Date: 1st September 2017

Note for SFC
On National Mission for Education through Information & Communication Technologies (NMEICT) (Phase – II)

1.   Scheme Outline

1.1   Title of the Scheme.
National Mission for Education through Information & Communication Technologies (NMEICT) (Phase-II)

1.2   Sponsoring Agency (Ministry/Department)
Department of Higher Education, Ministry of Human Resource Development

1.3   Total Cost of the proposed Scheme
Rs. 490.00 Crores

1.4   Proposed duration of the Scheme
30 months from 1st October 2017

1.5   Nature of the Scheme
Centrally Sector Scheme

1.6   For Central Sector Schemes, sub-schemes/components, if any, may be mentioned. For Centrally Sponsored Schemes, central and state components, if any, may be mentioned:
This is a Central Sector scheme for using ICT to improve quality in higher education. The interventions include running DTH channels, providing National Digital Library, Providing digital connectivity to campuses etc.

1.7   **Whether a New or a Continuing Scheme? In case of a Continuing Scheme, whether the old scheme was evaluated and what were the main findings?**
The NMEICT was sanctioned on 2nd January 2009 for Rs. 4612 Cr to be executed from 2008-2009. The scheme concluded on 31st March 2017, and was extended till 30th September 2017. A third party evaluation has been done by NASSCOM, which found significant positive impact on higher education and recommended continuation. Recommendations are placed at **Annexure 1.**

1.8   **Whether in-principle approval is required?**
It is a proposal for continuation of the project. Not Applicable

1.9   **Whether a Concept Paper or a Detailed Paper has been prepared and stakeholders consulted? In case of new Centrally Sponsored Schemes, whether the State Governments have been consulted?**
The project is based on the recommendations of the third party evaluation which has given a roadmap for future implementation.

1.10   **Which existing schemes/sub-schemes are being dropped, merged or rationalized?**
The NMEICT Phase I included projects on e-content development, connectivity and a number of knowledge/technology dissemination projects. Only projects recommended for continuation with enhanced targets by the 3rd party evaluation are proposed in Phase II.

1.11   **Is there an overlap with an existing scheme/sub-scheme? If so, how duplication of effort and wastage of resources are being avoided?**
No.

1.12   In case of an umbrella scheme (program) give the details of schemes and sub-schemes under it along with the proposed outlay component-wise.

Table 1: Physical and financial projections

Segment	Detail	Base line (for physical targets)	Physical			Financial							Total
			2017-18	2018-19	2019-20	2017-18	2017-18	2018-19	2018-19	2019-20	2019-20		Total
						NR	R	NR	R	NR	R		R+NR
DTH channels	Sattellite transponder charges					0	6	0	12	0	12		30
DTH channels	Uplinking cost for 32 Channels					0	6.4	0	12.8	0	12.8		32
DTH channels	Content creation (in Hrs)	20000	1600	4800	4800	8	0	24	0	24	0		56
DTH channels	Channel ops cost for 32 channels					0	1.6	0	3.2	0	3.2		8
ICT technology	NDL (Resources in Million)	10	4	8	8	4	2	18	4	18	4		50
ICT technology	e-Yantra (No. of Institutions)	263	200	300	500	6	0	9	0	15	0		30
ICT technology	FOSEE (No of Institutions)	700	500	1000	1000	3	0	5	0	7	0		15
ICT technology	Virtual labs (No. of Labs)	100	50	75	125	3	0	4.5	0	7.5	0		15
Connectivity	NKN connectivity to 1,000 best institutions (No. of institutions)	600	250	350	400	25	0	35	0	40	0		100
Connectivity	WiFi infrastructure in campuses (1000 Campus)	50	250	350	400	10	0	15	0	25	0		50
Connectivity	Cloud for the campuses (Storage in Terabytes)	100	50	50	50	5	0	5	0	5	0		15
Emerging trends	Training in new fields in 5 IITs @ one month each training	New	5000	10000	10000	2.5	0	5	0	5	0		12.5
Emerging trends	Funding new projects in emerging areas	New	5	10	15	10	0	20	0	30	0		60
Admin cost	PMU @ 5%					3.3	0	6	0	7.2	0		16.5
						79.8	16	146.5	32	183.7	32		490

Legend: All financial figures are in INR crores

NR - Non Recurring

R - Recurring

2.   Outcomes and Deliverables

2.1   Stated aims and objectives of the Scheme

The National Mission on Education Through Information and Communication Technology (NMEICT) has been envisaged as scheme to leverage the potential of ICT in providing High Quality personalised and interactive knowledge modules over the Internet/Intranet for all the learners in Higher Education Institutions in anytime and anywhere mode. These objectives are met through various projects of the scheme.

The aims and objectives of the individual projects are as follows:

1. The SWAYAM Prabha has been conceived as the project for telecasting high quality educational programs through 32 DTH channels on 24x7 basis
2. National Digital Library aims to collect, preserve and disseminate entire intellectual output of our country and provide on-line access from school level to post-graduate level including technical education.
3. The objective of e-Yantra is to incorporate Robotics into engineering education with the objective of engaging students through exciting hands on application on Mathematics, computer science and engineering principles
4. The purpose of FOSSEE is to promote use of open source software in educational institutions
5. Virtual labs provide a complete learning management system where students can use various tools for learning including use of sophisticated equipment in addition to web-resources, video lectures, animated demonstrations and self evaluation.
6. The objective of connectivity is to extent Internet and NKN connectivity to all students and faculty in Higher Education Institutions through Wi-Fi technology.
7. The Campus Cloud project provides the Data Centre facility to the Higher Education Institutions for hosting and sharing their Education contents
8. The projects in the Emerging technologies would enable the Education sector to keep pace with the emerging technologies.
9. The proposal to train the technical manpower/Faculty in emerging technologies in the IT would be run in summer/winter breaks in 5 IITs, in which the cost of the teaching would be met under the project and the participants pay for their stay.

2.2   Indicate year-wise outputs/deliverables in a tabular form.

Given in Table 1 above.

2.3   Indicate Outcomes of the Scheme in the form of measurable indicators which can be used to evaluate the proposal periodically. Baseline data or survey against which such outcomes should be benchmarked should also be mentioned.

The measurable indicators for each project has been indicated under the physical output/deliverables in Table-1 above

2.4   **Indicate other schemes/sub-schemes being undertaken by Ministries/Departments which have significant outcome overlap with the proposed scheme. What convergence framework have been evolved to consolidate outcomes and save public resources?**

The videos developed as part of MOOC in the SWAYAM project would be used in SWAYAM PRABHA DTH Channels. The additional videos that would be required to meet the objective of 4 hours of fresh content per day for the 32 Channels would be developed under this scheme.

3.   **Target Beneficiaries**

3.1   **If the scheme is specific to any location, area and segment of population, please give the details and details and basis for selection.**

The scheme will benefit all learners (casual to formal); Students & Faculty/Teachers across India.

3.2   **Please bring out specific interventions directed in favour of social groups, namely SC, ST, differently abled, minorities and other vulnerable groups.**

This scheme will benefit all groups and sections of the society.

3.3   **If the scheme has any gender balance aspects or components specifically directed at welfare of women, please bring them out clearly?**

This scheme is gender neutral.

3.3   **Please bring out special interventions, if any, in North East, Himalayan, LWE, Island territories and other backward areas.**

The DTH channels have been conceived to reach the unconnected areas in the north-east and in the tribal belts.

3.4   **In case of beneficiary oriented schemes, indicate the mechanism for identification of target beneficiaries and the linkage with Aadhaar/UID numbers.**

Not Applicable

3.5   **Wherever possible, the mode of delivery should involve the Panchayati Raj Institutions and Urban Local Bodies. Where this is intended, the preparedness and ability of the local bodies for executing the proposal may also be examined.**

Not Applicable

4. Cost Analysis

4.1   Cost estimates for the scheme duration: both year-wise component-wise segregated into non-recurring and recurring expenses.

Segement	Detail	Base line (for physical targets)	Physical 2017-18	Physical 2018-19	Physical 2019-20	Financial 2017-18 NR	Financial 2017-18 R	Financial 2018-19 NR	Financial 2018-19 R	Financial 2019-20 NR	Financial 2019-20 R	Total R+NR
DTH channels	Sattellite transponder charges					0	6	0	12	0	12	30
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						79.8	16	146.5	32	183.7	32	490

(all financial figures are in Crores)

Summary

Financial Year	Non Recurring (NR)	Recurring (R)	Total (in Crores)
2017-18	79.80	16.0	95.80
2018-19	146.50	32.0	178.50
2019-20	183.70	32.0	215.70
Grand Total	410.00	80.0	490.0

4.2   The basis of these cost estimates along with the reference dates for normative costing.

Norms for the cost estimates are as follow:

a) DTH channels:
   i. Satellite transponder charges - the actual cost payable to ISRO and NOCC/WPC (Dept of Telecom) have been accounted for.
   ii. Up linking cost for 32 channels @ Rs. 40 lakhs per channel per year to be paid to BISAG, Gandhingar
   iii. Content creation @ Rs.50,000 per hour (as per SWAYAM norms) for 11,200 hours, which is to be created over-and-above what is available from the SWAYAM.
   iv. Channel operations cost - for running the channel, Rs. 10 lakh per channel per year to be released to the channel coordinator.
b) National Digital Library: Actual costs have been estimated for the following:
   i. The content to be raised from 1 Crore digital(10 Miilion) resources to 3 Crore (30 Million) digital resources
   ii. Strengthening the servers and setting up Disaster Recovery system

      iii.   Increase in the storage to serve the increasing number of users from 10 lacs to 100 lacs

c) <u>ICT technology</u>: the cost for maintaining and expansion of the crucial interventions required for spread of the ICT in the institutions:

      i.   E-Yantra: Cover 1000 institutions @ Rs. 3 lakhs per institution, with the institution contributing the rest of cost for setting up robotic labs; and running competitions.

      ii.   Free and Open Source software for education (FOSSEE): To help 2,500 institutions in developing open source software required in academic projects @ Rs. 60,000 per institution per year.

      iii.   Virtual labs: To develop (250) new virtual labs for engineering and science education which can be used for teaching anywhere in the country, especially in the institutions without adequate lab facilities. @ Rs. 5 to 10 lakhs per lab.

d) <u>Connectivity</u>:

      i.   To support connecting high speed National Knowledge Network (NKN) to (1,000) best institutions each with more than 1,000 student strength through a participatory mode with the Institutions. The average contribution per Institution would be Rs. 10 lakh.

      ii.   To aim to provide WiFi facility to all the higher educational institutions through a participatory mode with Institutions in which the costs to Govt. would be limited to provision of local infrastructure. Total allocation would be Rs. 50 Cr over the project period.

      iii.   Maintaining/upgrading the Baadal – cloud services at IIT Delhi to serve all the campuses for their IT related activities. An amount of Rs. 15 Cr is provided for this in the project period for enhancing Storage capacity.

e) <u>Emerging areas</u>:

      i.   Training in emerging technologies: The objective is to retrain 25,000 IT teachers in the emerging technologies, so that they can transmit the same to students and others in their respective institution. For this there would be summer/winter trainings and the cost of teaching-learning @ Rs. 5,000 per person would be met from the project. Balance cost if any, has to be borne by the institution/teacher.

      ii.   New Projects in emerging areas: Projects will be sanctioned in areas identified in the third party evaluation such as - Artificial Intelligence (AI), Machine Learning (ML), Virtual Reality (VR) and Internet of Things (IoT). Each project will have clear deliverables and the average cost per project would be Rs. 2 Cr.

4.3   In case the land is to be acquired, the details of cost of land and cost of rehabilitation/resettlement, if any.

Not Applicable

4.4   **In case pre-investment activities or pilot studies are being carried out, how much has been spent on these?**

NDL Project is being executed as Pilot Project under NMEICT Phase-1. A total of Rs 21.65 Cr has been released for this & 10 million digital resources have been achieved with about 1 million active users.

4.5   **In case the scheme involves payout of subsidy, the year wise and component wise expected outgo may be indicated.**

Not Applicable

4.6   **In case committed liabilities are created, who will or has agreed to bear the legacy burden? In case assets are created, arrangements for their maintenance and upkeep?**

Not Applicable

5. Scheme Financing

5.1   **Indicate the sources of finance for the Scheme: budgetary support, extra-budgetary sources, external aid, state share, etc.**

Central Funding

5.2   **If external sources are interned, the sponsoring agency may indicate, as also whether such funds have been tied up?**

Not Applicable

5.3   **Indicate the component of the costs that will be shared by the State Governments, local bodies, user beneficiaries or private parties?**

Not applicable

6. Approvals and Clearances

Requirement of mandatory approvals and clearances from various local, state and national bodies and their availability may be indicated in a tabular form (Land acquisition, environment, forestry, wildlife etc.)

Not Applicable

7. Human Resources

7.1   **Indicate the administrative structure for implementing the Scheme. Usually creation of new structures, entities etc. should be avoided.**

The existing TEL Bureau would be handling this scheme, with the assistance of the Project Management Unit (PMU) which will be managed by EdCIL. The PMU will have experts along with support systems for managing and monitoring the projects under the scheme. The PMU would be paid 5% of the total cost of the project.

- Sanctioning of projects – would be done by the Project Approval Board chaired by the Secretary (HE) with experts and IFD.
- Monitoring of projects – will be done by the PMU.

- Release of money will be made by the MHRD using online PFMS (EAT module) based on certification by the institution, confirmed by the PMU.

7.2   **Manpower requirement, if any. In case posts, permanent or temporary, are intended to be created, a separate proposal may be sent on file to Pers. Division of Department of Expenditure (such proposals may be sent only after the main proposal is recommended by the appraisal body)**

No additional posts are sought

7.3   **In case outsourcing of services or hiring of consultants is intended, brief details of the same may be provided.**

The current arrangement of Project Management through EdCIL would be continued.

8.   **Monitoring and Evaluation**

8.1   **Please indicate the monitoring framework for the Scheme and the arrangements for statutory and social audit (if any).**

The projects in the scheme would be monitored by the PMU. The overall scheme would be monitored by the Mission Director.

8.2   **Please indicate the arrangement for third party/independent evaluation? Please note the evaluation is necessary for extension of scheme form one period to another.**

The third party evaluation would be conducted during the last quarter of the scheme.

9.   **Comments** of the Financial Advisor, NITI Aayog, Department of Expenditure and other Ministries/Departments may be summarized in tabular form along with how they are being internalized and used to improve this proposal.

(Comments will be added)

10.   **Approval sought**:

Approval of the SFC is sought for Rs. 490.00 crores (Rs. Four hundred and ninety crores only) for undertaking the mission NMEICT Phase II from 1stOctober 2017 to 31st March 2020 as per the details mentioned in para 1.12 above. All disbursements and monitoring of funds would be done through the EAT module of PFMS.

(R.Subrahmanyam)
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