OFFICE MEMORANDUM

Subject: Meeting of the Project Approval Board (PAB) held on 7.4.2021 to consider the Annual Work Plan & Budget (AWP&B) for the year 2021-2022 for National Achievement Survey (NAS) 2021 – Circulation of Minutes.

The meeting of Project Approval Board (PAB) was held on 07.04.2021 under the chairpersonship of Secretary (SE&L) to consider the Annual Work Plan & Budget (AWP&B), for National Achievement Survey (NAS) 2021.

2 The undersigned is directed to forward herewith the approved PAB minutes for the year 2021-22 for NAS 2021 for further necessary action.

Encl: as above.

(Dalbir Singh)
Under Secretary to the Government of India
Tel: 011-23385585
Email:- dalbir.singh@nic.in

To,

1. Prof. Sridhar Srivastava, Director, NCERT
2. Shri Manoj Srivastava, Director, CBSE
3. Dr. Indrani Bhaduri, Professor, NCERT

Copy to:

1. All TSG Consultants
2. Shri Saba Akhtar, NIC

Copy for information to:

1. PPS to Secy (SE&L)
2. PS to JS (SS-2)
3. PS to JS (SS-1)
4. PS to JS (Coord)
5. PS to JS (FA)

Government of India
Ministry of Education
Department of School Education and Literacy

Minutes of the Meeting of Project Approval Board (PAB) held on 7.4.2021 to consider the Annual Work Plan & Budget (AWP&B) 2021-22 for National Achievement Survey (NAS) 2021

A meeting to finalise the Annual Work Plan & Budget (AWP&B) for the year 2021-22 for undertaking NAS 2021 was held on 7.4.2021 under chairpersonship of Ms. Anita Karwal, Secretary (SE&L) through video conferencing. The list of participants is at **Annexure-I**.

2.   At the outset, Secretary (SE&L) welcomed all the participants to the PAB. She stated that huge budget constraints are expected during the next 3-4 years and therefore, the proposals for seeking funds should be rationalized appropriately to manage with the limited available funds.

3.   Shri JP Pandey, Director made a brief presentation on various activities proposed to undertaken by NCERT, CBSE and NIC with cost estimates against each activity. The copy of presentation is at **Annexure-II**.

4.   Secretary (SE&L) pointed out that the translation of tests in Hindi and Regional languages was undertaken by SCERTs during NAS 2017. Shri Maneesh Garg, JS (SS-II) stated that to ensure secrecy, the translation is being undertaken by NCERT and CBSE at the central level. Secretary (SE&L) mentioned that considering the variety of regional languages, there is need for ensuring contextualization. She suggested that regional offices of CBSE should be involved in this exercise. She also instructed that the translation work of Achievement Test (ATs) may be done by CBSE while for translation of PQ, TQ & SQ, SCERTs may be involved in the translation work.

5.   After activity-wise discussions, the following decisions were taken by PAB:

(i)   The Pre-survey verification of schools would be done by an App to be developed by NIC.

(ii) The Field Investigators may be deployed and report directly to CBSE to ensure nature of being a completely third party survey.

(iii) Hiring of the international technical agency for preparation of text books, auto generation of district report cards, processing of the State learning reports

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etc. to bring in world standards and worldwide acceptability of NAS may be undertaken by AIR who has been engaged by UNICEF. NCERT may liaise with UNICEF in this regard.

(iv) The proposal of CBSE amounting to **Rs. 15234 lakh** for undertaking various activities of NAS 2021 was approved.

(v) The proposal of NCERT amounting to **Rs. 688.52 lakh** for undertaking various activities of NAS 2021 was approved.

(vi) Further, NCERT proposed for conducting a **Study for the assessment of Foundational Numeracy and Literacy Skills** (Language Comprehension & Oral Reading Fluency/ORF) across the country during 2021. It has been envisioned to be positioned as a subsystem study under the National Achievement Survey (NAS) 2021. The main objectives of the study are to identify the learning gaps in foundational learning which will be used to help to design the intervention strategies, to establish reading proficiency benchmarks for fluency and comprehension for each of the languages being tested under the study, and to establish 'numeracy' benchmarks. The proposal of NCERT amounting to **Rs. 173.92 lakh** for undertaking the study in all 22 languages was approved.

(vii) NIC proposed for development of web application modules for pre-survey activities, survey execution and monitoring and post-survey activities for NAS 2021. DDG (Stats) suggested that to avoid duplication of post NAS activities, activity-wise responsibilities be assigned to NCERT, CBSE & NIC. Secretary (SE&L) instructed that NCERT may prepare a document on post NAS 2021 activities specifying action points for States/UTs, CBSE, NCERT & NIC and this document should be ready before undertaking NAS 2021. She also asked NCERT to share a report with the Ministry on activity-wise expenditure regarding post NAS 2017 activities. The proposal of NIC amounting to **Rs. 259.34 lakh** for undertaking various activities of NAS 2021 was approved.

6.   Secretary (SE&L) observed that conduct of NAS examination in a fair manner is to be ensured. On the day of NAS examination, checks may be made available similar to the checks undertaken by CBSE during Board exams. Observers of CBSE may be deputed to sensitive exam centres.

7.   Based on the aforesaid decisions, an overall budget estimates of **Rs. 16355.78 Lakhs** was approved for NAS 2021 by the PAB as follows:

SN	Institutions	Recommended amount (Rs in Lakhs)
1	CBSE	15234
2	NCERT (NAS 2021)	688.52
3	NCERT (FLN)	173.92
4	NIC	259.34
	Total	**16355.78**

The costing sheeting of activity-wise approvals is at **Annexure-III**.

8.   The meeting ended with thanks to the Chair.

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S. No.	Name of participant	Designation & office address
1	Ms. Anita Karwal	Secretary (SE&L)
2	Shri Maneesh Garg	Joint Secretary (SS-II), MoE
3	Shri Santosh Yadav	JS(SS-I), MoE
4	Shri Vipin Kumar	JS(Coord), MoE
5	Smt. Darshana M. Dabral	JS & FA, MoE
6	Shri P K Banerjee	DDG (Stats), MoE
7	Shri Sridhar Srivastava	Director, NCERT
8	Prof Indrani Bhaduri	NCERT
9	Dr. Joseph Emmanuel	Director, CBSE
10	Shri Manoj Srivastava	Director, CBSE
11	Shri Pramod Kumar T K	Joint Secretary, CBSE
12	Smt. Sweta Singh	Joint Secretary, CBSE
13	Shri JP Pandey	Director, MHRD
14	Shri Shobhit Gupta	Director, MoE
15	Shri Dalbir Singh	Under Secretary (MHRD)
16	Shri Saba Akhtar	NIC
17	Ms. Purabi Pattanayak	Chief Consultant, TSG
18	Ms Letha Rammohan	Chief Consultant, TSG

Annexure - II

National Achievement Survey (NAS) 2021

Project Approval Board 2021-22

7th April 2021

To be funded from national components of STARS

NAS Stakeholders

शिक्षा मंत्रालय भारत सरकार — Ministry of Education (MoE)	**Co-ordination, Guidance, Funding:** Overall monitoring of NAS project through a Steering Committee constituted by the Ministry.
Central Board of Secondary Education (CBSE)	**Assessment Administration:** delivery of NAS in sample schools through nominated Actors (functionaries), planning, confidential printing & delivery, logistics, training for all (except FIs) and conduction of examination on 12th Nov 2021.
National Informatics Centre (NIC)	**ICT Intervention and Automation:** NAS-2021 website & web application development for School Sampling & verification, Resource deployment, management & monitoring during the conduct of NAS examination, assessments of correlational effect of various subjects /teacher / school / parent social background etc. on education achievement, hosting of NAS Report cards (District and State Report cards). Centralized data centre for NAS.
National Council of Educational Research and Training (NCERT)	**Assessment Developer:** Development of assessment framework for target grades , Item testing, piloting, translation, finalization of competency-based item for Achievement test, preparation of background questionnaire.
Niti Aayog	**Advisory Support**
UNICEF for every child	**Technical Support**

Roles and Responsibilities- Ministry vide OM dated 18th Feb 2020 constituted a Steering committee

Activities	Agency(s) involved
• Development of Tools, Finalization of Achievement Tests items	NCERT
• Development of Questionnaires (PQ, TQ and SQ)	NCERT
• Translation of tests in Hindi and Regional languages	NCERT # (CBSE)
• Sampling design to be finalised by the group comprising of NCERT. DDG,UNICEF, NIC	NCERT. DDG, UNICEF, NIC
• Administration of the test in the sampled schools	CBSE
• Designing, Printing, Packing, Supply of Test Booklet (AT) and Survey Questionnaire (PQ,TQ & SQ) • Collection and centralized scanning for data capturing, scoring and processing	CBSE
• Selection, training of Observers (OBS), District Level Coordinator (DLC), Board Representative (BR), District Collection Centre, NAS QP Booklets and Survey Questionnaire Custodians (CUS)	CBSE
• Manuals, Guidelines, Report Forms etc. and training of DLC,BR, Observers, Custodians.	CBSE
• Selection, training of Field Investigators (FIs) trained by NCERT (appointed and paid by State/UT)	NCERT, SCERT $ (CBSE)
• Analysis of data to understand the learning gaps at school level, Dissemination of District reports, Conduct workshops at Regional/State level, Printing of Reports (Hindi & English) at State, National level	NCERT
• NAS Web Application/Portal for Date handling, Pre-Survey Stage (Verification, resource Management etc.), Delivery Stage Monitoring by concerned Agencies, Post NAS Reporting	NIC, CBSE, NCERT

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PAB 2020-21

◎ FY 2021: PAB approved Rs.127.01Cr. to CBSE.

◎ **1st Instalment Rs.1.63 crore released on March, 2021 to CBSE. Expenditure of Rs.24.54 lakh and UC submitted to Ministry vide letter dtd 01.04.2021.**

◎ FY 2021: PAB approved Rs. 8.54 crore to NCERT.

◎ **1st Instalment Rs.5 crore released; Expenditure of Rs.24.04 lakh**

◎ NAS deferred for 2021 and **12th Nov. 2021**(Single Day for Grades III, V, VIII and X) notified to all States and UTs.

Proposals for NAS: 2021-22

Sl. No.	Institutions	Amount (incrore)
1	CBSE	152.34
2	NCERT – NAS 2021	31.80
3	NCERT - NAS Foundational Learning 2021	7.56
	Total	191.70

NIC: Summary (in crore)	
Design and Development cost of Web based solution for NAS (6 Months)	2.10
Operation & Maintenance cost(2 Years)	0.49
Total Project Cost (Including all taxes and NICSI Administrative Charges)	**2.59**

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Recommendation for NAS 2021

Sl. No.	Institutions	Proposed Amount (incrore)	Recommended Amount (incrore)
1.	**Estimate for CBSE**	152.34	**152.34** *(discussion to be held on new additions)*
2.	**Estimate for NCERT - NAS 2021**	31.80	**7.71**
3.	**Estimate for NCERT - NAS Foundational Learning 2021**	7.56	**1.74**
4.	NIC (including for 6 months and 2 years)	2.59	**2.59**
	Grand Total	194.29	**164.38**

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CBSE

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CBSE Proposed Summary

S. No.	Head Name	PAB allocation in 2020-21 Amount (incrore)	Proposed for 2021-22 (incrore)
1	Cost of Designing, Printing. Packing, Supply of Test Booklet (AT) and Survey Questionnaire	22.50	22.50
2	Cost of Designing, Printing, Scanning of OMRs	9.14	9.14
3	Cost on Board Representatives (BRs) (Nos=2812)	7.31	7.31
4	Cost on Observers (140600 Observers= Sample Schools No)	54.83	54.83
5	Logistics	NIL	NIL
6	Custodian, District Collection Centre (DCC), District Level Coordinator (DLC)& and Pre-survey verification schools by DLC by deploying its staff	9.08	13.30
7	District Collection Centre(DCC) & (DLC) and associated cost	NIL	NIL
8	Cost on Secrecy Work (OMR handling Pre&Post-NAS processing by Computing Agencies	6.19	6.19
9	Establishment,Infrastructure cost (apportionment, salary allowances, conveyance) and remuneration etc.	4.86	4.86
10	Cost on Training	9.40	9.4 0
11	Other expenses	3.70	3.70
12	Cost on Field Investigators	NIL	19.40
13	Translation Work (AT,PQ,TQ,SQ all Gr 22 languages No of Translators per Medium=4 per Gr. 3 Days per Medium Medium=22 Lang	NIL	1.71
	Total	**127.01**	**152.34**

Additional Proposal of CBSE

Head No	Head Name		PAB Head (Basis = 4218000 Students)	PAB allocation in 2020-21 Amount (in crore)	Proposed for 2021-22 (in crore)
6	Custodian, District Collection Centre (DCC), District Level Coordinator (DLC) & and Pre-survey verification schools by DLC by deploying its staff	6.3	Additional Cost for Pre-survey Verification of School by DLC/Custodians at nominal rate of Rs.300/- per School (computed on 140600 School)	(Nil)	4.22

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Additional Proposal of CBSE

Head No	Head Name		PAB Head (Basis = 4218000 Students)	PAB allocation in 2020-21 Amount (in crore)	Proposed for 2021-22 (in crore)	Remarks
12.	Cost on Field Investigators	12.1	Fixed Remuneration including conveyance to FI to be paid by CBSE @Rs.900/- per FI (Gr-III to have 2 FIs and 1 each for other grades) (Gr III 70300 schools) + 70300 Gr V+ VIII+X)	NIL	18.98	CBSE may clarify on this additional need
		12.2	Lump Sum Proposed Cost for Nodal Officer at District Level (appointed by State / UT) and paid by CBSE @ Rs. 5000/- fixed for nominating FI Data collecting details in the District	NIL	0.37	
		12.3	Lump Sum Proposed cost for State Nodal Officer to coordinate with the Dist Nodal Officer, NIC. CBSE and DLC for state level coordination to be paid by CBSE @Rs.10000/- fixed		0.05	
			TOTAL under this head	NIL	19.40	

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Additional Proposal of CBSE

Head No	Head Name		PAB Head (Basis = 4218000 Students)	PAB allocation in 2020-21 Amount (in crore)	Proposed for 2021-22 (in crore)	Remarks
13.	Translation Work (AT,PQ,TQ,SQ all Gr 22 languages	13.1	Sitting Allowances for expert @Rs1500/- (fixed) per day for translation expert and proof expert	NIL NIL	0.21	
	No of Translators per Medium=4 per Gr. 3 Days per Medium Medium=22 Lang	13.2	Conveyance @Rs.1000/-(fixed) per day for expert	NIL	0.15	NCERT has also proposed for translation work
		13.3	Translation charges @Rs.200/-per item for translation expert, proof expert	NIL	0.92	
		13.4	Refreshment for Translation Expert, Proof expert @Rs.400/-	NIL	0.04	
		13.5	Stay Arrangement @Rs.3000/- for Translation Expert and Proof Expert	NIL	0.39	
			TOTAL under this head	NIL	1.71	

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NCERT

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Expenditure in 2020-21

Rs. in Crore

Approved (2020-21)	Released (2020-21)	Expenditure (2020-21)	Proposed (2021-22)	Recommended (2021-22)
8.54	5.00	Rs. 0.24	31.80	7.80

Activities Proposed	Expenditure Incurred (in Rs.)
APRIL 2020 TO MARCH 2021 **PREPARATION FOR THE CONDUCT OF THE SURVEY**	
• Finalization of Assessment Framework	IN HOUSE/ AIR
• Development and Finalization of Technical Standards and Sample Selection Method	DDG Statistics
• Finalization of Achievement Tests items (Virtual workshops mode)	Rs. 9,13,423/-
• Translation of tests in Hindi	Rs. 1,01,577/-
• Development of Questionnaires	IN HOUSE/AIR
• Field Try Out I. English as medium of instruction II. Hindi as medium of Instruction	Rs. 4,97,158 On going
• Analysis and Reporting of the piloting	Rs. 2,45,685
• Workshops for finalization of Guideline-cum-training Manual, Field Notes, School information sheet	Virtual/Distant mode
• Salary	Rs. 4,31,900
• Photocopy & Stationary Charges	Rs 2,14,509
• **Total**	**Rs. 24,04,252**

Proposal of NCERT 2021-22

S. No.	Activities Proposed	Proposed Dates From	Proposed Dates To	Estimated Expenditure (in lakh)	Recommendations (Rs. in lakh)
1.	Field try out, data entry and finalization of the Items for survey.	April	April	5.00	5.00
2	(a) Finalization of the Test Booklets in Source Language (English) and Translated in Hindi Using the rotated matrix design (a) Finalization of the Questionnaire	April	May	5.00	5.00
3.	Training of the 4 Master Trainers in each district for implementing the survey.	June	Oct	Budget to be proposed by CBSE	-
4.	Development of a prototype for a District Report Card	July	July	In house	-
5.	Development of a web-based platform for generating District Report Card	**July**	**October**	**10.00**	To be developed by NIC

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S. No.	Activities Proposed	Proposed Dates From	Proposed Dates To	Estimated Expenditure Rs. in lakh	Recommendations (Rs. in lakh)
6.	Generation of the District Reports	November	January 2022	In house	-
7.	Short term intervention with the States and UTs to Disseminate the NAS findings and to use the NAS findings in developing their AWBP.	January, 2022	March, 2022	1500.00	**100.00**
8.	Project Contingency for miscellaneous expenditure including TA/DA of staff/project staff visits, Toner/cartridge, one fixed line wifi connection @ Rs.5000/- pm., IT hardware, software, refreshment in the meetings and stationary, kits, books etc.	Apr.'2021	Mar.'2022	25.00	**25.00**
9	Project Staff Salary (NCERT)	Apr.'2021	Mar.'2022	135.84	**135.84**
10.	On boarding an international technical agency for preparation of test booklets, auto generation of district report cards, processing of the State learning Reports etc. to bring in world standards and worldwide acceptability to NAS.	Apr.'2021	Mar.'2022	1500.00	**500.00**
	TOTAL	**Apr.'2021**	**Mar.'2022**	**3180.84**	**770.84**

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NAS Project Staff Details –Present Status

Sl. No.	Designation	Date of Joining	Salary
1.	Sr. Consultant	15.03.2021	Rs. 60,000/-
2.	Consultant	01.03.2021	Rs. 45,000/-
3.	Consultant	08.03.2021	Rs. 45,000/-
4.	Data Manager	01.03.2021	Rs. 45,000/-
5.	Survey Associate	09.03.2021	Rs. 30,000/-
6.	Survey Associate	04.03.2021	Rs. 30,000/-
7.	Sr. Graphic Designer Cum Visualizer	01.03.2021	Rs. 30,000/-
8.	System Analyst	02.03.2021	Rs. 30,000/-
9.	System Analyst	11.03.2021	Rs. 30,000/-
10.	DTP Operator	03.03.2021	Rs. 23,000/-
11.	DTP Operator	12.03.2021	Rs. 23,000/-
12.	Computer Assistant	10.02.2021	Rs. 20,000/-
13.	Accountant	25.03.2021	Rs. 20,000

Presently 13 staff are working whereas NCERT has asked for 33 staff for 2021

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Slide 17

Proposed Staff for 2021-22

S. No.	Staff Detail	No. of Posts	Duration Apr 2021 to Mar 2022	Amount (Rs)
1.	Senior Consultant	4	12	28,80,000.00
2.	Data Manager	2	12	14,40,000.00
3.	Consultant	4	12	21,60,000.00
4.	Web Developer	1	12	5,40,000.00
5.	System Analyst	4	12	14,40,000.00
6.	Survey Associate	4	12	14,40,000.00
7.	Computer Assistant	4	12	9,60,000.00
8.	Sr. Graphic Designer-cum-Visualizer	2	12	7,20,000.00
9.	Assistant Program Manager	1	12	3,00,000.00
10.	Accountant	1	12	2,40,000.00
11.	DTP Operator	4	12	11,04,000.00
12.	Project Helper**	2	12	3,60,000.00
		33	Total	1,35,84,000.00

Slide 18

NCERT:
NAS Foundational Learning 2021

Slide (Project Objective)

Project Objective

◎ The study will identify the learning gaps in foundational learning which will be used to understand the learning up to Grade 3 and help to design the intervention strategies.

◎ Establish reading proficiency benchmarks for fluency and comprehension for each of the languages being tested under the study and establish 'numeracy' benchmarks.

◎ will also provide the data for SDG 4.1.1.

Slide (Scale of operation)

Sr. No.	Scale of operation – Major heads		Comments
1.	Total no of States/Uts Covered	36	(Total FIs required per state = 4 per language. 1 FI can cover 1 school in a day = ~20 students. Each student takes 15 mins for assessment. Hence 5 hrs for conducting assessment for 20 students. Since the assumption is that school hours 3rd Graders is restricted to 4-5 hrs in a day, thus 1 FI will be able to cover only 1 school per day.)
2	Total languages	20	
3	No. of students per state	5000	
4	Total no. of students to be assessed (State as the unit of sampling)	1,80,000	
5	Total no. of students assessed per FI per school	20	
6	Total number of schools per state	20	
7	Total no. of FIs needed	9000	

Financial Proposal and Recommendation

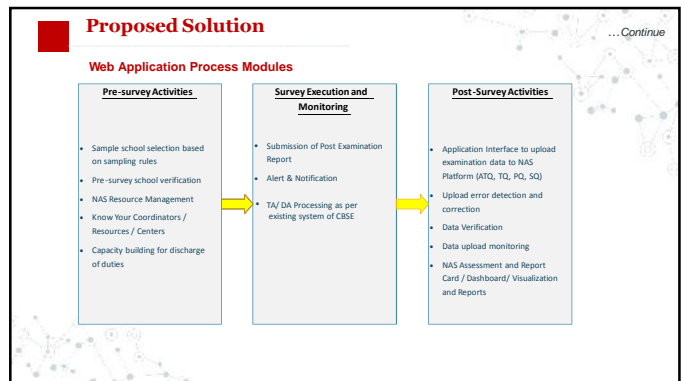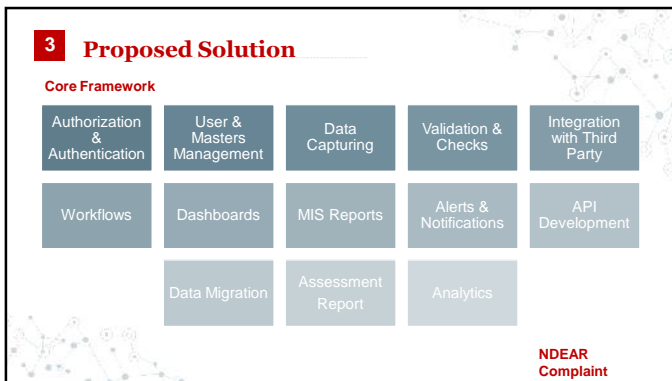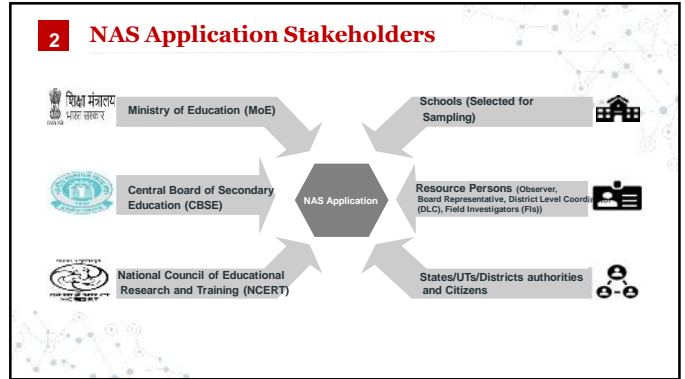|		Conducting Foundational Learning Assessment				
Sr. No.	Heads	Unit Cost	Qty	Total	Comments	Recommendations
1	Instrument development					
1.1	Workshops for instrument development		-	5,00,000	Base tools in Hindi and English will be developed.	5,00,000.00
1.2	Translation	3,000	18	54,000	1. 3000 = per language cost for translation 2. 18 = Total number of languages to be assessed - (English and Hindi) 3. We are excluding Hindi and English from 2 is because base tools are developed in English and Hindi	54,000.00
1.3	Back translation for Quality Assurance	3,000	18	54,000	Back translation cost involves translation of regional language tools to Eng/ Hindi	54,000.00
				Sub-Total 6,08,000		6,08,000.00

Budget

		Conducting Foundational Learning Assessment				
Sr. No.	Heads	Unit Cost	Qty	Total	Comments	Recommendations
2	Sampling				NCERT/CSF will own sampling	
3	Training of field investigators					
3.1	Development of training module including video version	8000	30	240,000	@ of Rs 8000 per minute for 30 minutes	240,000.00
3.2	Online training and support (incase local resources are required)	3,000	20	60,000	20 language trainers with 2 online sessions for 10 people each = 400	60,000.00
3.3	On- ground practice session of field investigators	1,000	296	2,96,000.00	1. 296 = 4 FIs for 37 states (additional state accounted to test Urdu) testing the tool over 2 days -> 4*37*2 = 296 2. Field investigators will visit schools to practice the tool, data entry, time management etc before the actual assessment	2,96,000.00
				Sub-Total		5,96,000.00

		Conducting Foundational Learning Assessment				
Sr. No.	Heads	Unit Cost	Qty	Total	Comments	Recommendations
4	Field Investigation Cost				(Done by Field Investigators)	
4.1	Per day allowance for field investigators for school visit	1000	9000	9000000	1 day visit for FIs	90,00,000.00
4.2	Travel allowance for Experts	500	9000	4500000		45,00,000.00
4.3	Per day cost for experts to be present for QA and data validation	5000	216	1,850,000	216 = 2*36*1 2 = Number of Experts per state 1 = Number of days for Field Investigation	10,80,000.00
4.4	Travel allowance for Experts	500	216	1850000		1,08,000.00
						1,46,88,000.00
5	Data collection and management	-	-	500,000	Cost of software for data collection, analysis, and reporting	500,000.00
6	Analysis & Reporting	-	-	500,000		
7	Communications and outreach	-	-	500,000	Developing media collaterals (includes videos, posters, handouts etc)	
8	Miscellaneous expenses	-	-	1,000,000	Travel of project staff, faculty, purchase of stationery etc.	1,000,000.00
	Subtotal					
TOTAL BUDGET –						1,73,92,000.00

NIC Proposal for

National Achievement Survey : 2021

Presentation by School Education Division, NIC
5th April, 2021

NIC

1 NAS Application - Overview

Pre-survey activities for survey include identification and finalization of schools for NAS 2021

Identification & management of resources, imparting required trainings to resources and collection of required materials

Post-survey activities upload in NAS Platform in the desired format

Examination Report submission, TA / DA Payment Processing via API

1

2 — Resources (FI, Coordinator, DLC..)

5

Schools-2 Lacs Students - 45.5 Lacs

Assessment

4

6

States/Uts-36 Districts-725

3

Assessment and generation of Report Card / Dashboard/ Visualization and Reports.

Resource reporting to the school, distribution and collection of survey questionnaire and transfer to centralized location

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2 NAS Application Stakeholders

शिक्षा मंत्रालय भारत सरकार — Ministry of Education (MoE)

Schools (Selected for Sampling)

Central Board of Secondary Education (CBSE)

NAS Application

Resource Persons (Observer, Board Representative, District Level Coordina (DLC), Field Investigators (FIs))

National Council of Educational Research and Training (NCERT)

States/UTs/Districts authorities and Citizens

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3 Proposed Solution

Core Framework

Authorization & Authentication	User & Masters Management	Data Capturing	Validation & Checks	Integration with Third Party
Workflows	Dashboards	MIS Reports	Alerts & Notifications	API Development
	Data Migration	Assessment Report	Analytics	

NDEAR Complaint

Proposed Solution *…Continue*

Web Application Process Modules

| Pre-survey Activities | Survey Execution and Monitoring | Post-Survey Activities |

Pre-survey Activities
- Sample school selection based on sampling rules
- Pre-survey school verification
- NAS Resource Management
- Know Your Coordinators / Resources / Centers
- Capacity building for discharge of duties

Survey Execution and Monitoring
- Submission of Post Examination Report
- Alert & Notification
- TA/ DA Processing as per existing system of CBSE

Post-Survey Activities
- Application Interface to upload examination data to NAS Platform (ATQ, TQ, PQ, SQ)
- Upload error detection and correction
- Data Verification
- Data upload monitoring
- NAS Assessment and Report Card / Dashboard/ Visualization and Reports

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3 **Proposed Solution NAS –Pre-Survey Modules**   *…Continue*

Pre-Survey Activities

1. Sample school selection based on sampling rules

1. Pre-survey school verification by observer
    - Pre-survey school verification by observer.
    - School finalization for survey by National Nodal Officer (NNO) for NAS 2021.
    - Pre-survey school verification progress monitoring by National Nodal Officer (NNO).

3. NAS Resource Management
    - **Field Investigators (FIs) :** 2 in grade 3 and 1 in each remaining applicable grade for Sample School will be nominated by states and appointed by CBSE.
    - **Observer :** One in each Sample School appointed by CBSE
    - **Custodian Centre Superintend :** Three to Four in each district appointed by CBSE
    - **District Level Coordinator (DLC) :** One in each district is appointed by CBSE
    - **Board Representative :** Three in each district appointed by CBSE

4. Alert and Notifications

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3 **Proposed Solution- Survey Execution and Monitoring**

NAS – Survey Execution and Monitoring   *…Continue*

1. **Post Examination Report (Report regarding conduct of examination):**
    - Generate Post Examination Report Performa
    - Online capturing of key points of Post Examination Report and upload the scanned copy of report
    - TA / DA claim
    - TA / DA claim processing by Existing Payment System of CBSE.

2. **Survey Monitoring / Progress tracker :**
    - NAS Platform will provide various reports to monitor the progress of resource allocation and survey progress. Key monitoring reports (District wise & resource type wise) would include :

        ✓ Resource Requirement as per sampled schools
        ✓ Number of prospective resources identified
        ✓ Number resource requirement vs registered resources
        ✓ Number of provisional appointment vs confirmation
        ✓ Material received or not by observers
        ✓ Number of final reports submitted etc.

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3 **Proposed Solution NAS – Post Survey Activities**   *…Continue*
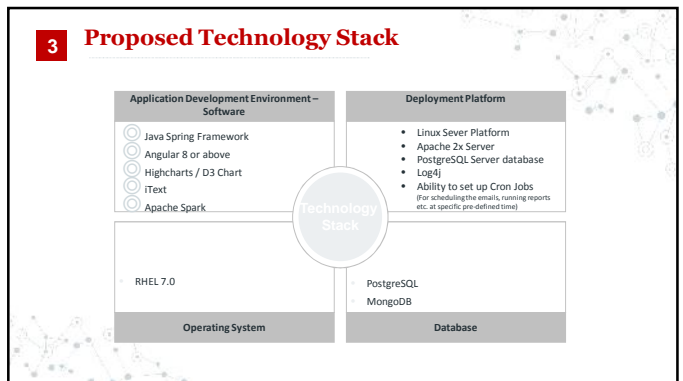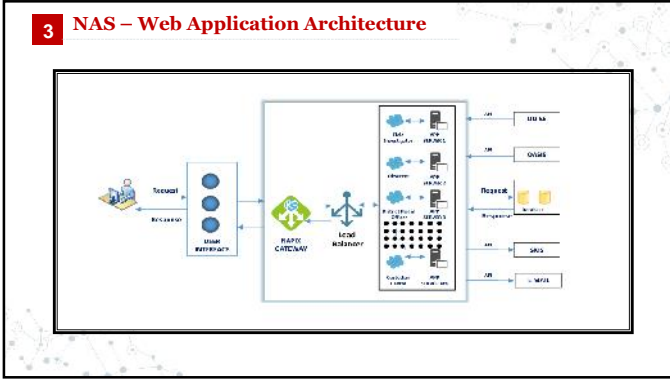
1. **Upload of Scanned data :**
    CBSE will have provision to upload examination data through interface for the following:
    - **School Questionnaire (SQ) OMRs**
    - **Pupil Questionnaires (PQ) OMR**
    - **Teacher Questionnaire (TQ) OMRs**
    - **Achievement Test OMRs**
2. **Data Verification and Submission :**
    Data Verification Authority will again verify the data quality before final submission into NAS Platform. In case of errors, Data Verification Authority will rectify the errors and send back the data for reupload of rectified data.

3. **Provided data monitoring :**
    NAS Platform will provide facility to monitor progress OMR upload against 'number of students enrolled in the class', 'number of students present', 'number of participated students', 'number of sampled schools' and 'number of teachers' for each sampled school as per field notes.

4. **Development of various survey assessment report**

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3 **Proposed Technology Stack**

Application Development Environment – Software	Deployment Platform
Java Spring Framework	• Linux Sever Platform
Angular 8 or above	• Apache 2x Server
Highcharts / D3 Chart	• PostgreSQL Server database
iText	• Log4j
Apache Spark	• Ability to set up Cron Jobs (For scheduling the emails, running reports etc. at specific pre-defined time)

Technology Stack

RHEL 7.0	PostgreSQL
	MongoDB
Operating System	**Database**

3 NAS – Web Application Architecture

4 Project Approach and Methodology

Milestone wise timeframe

S. No.	Activity List	Timelines (In Month)						
		1	2	3	4	5	6	7....30
1.	Project Plan	▓						
2.	System Requirement Study	▓						
3.	Draft Plan & StRS Approval	▓						
4.	Website Design & Development	▓						
5.	Web App Development		▓	▓	▓	▓		
6.	Testing (including system test, unit test, Integration) and verification		▓	▓	▓	▓	▓	
7.	User Acceptance Test					▓		
8.	Security Audit					▓		
9.	Training - End user training, Application training				▓	▓	▓	
10.	Documentation- User Manual					▓		
11.	Deployment and Go Live						▓	
12.	Project Management							▓
13.	Project maintenance and support							▓

4 Project Approach and Methodology

Deliverable Schedule

S. No.	Version	Features	Expected Completion date (In Months)
1.	Version 0.1	Web Application Design and Development • User Management (Nodal officers) • FIs data collection • Website Design and Development	T+1
2.	Version 0.2	Web Application Design and Development • Sampling of schools • Pre-survey school verification	T+2
3.	Version 0.3	Web Application Design and Development • NAS Resource Management • Know Your coordinators / resources • Alert and Notifications • Survey execution and monitoring • Configuration of Activities Timelines • Data Integration / Sources • Post Survey Data Collection and reporting	T+4
4.	Version 0.4	Web Application Design and Development • Dashboard and Reports	T+6

5 Project Cost –Design, Development and Implementation (6 Months)

S. No.	Particulars	Estimated Amount (Lakhs)
	Design, Development and implementation phase (6 Months)	
A	**Infrastructure Cost**	**
	a. Hosting with DR (Cloud Resource Cost)	**
B	**Website, Web Application Design and Development (B.1+B.2)**	120.00
B.1	Website	5.00
B.2	Web Application(B.2.a+B.2.b)	115.00
	a. Survey Management Module	55.00
	i. School Sampling and Verification Module	
	ii. Survey and Resource Deployment Management Module	
	iii. MIS Reports	
	b. Assessment Management	60.00
	i. Data Transfer (PQ, TQ, SQ, AQ), Generation of Assessment Reports/ NAS Report Card/ Dashboard / Visualization and Basic Analytics Report	
C	**Audit & Certification Cost**	2.00
	a. Security Audit	2.00
D	**Messaging Service**	10.00
	a. SMS, ODB etc.	10.00
E	**Other Cost**	35.00
	a. PMU including Capacity building / training	24.00
	b. Call Center Resources Deployment(2 Nos for 4 months)	
	c. Travel	6.00
	d. Consumables etc.	1.00
	e. IT Infrastructure (Seating Charges of 2 Resources for 6 months and 2 resources for 4 months during development)	4.00
F	**Design and Development Cost (A+B+C+D+E)**	167.00
G	NICSI Administrative Charges (7% of F)	11.69
H	**NICSI Total (F+G)**	178.69
I	GST @ 18 % on total (H)	32.16
J	**Total Design and Development Cost (H+I)**	210.85

5 **Project Cost - Operation & Maintenance (2 Years)**

S. No.	Particulars	Estimated Amount (Lakhs)
	Operation & Maintenance (2 Years) (Post Assessment Survey)	
K	Infrastructure Cost	-**
	a. Hosting Charges (Cloud Resource Cost, DR not required)	-**
L	Maintenance and Support Cost	38.40
	a. Resources Deployment (2 Nos for 24 months)	28.80
	b. IT Infrastructure (Seating Charges of 2 Resources for 24 months for maintenance support)	9.60
M	Total Operation & Maintenance (K+L)	38.40
N	NICSI Administrative Charges (7% of M)	2.69
O	NICSI Total (M+N)	41.09
P	GST @ 18 % on total (O)	7.40
Q	Gross Total for Maintenance Cost (O+P)	48.48

*Note:

➢ System Software Tools cost is not included
➢ NICSI, GST and other taxes as applicable from time to time.
➢ Cost is estimated as per existing NICSI available rates and subject to revision as   per amendments in NICSI rates, if any
➢ ** Cloud Infrastructure Cost (for both Design, Development and implementation phase & Operation and Maintenance) is not included. Cloud shall be provisioned from Samagra Shiksha budget.

5 **Total Project Cost**

	Design and Development Cost (6 Months)				Operation & Maintenance Cost (2 Years)	
S.no	Particulars	Estimated Amount (Lacs)	S.no	Particulars	Estimated Amount (Lacs)
A.	Design and Development Cost	167.00	F.	Total Operation & Maintenance	38.40
B.	NICSI Administrative Charges (7% of A)	11.69	G.	NICSI Administrative Charges (7% of F)	2.69
C.	NICSI Total (A+B)	178.69	H.	NICSI Total (F+G)	41.09
D.	GST @ 18 % on total (C)	32.16	I.	GST @ 18 % on total (H)	7.40
E.	Total Design and Development Cost (C+D)	210.85	J.	Total for Maintenance Cost (H+I)	48.48

Summary	
Design and Development Cost (6 Months)	210.85 Lacs
Operation & Maintenance Cost (2 Years)	48.48 Lacs
Total Project Cost (Including all taxes and NICSI Administrative Charges)	259.34 Lacs

Thank You

1. National Achievement Survey-2021- Approvals for CBSE (PAB 2021-22)

Head No	Head Name		PAB Head (Basis = 4218000 Students)	PAB allocation in 2020-21 Amount (Rs in lakhs)	Recommended for 2021-22 (Rs in lakhs)	Remarks
1.	Cost of Designing, Printing. Packing, Supply of Test Booklet (AT) and Survey Questionnaire	1.1	Achievement Test (AT) for 4218000 students @Rs30/-	1265	1265	
		1.2	Pupil Questionnaire (PQ) for 4218000 students @Rs20/-	844	844	
		1.3	Teacher Questionnaire (TQ) for 562400 teachers) @Rs20/-	112	112	
		1.4	School Questionnaire (SQ) for 140600 schools @Rs20/-	28	28	
			TOTAL under this head	**2250**	**2250**	
2.	Cost of Designing, Printing, Scanning of OMRs	2.1	Achievement Test (AT) : OMR printing, scanning @Rs.10/-	422	422	
		2.2	Pupil Questionnaire (PQ) : OMRs printing, scanning @Rs.10/-	422	422	
		2.3	Teacher Questionnaire(TQ):OMRs printing, scanning @Rs.10/- (562400 teachers)	56	56	
		2.4	School Questionnaire(SQ) OMRs printing, scanning @Rs.10/- (for 140600 schools)	14	14	
			TOTAL under this head	**914**	**914**	
3.	Cost on Board Representatives (BRs) (Nos=2812)	3.1	Cost on Remuneration @Rs3000/per day(2 days)	169	169	
		3.2	Cost on Stay @Rs.2500/-per day (2 days)	141	141	
		3.3	Cost on Food @Rs500/-per day (2 days)	28	28	
		3.4	Cost on fixed local conveyance @Rs2000/-per day (2 days)	112	112	
		3.5	Cost on Travelling @Rs.10000/- per BR (to & fro) cover OMR transportation cost as well	281	281	
			TOTAL under this head	**731**	**731**	
4	Cost on Observers (140600 Observers= Sample Schools No)	4.1	Cost on Remuneration @Rs.2500/-for 1 Day	3515	3515	
		4.2	Cost on Food @Rs.400/-for 1 Day	562	562	
		4.3	Cost on Conveyance @Rs.1000/-for 1 Day	1406	1406	
			TOTAL under this head	**5483**	**5483**	

5	Logistics	5.1	Cost on transportation of OMR, NAS Materials	NIL	NIL	Covered at S.No. 3
			TOTAL under this head	**NIL**	**NIL**	No change
6	Custodian, District Collection Centre (DCC), District Level Coordinator (DLC) & and Pre-survey verification schools by DLC by deploying its staff	6.1	Custodian Cost of (ATBooklets+PQ+TQ+SQ) an average of 4 Custodians per District @Rs.15000/- as fixed charges per Custodian	422	422	1 Custodian to act as DLC and collection Centre for OMR storage..
		6.2	Cost on Remuneration for people at Custodian Centre. (Principal @Rs.5000/- (fixed including conveyance),(Support Staff (3 teachers / Clerks @Rs.2500/per head) 4 MTS @Rs1200/ per head)	486	486	No Change
		6.3	Additional Cost for Pre-survey Verification of School by DLC/Custodians at nominal rate of Rs.300/- per School (computed on 140600 School)	Nil	**422**	
			TOTAL under this head	**908**	**1330**	
7	District Collection Centre (DCC) & (DLC) and associated cost	7.1	Collection Centre post NAS Storage cos	NIL	NIL	
		7.2	Remuneration (Additional as token) for DLC	NIL	NIL	
		7.3	Remuneration for staff involved at DCC	NIL	NIL	
			TOTAL under this head	**NIL**	**NIL**	merged with Head at S.N 6
8	Cost on Secrecy Work (OMR handling Pre & Post-NAS processing by Computing Agencies	8.1	Cost on Secrecy Work (AT)	422	422	
		8.2	Secrecy Work (PQ, TQ, SQ)	148	148	
		8.3	Remuneration Secrecy Team & Others (50-60 days)	37	37	
		8.4	Conveyance Secrecy Team & Others	12	12	
			TOTAL under this head	**619**	**619**	
9	Establishment, Infrastructure cost (apportionment, salary allowances, conveyance) and remuneration etc.	9.1	Rental, (Office, Warehouse, Security Surveillance, operational)	283	283	
		9.2	Furniture, Office equipment, Computers, IT hardware, HDD, PDs, Software, Printers	15	15	
		9.3	Salary + allowances + conveyance + Remuneration to the staff of NAS Cell, (Officer, Supdt/Clerical, Non-clerical, NPS Contribution, Wages contractual workers (Daily wages)	188	188	
			TOTAL under this head	**486**	**486**	
10.	Cost on Training	10.1	Training - BR including cost of TA/DA	50	50	
		10.2	Training – DLC including cost of TA/DA	80	80	
		10.3	Training - Observers	422	422	
		10.4	Training Materials: Manuals, Handouts, Guidelines	77	77	
		10.5	Training Module, Videos, Clippings	30	30	
		10.6	Training-Remuneration Resource Persons,TA/DA, conveyance	281	281	

				940	940	
			TOTAL under this head	**940**	**940**	
11	Other expenses	11.1	Miscellaneous Overheads	370	370	
			TOTAL under this head	**370**	**370**	
12.	Cost on Field Investigators	12.1	Fixed Remuneration including conveyance to FI to be paid by CBSE @Rs.900/- per FI (Gr-III to have 2 FIs and 1 each for other grades) (Gr III 70300 schools) + 70300 Gr V+ VIII+X)	NIL	1898	
		12.2	Lump Sum Proposed Cost for Nodal Officer at District Level (appointed by State / UT) and paid by CBSE @ Rs. 5000/- fixed for nominating FI Data collecting details in the District	NIL	37	
		12.3	Lump Sum Proposed cost for State Nodal Officer to coordinate with the Dist Nodal Officer, NIC. CBSE and DLC for state level coordination to be paid by CBSE @Rs.10000/- fixed		5	
			TOTAL under this head	**NIL**	**1940**	
13.	Translation Work (AT,PQ,TQ,SQ all Gr 22 languages No of Translators per Medium=4 per Gr. 3 Days per Medium Medium=22 Lang	13.1	Sitting Allowances for expert @Rs1500/- (fixed) per day for translation expert and proof expert	NIL NIL	21	
		13.2	Conveyance @Rs.1000/-(fixed) per day for expert	NIL	15	
		13.3	Translation charges @Rs.200/-per item for translation expert, proof expert	NIL	92	
		13.4	Refreshment for Translation Expert, Proof expert @Rs.400/-	NIL	4	
		13.5	Stay Arrangement @Rs.3000/- for Translation Expert and Proof Expert	NIL	39	
			TOTAL under this head	**NIL**	**171**	
			Grand Total	**12701**	**15234**	

2. National Achievement Survey 2021- Approvals for NCERT (PAB 2021-22)

S. No.	Activities Proposed	Amount proposed (in Rs. In lakhs) Classes III, V, VIII and X	Amount recommended (in Rs in lakhs)	Remarks
1.	**Field try out, data entry and finalization of the Items for survey.**	5	5	
2.	**(a) Finalization of the Test Booklets in Source Language (English) and Translated in Hindi Using the rotated matrix design** **(b) Finalization of the Questionnaire**	5	5	
3.	**Training of the 4 Master Trainers in each district for implementing the survey.**	-	-	Covered in CBSE proposal
4.	**Development of a prototype for a District Report Card**	-	-	In house
5.	**Development of a web-based platform for generating District Report Card**	10	Nil	To be developed by NIC
6.	**Generation of the District Reports**	-	-	In house
7.	**Short term intervention with the States & UTs to Disseminate the NAS findings and to use the NAS findings in developing their AWBP.**	1500	100	
8.	**Project Contingency** for miscellaneous expenditure including TA/DA of staff/project staff visits, Toner/cartridge, one fixed line wifi connection @ Rs.5000/- pm., IT hardware, software, refreshment in the meetings and stationary, kits, books etc.	25	25	
9	**Project Staff Salary (NCERT)**	135.84	53.52	
10.	On boarding an international technical agency for	1500	500	

S. No.	Activities Proposed	Amount proposed (in Rs. In lakhs) Classes III, V, VIII and X	Amount recommended (in Rs in lakhs)	Remarks
	preparation of test booklets, auto generation of district report cards, processing of the State learning Reports etc. to bring in world standards and worldwide acceptability to NAS.			
	TOTAL	**3180.84**	**688.52**	

3.   Foundational Learning Assessment 2021-22 : Approvals for NCERT (PAB 2021-22)

Sr. No.	Heads	Unit Cost	Qty	Amount Proposed (Rs in Lakhs)	Amount Recommended (Rs in Lakhs)	Remarks
1	**Instrument development**					
1.1	Workshops for instrument development	-	-	5.0	5.0	Base tools in Hindi and English will be developed.
1.2	Translation	3,000	18	0.54	0.54	1. 3000 = per language cost for translation 2. 18 = Total number of languages to be assessed - (English and Hindi) 3. We are excluding Hindi and English from 2 is because base tools are developed in English and Hind
1.3	Back translation for Quality Assurance	3,000	18	0.54	0.54	Back translation cost involves translation of regional language tools to Eng/ Hindi
	Sub-Total			**6.08**	**6.08**	
2	**Sampling**					NCERT/CSF will own sampling
3	**Training of field investigators**					
3.1	Development of training module including video version	8000	30	2.40	2.40	@ of Rs 8000 per minute for 30 minutes
3.2	Online training and support (incase local resources are required)	3,000	20	0.60	0.60	20 language trainers with 2 online sessions for 10 people each = 400

Sr. No.	Heads	Unit Cost	Qty	Amount Proposed (Rs in Lakhs)	Amount Recommended (Rs in Lakhs)	Remarks
3.4	On- ground practice session of field investigators	1,000	296	2.96	2.96	1. 296 = 4 FIs for 37 states (additional state accounted to test Urdu) testing the tool over 2 days -> 4*37*2 = 296 2. Field investigators will visit schools to practice the tool, data entry, time management etc. before the actual assessment
	Sub-Total			**5.96**	**5.96**	
4	**Field Investigation Cost**					
4.1	Per day allowance for field investigators for school visit	1000	9000	450.0	90.0	1 day visit for FIs
4.2	Travel allowance for Experts	500	9000	237.5	45.0	
4.3	Per day cost for experts to be present for QA and data validation	5000	216	18.50	10.8	216 = 2*36*1 2 = Number of Experts per state 1 = Number of days for Field Investigation
4.4	Travel allowance for Experts	500	216	18.50	1.08	
	Sub-Total			**724.50**	**146.88**	

Sr. No.	Heads	Unit Cost	Qty	Amount Proposed (Rs in Lakhs)	Amount Recommended (Rs in Lakhs)	Remarks
5	**Data collection and management**	-	-	5.0		Cost of software for data collection, analysis, and reporting
6	**Analysis & Reporting**	-	-	5.0	5.0	
7	**Communications and outreach**	-	-	5.0		Developing media collaterals (includes videos, posters, handouts etc)
8	**Miscellaneous expenses**	-	-	10.0	10.0	Travel of project staff, faculty, purchase of stationery etc.
	Sub-Total			**25.0**	**15.0**	
TOTAL BUDGET				**761.54**	**173.92**	

4. ICT intervention for Automation of NAS 2021 by NIC (PAB Approvals 2021-22)

Design and Development (6 Months)

S. No.	Particulars	Amount recommended (Rs in Lakhs)
	Design, Development and implementation phase (6 Months)	
A **	Infrastructure Cost	- **
	a. Hosting with DR (Cloud Resource Cost)	-**
B	Website, Web Application Design and Development (B.1+B.2)	120.00
B.1	Website	5.00
B.2	Web Application(B.2.a+B.2.b)	115.00
	a. Survey Management Module	55.00
	i. School Sampling and Verification Module	
	ii. Survey and Resource Deployment Management Module	
	iii. MIS Reports	
	b. Assessment Management	60.00
	i. Data Transfer (PQ, TQ, SQ, AQ), Generation of Assessment Reports/ NAS Report Card/ Dashboard / Visualization and Basic Analytics Report	
C	Audit & Certification Cost	2.00
	a. Security Audit	2.00
D	Messaging Service	10.00
	a. SMS, ODB etc.	10.00
E	Other Cost	35.00
	a. PMU including Capacity building / training	24.00
	b. Call Center Resources Deployment(2 Nos for 4 months)	
	c. Travel	6.00
	d. Consumables etc.	1.00
	e. IT Infrastructure (Seating Charges of 2 Resources for 6 months and 2 resources for 4 months during development)	4.00
F	Design and Development Cost (A+B+C+D+E)	167.00
G	NICSI Administrative Charges (7% of F)	11.69
H	NICSI Total (F+G)	178.69

S. No.	Particulars	Estimated Amount (Lakhs)
I	GST @ 18 % on total (H)	32.16
J	**Total Design and Development Cost (H+I)**	**210.85**

1.1 Operation & Maintenance (2 Years)

S. No.	Particulars	Estimated Amount (Lakhs)
	Operation & Maintenance (2 Years) (Post Assessment Survey)	
K	**Infrastructure Cost**	**-****
	a. Hosting Charges (Cloud Resource Cost, DR not required)	-**
L	**Maintenance and Support Cost**	**38.40**
	a. Resources Deployment (2 Nos for 24 months)	28.80
	b. IT Infrastructure (Seating Charges of 2 Resources for 24 months for maintenance support)	9.60
M	**Total Operation & Maintenance (K+L)**	**38.40**
N	NICSI Administrative Charges (7% of M)	2.69
O	**NICSI Total (M+N)**	**41.09**
P	GST @ 18 % on total (O)	7.40
Q	**Gross Total for Maintenance Cost (O+P)**	**48.48**

1.2 Total Project Cost

R	Total Project Cost (J+Q)	259.34

*Note:

i. System Software Tools cost is not included

ii. NICSI, GST and other taxes as applicable from time to time.

iii. Cost is estimated as per existing NICSI available rates and subject to revision as per amendments in NICSI rates, if any

iv. ** Cloud Infrastructure Cost (for both Design, Development and implementation phase & Operation and Maintenance) is not included. Cloud shall be provisioned from Samagra Shiksha budget.