation of Science Cities/Centres/Innovation Hubs would be as below:

Category	Total funding (Maximum) (Rs. In Crore)	Sharing of Funds between GOI & State Govt./UT /Society	Project/Scheme completion time (Maximum)
Science City (All locations (other than North East including Sikkim)	36.25	60:40	36 months
Science City in NE Region including Sikkim State	44.00	90:10	36 months
Science Centres -Category I (All locations (other than North East including Sikkim)	7.25	50:50	24 months

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Science Centres - Category I in NER including Sikkim state	8.70	90:10	24 months
Science Centres -Category II (All locations (other than North East including Sikkim)	3.65	50:50	24 months
Science Centres - Category II in NER including Sikkim State	4.35	90:10	24 months
Science Centres -Category III (All locations (other than North East including Sikkim)	2.20	50:50	18 months
Science Centres - Category III in NER including Sikkim State	2.90	90:10	18 months
Innovation Hubs	1.50	50:50	12 months

7. PROJECT IMPLEMENTATION

The project shall normally be undertaken by NCSM on turn-key basis. The funds for the project will be received by NCSM, both from Central Govt. & State Govts./UT's/Societies. NCSM shall take up the modernization/Upgradation of the Science Cities/Centres/Innovation Hubs on its own or through CMD, a wholly owned section 25 company of NCSM. NCSM shall be paid normal consultancy fees for execution of the project. An MOU will be signed between NCSM & State Govt./UT/Society for implementation of the Project.

In case of a State/UT Government or the Societies formed by the State/UT Governments seeking financial support from Government of India for a modernization/Upgradation project, to be implemented by the concerned Societies, the project will be vetted and processed by NCSM for approval of competent authority in Ministry of Culture, Govt. of India and NCSM shall be paid normal consultancy fees for the purpose. In that case funds will be released by Ministry of Culture, Govt. of India to the State Govt./UT or the Societies in a phased manner subject to sanction and release of State/UT's share of funds from the respective State/UT Governments/Societies and submission of utilization certificate by the State/UT Govt./Societies for the funds released from Government of India and the State Governments/UT/Societies.

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Annexure – H

Application & Format for preparation of a Detailed Project Report (DPR) for Modernization of existing Science City/Science Centres/Innovation Hubs

Application Form for Grants-in-aid for Modernization of existing Science City/Science Centres/Innovation Hubs

1. Name of the organization :
2. Complete Address (With Telephone & Mobile No., e-mail) :
3. Availability of Built Up Space: Yes/No
4. Organization's profile including its Objectives, Status and Activities (to be annexed)
5. Category of Science City/Science Centre/Innovation Hub applied for :
6. Details of the income from other sources including foreign sources during the last three financial years
7. Estimated cost of the facility (indicate total here and annex the details) for which funding is being sought
8. Details of own resources of the organization to carry out the proposed activity
9. Amount of grant-in-aid sought
10. Details of grants-in-aid sought/received from other bodies
11. Location of Site
12. Past experience in the related activities
13. Details of projects taken up in the last 10 years
14. Organization and management of work (Please give details of the organizational structure to implement the project)
15. Additional information, if any

It is certified that the information given above is correct and I undertake to abide by them on behalf of our organization.

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Signature of applicant/Head of Organization
Name (In block letters)
Designation
Office Stamp

Format for preparation of a detailed project report (DPR) for Modernization of existing Science City/Science Centres/Innovation Hubs

Introduction:

The Detailed Project Report (DPR) needs to be structured in accordance with the format given below. The DPR will need to be complete and the required information in all the sections provided irrespective of whether a part of it or whole of it was submitted with any of the earlier correspondence or the initial application. In other words the DPR will be a single document for assessing the application. An incomplete DPR will render the application liable for rejection.

The DPR will preferably be a hard bound volume in A4 size and in portrait alignment. Drawings for inclusion can be in A3 size, however integrated as a fold out within the volume.

The Drawings, Details, Views, Sketches and supporting Photographs may also be submitted in addition on a CD/ DVD/Pen Drive.

The DPR, in the prescribed format, will be submitted by all applicants.

The cues and/ or instructions against each Section/ Sub-section are given in *Italics*.

CONTENTS OF THE DPR

1. Cover Sheet

2. Abstract

3. Profile Sheet (This sheet will contain the following)

i. Name of the Organisation:
ii. Registered Address:
iii. E-Mail ID and Telephone Number:
iv. Year of Establishment of the Organisation:
v. Type of Organisation:*(Government/ State Government/ Private/Society/ Trust etc.)*
vi. Details of Registration (if applicable): *(copy to be provided as annexure)*
vii. PAN Number *(if applicable)*:
viii. Service Tax Number *(if applicable)*:
ix. Authorised Contact Person & Designation:
x. Annual Budget:
xi. Source of Funding *(Self/ Govt./ Others)* :
xii. Authorised Contact Person & Designation: (with telephone, mobile numbers and e-mail id)

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4. Mandatory Documents

i. Copy of Registration
ii. Memorandum of Association or Trust Deed
iii. Letter of Support from State Government
iv. Letter of Recommendation from District Authority
v. Authorisation Certificate
vi. Audited Statement of Accounts for Last Three Years
vii. Commitments for space, operation & sustenance of the facility

5. Background Information: Organisation *(where the present organization is a part of a larger organization)*

i. History of the Organisation
ii. Aims & Objectives of the Organisation
iii. Organisational Structure and Management
iv. Support Base, Benefactors
v. Financial Resources & Summary Balance Sheets
vi. Additional/ Special/ specific Information

6. The Proposal

(This section should provide the complete extent and details of the proposal for which Financial Assistance is being sought. Qualitative and Quantitative justifications should be well supported by rationale and measurements respectively. The elaboration should clearly bring out the estimate of costs for Buildings and Infrastructure as separate from estimate of costs for other requirements. The proposal should bear in mind the limits of Financial Assistance set out for the scheme. No proposal should aim to seek funding with a view to use it for achieving a partial fulfilment of goals without any plan for completing the remainder.)

7. Sustenance and Growth

i. Present Scenario of institutional financing
ii. Financial sustainable plan for the new facility to be created under modernization/upgradation

8. Conclusions: *(The conclusions should clearly bring out the anticipated impact of the proposal both in terms of quantitative and qualitative. Local Innovation that will be brought about in the project may be indicated.*

Annexure *(additional ones if any)*
References
Acknowledgements

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