

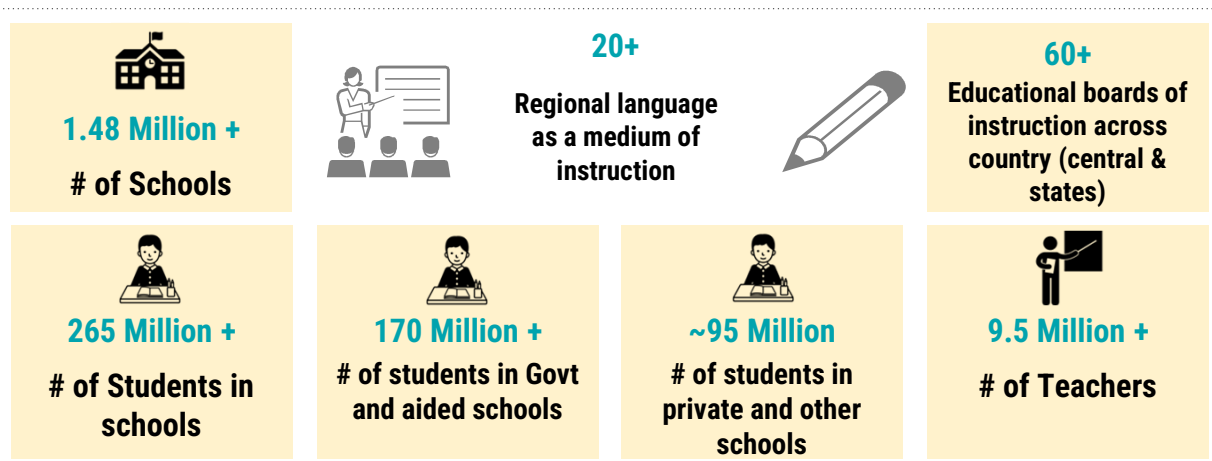


NDEAR



# NDEAR - DIKSHA

## India K-12 Education System is big, diverse & complex



Source: UDISE+ Report 2021-22(Dashboard)

## NEP, 2020 has multiple provisions for inculcating and promoting digital innovations ...



*Content creation, digital repository, and dissemination*



*Addressing the digital divide and equity*



*Training of teachers*



*Promoting digital learning*



*Laying down standards*



*Mathematical and computational thinking*



*Other special areas for online learning*

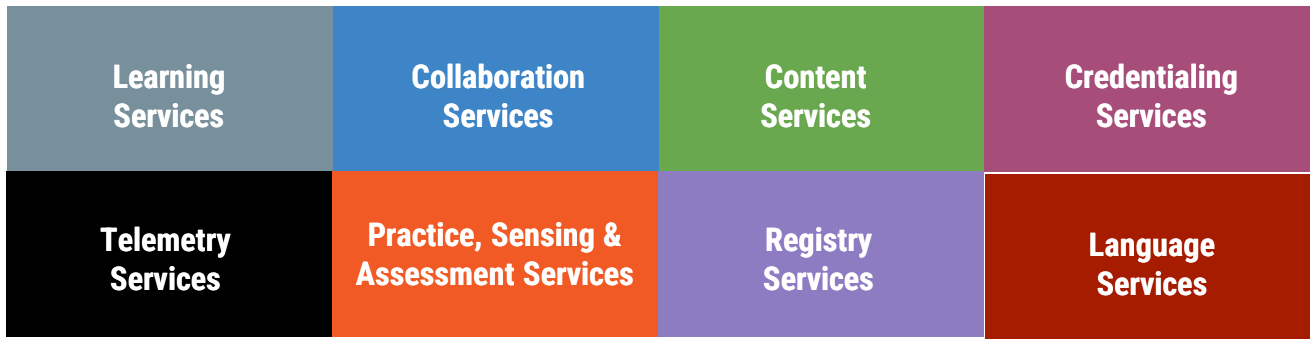
3

## To implement these policies, we wanted digital innovations that can work at our scale, diversity & complexity



4

**We wanted a plug and play digital infrastructure that could work for all of India, and not just a specific solution**



5

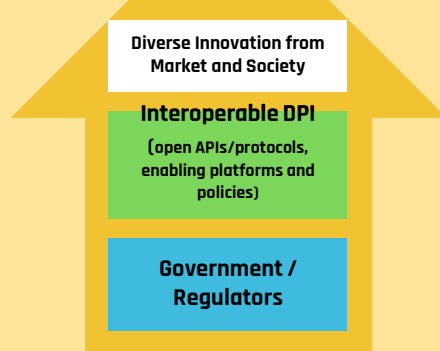
### All Govt Approach

*Single Provider, Slow Innovation*



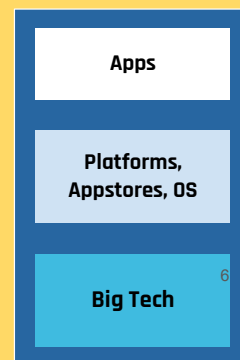
### India Approach

*Addresses diversity  
Development Friendly,  
Layered Innovation*



### Big Tech Approach

*Walled Garden, Winner takes all*

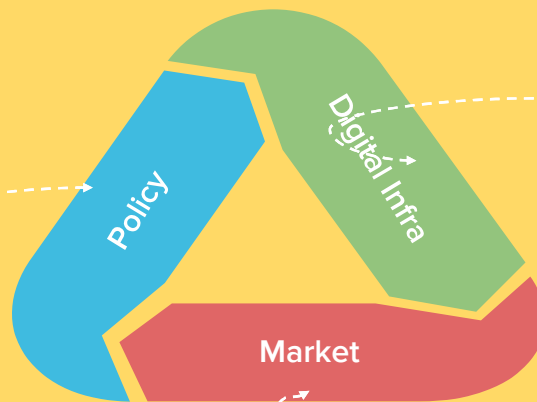


Content of this deck is licensed under CC BY-SA 4.0

## India harnessed these 3 successfully



Supporting innovation,  
market participation rules  
Interoperability & Portability  
Funding ecosystem



Connectivity infra  
ID and Data infra  
Financial infra  
Health infra  
Education & Skilling Infra  
Commerce Networks

Enterprises, Startups  
Govt depts, Regulated entities  
Non-profits, Communities

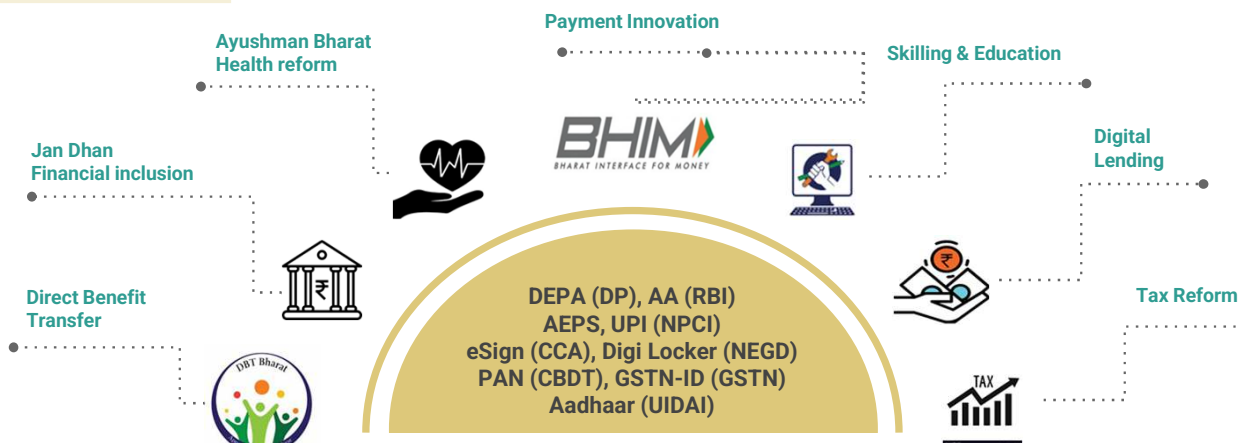
7

Content of this deck is licensed under CC BY-SA 4.0

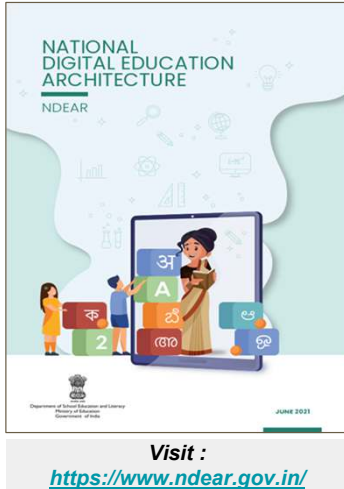
## Like Digital Infra with federated building blocks helped India leapfrog



### INDIA STACK



8



**National Digital Education Architecture (NDEAR) was launched by Hon. Prime Minister of India on 29th July 2021, with a vision to create a Unifying national digital infrastructure to energise and catalyse the education ecosystem.**



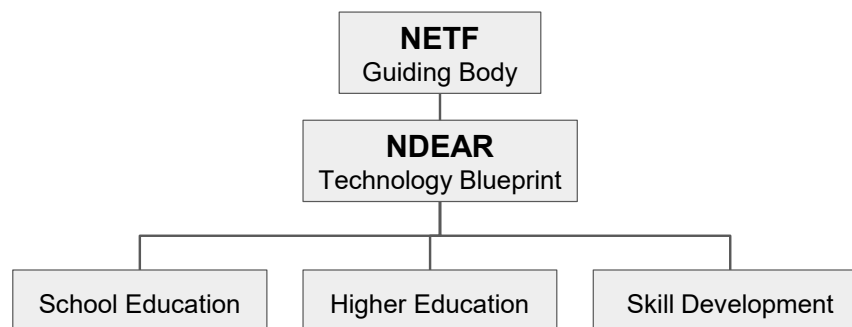
UPI is an ecosystem connector that revolutionised the finance sector. Similarly NDEAR is a key enabler of National Education Policy (NEP 2020) and acts as a super connector to cross leverage ecosystem capabilities and catalyse innovation in skilling & education.

Shri Narendra Modi  
Hon'ble Prime Minister of India

## National Education Task Force (NETF) has been established

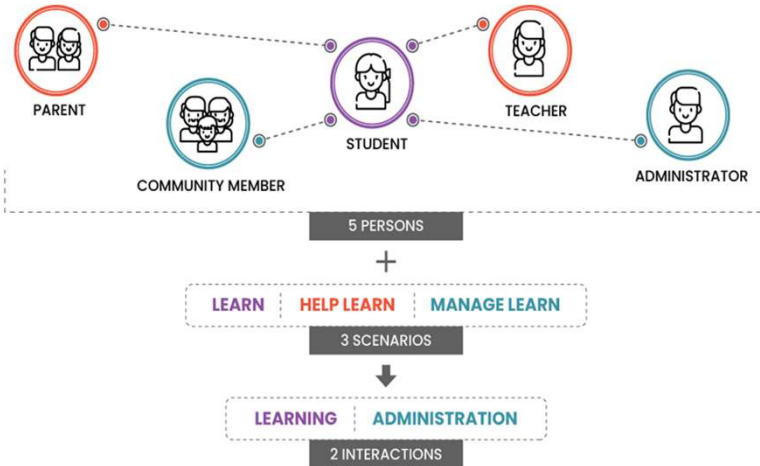
Reference NEP 2020, Section 23.3

**.... the National Educational Technology Forum (NETF), will be created to provide for the free exchange of ideas on the use of technology to enhance learning, assessment, planning, administration, and so on, both for school and higher education.**

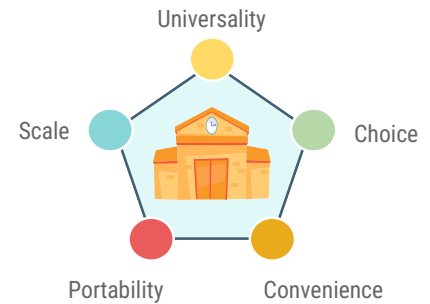


## NDEAR enables digital in education across different actors & scenarios

NDEAR caters to...

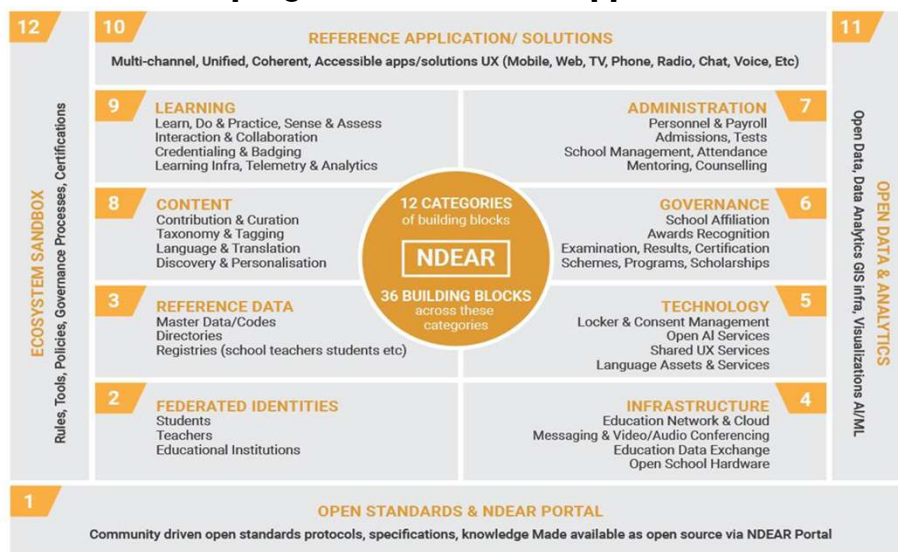


... and ensures

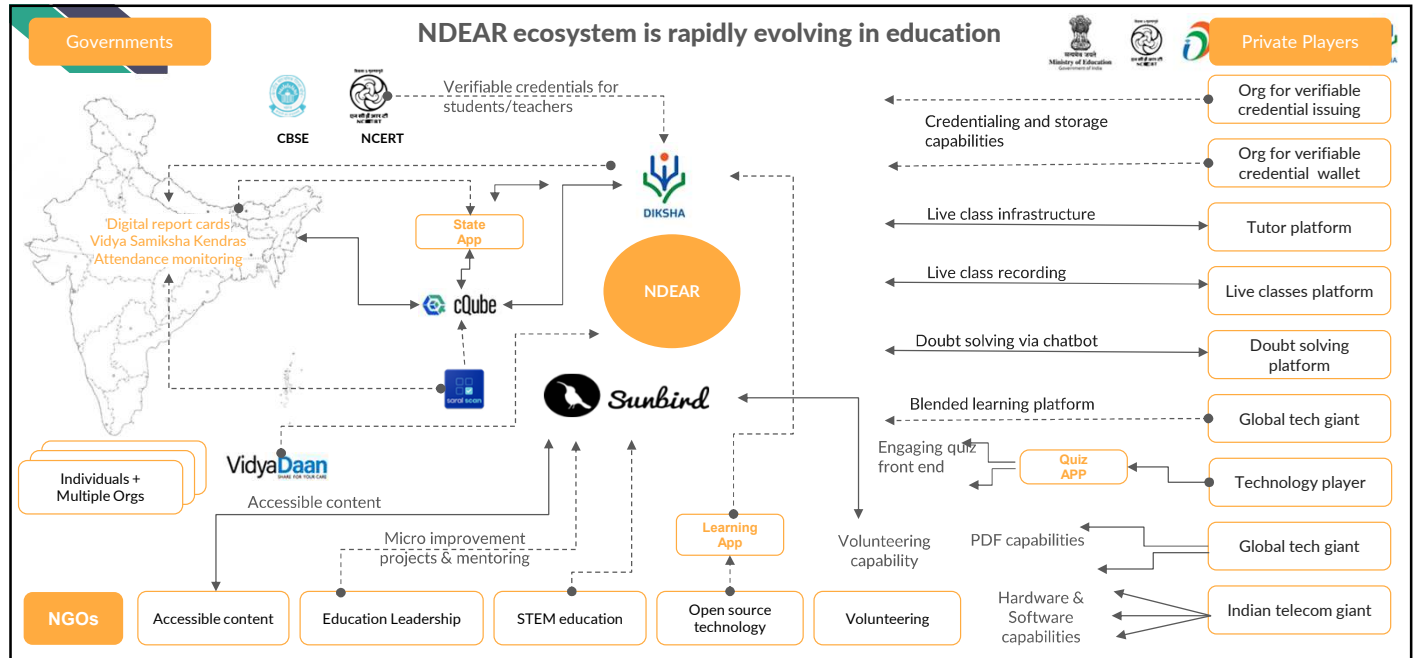


11

## NDEAR has 36 building blocks across 12 categories to enable diverse programs/schemes & applications



12





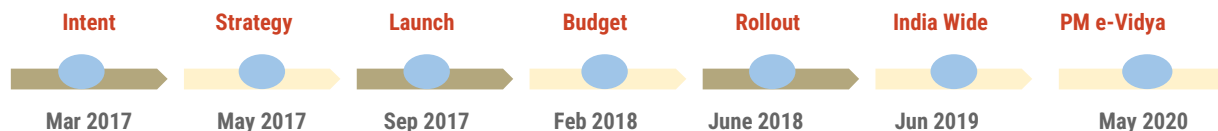
**DIKSHA was launched in 2017 by then  
Hon. Vice President of India,  
Shri M. Venkaiah Naidu**







## DIKSHA - Journey so far (1/2)



"DIKSHA is a customizable National Digital Infrastructure that states can use for their respective teacher-centric initiatives. Teachers will be able to use DIKSHA to access and create high quality teaching, learning and assessment resources for all subjects and levels in all Indian languages. DIKSHA aims to strengthen 'Our Teachers, Our Heroes' "



**Shri Prakash Javadekar**  
DIKSHA Strategy Paper  
May 2017

On the occasion of Teacher's day, Hon. Vice President of India, dedicated **DIKSHA, A National digital Infrastructure for Teachers**, to the nation



**Shri Venkaiah Naidu**  
National Teacher's Day  
September 2017

"Technology will be used to upgrade the skills of teachers through the recently launched digital portal **DIKSHA**"



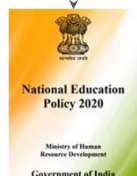
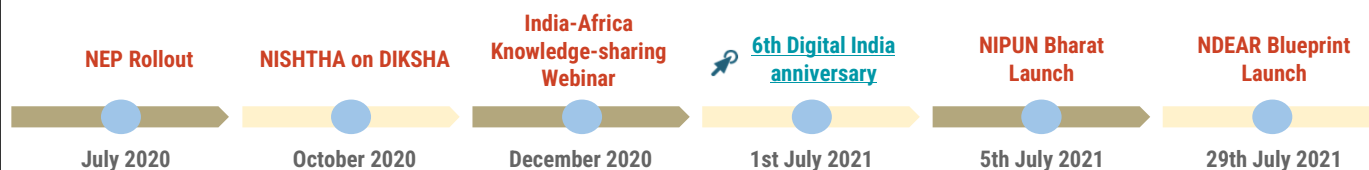
**Late Shri Arun Jaitley**  
Budget Speech  
February 2018

PM eVIDYA' programme will consist of '**DIKSHA**' involving e-content and QR coded energized textbooks for all grades and will be called as '**one nation, one digital platform**'.



**Smt. Nirmala Sitharaman**  
Union Finance Minister  
May 2020

## DIKSHA - Journey so far (2/2)



Extending horizons of DIKSHA in alignment with NEP 2020



In collaboration with MoE and MeitY, the World Bank conducted the webinar to enable remote learning through state-of-the art digital education platform - **DIKSHA**, in post-COVID world.



Hon'ble PM interacted with the beneficiaries of DIKSHA during 'Digital India' event and heard about the experiences with DIKSHA App and how it was useful for education during lockdown.

DIKSHA shall be integrated with the new Curriculum Framework by the States/UTs.



DIKSHA contains several building blocks that enable and support various use-cases, multiple languages and solutions for teaching and learning



## DIKSHA & its capabilities referred in various aspects in NEP 2020...



**Section 2.6** "A national repository of high-quality resources on foundational literacy and numeracy will be made available on the Digital Infrastructure for Knowledge Sharing (DIKSHA)."

**Section 15.10** "The use of technology platforms such as SWAYAM/DIKSHA for online training of teachers will be encouraged, so that standardized training programmes can be administered to large numbers of teachers within a short span of time."

**Section 23.6** "Teaching-learning e-content will continue to be developed by all States in all regional languages, as well as by the NCERT, CIET, CBSE, NIOS, and other bodies/institutions, and will be uploaded onto the DIKSHA platform. "

**Section 24.4 ( c ) :** "Online teaching platform & tools: Appropriate existing e-learning platforms such as SWAYAM, DIKSHA, will be extended to provide teachers with a structured, user-friendly, rich set of assistive tools for monitoring progress of learners."

17

## DIKSHA Infrastructure is based on NDEAR principles and covers 7 NDEAR building block categories enabling diverse programs/schemes



1. Open Standards & NDEAR portal	5. Technology	9. Learning
2. Federated Identities	6. Governance	10. Reference Applications/Solutions
3. Reference Data	7. Administration	11. Open Data & Analytics
4. Infrastructure	8. Content	12. Ecosystem Sandbox

18

## DIKSHA's building blocks were used for multiple use cases with complete sovereign control



19

## Overview of key programs leveraging DIKSHA



**Energised Textbooks** : Physical Textbooks to 'Phygital' Textbooks

**PM eVidya** : Aims to unify all efforts related to digital / online / on-air education to enable equitable multi-mode access to education



**VidyaDaan** : Sourcing high quality content in a controlled manner

**NISHTHA** : A nationwide capacity building programme for "Improving Quality of School Education through Integrated Teacher Training"



**National Quizzes** : Interactive & competitive learning

**Micro Improvements** : Small steps to build great schools. Encourage, recognise & nurture innovations across all schools

**Vidya Amrit**

**Micro Learning Packages** : Enables setting up your own asset taxonomies and categorization

**NIPUN Bharat** : Attaining Foundational Numeracy & Literacy



**Adult Education**

**CWSN**

**Vocational Education**

**Virtual Labs**

**... and other priorities as per NEP 2020**

20

## How we achieved success as national scale

Orientation and  
Capacity building

Implementation /  
Creation Workshops

Field visits and  
engagements with end user

Well Defined SOPs

Templates for taxonomy,  
outreach etc

Guidelines for  
Institutional Framework

Guidance and handholding  
for program adoption

Data availability  
through emit mode

Onboarding stages,  
Process packages, etc.

Framework format template,  
Taxonomy guidelines, etc.

Org structure, Committee  
setup guidelines, etc.

Program Toolkits, Outreach,  
etc.

Creation & Consumption  
Dashboards, Sentiment analysis

... and many more

21

## Leading to unparalleled usage of the world's largest, most diverse school education platform

# 5.11 Billion +

Learning Sessions

---

# 60 Billion +

Learning Minutes

# 39 Billion +

Page Hits

---

# 33+

Languages

Data as on 14th November 2022

Source: [diksha.gov.in](https://diksha.gov.in)

22

## DIKSHA is built on free & open source platform **"SUNBIRD"** 'Made in India', 'Made for the World'

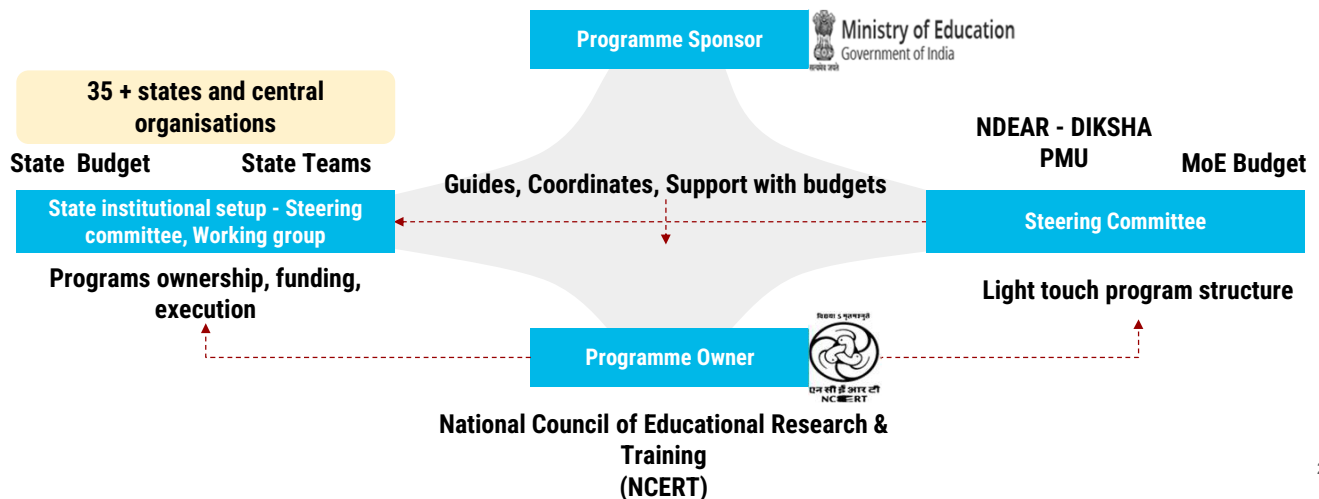


[sunbird.org](https://sunbird.org)

[github.com/project-sunbird](https://github.com/project-sunbird)  
[docs.sunbird.org](https://docs.sunbird.org)

23

## Implemented through existing federated & decentralised structure

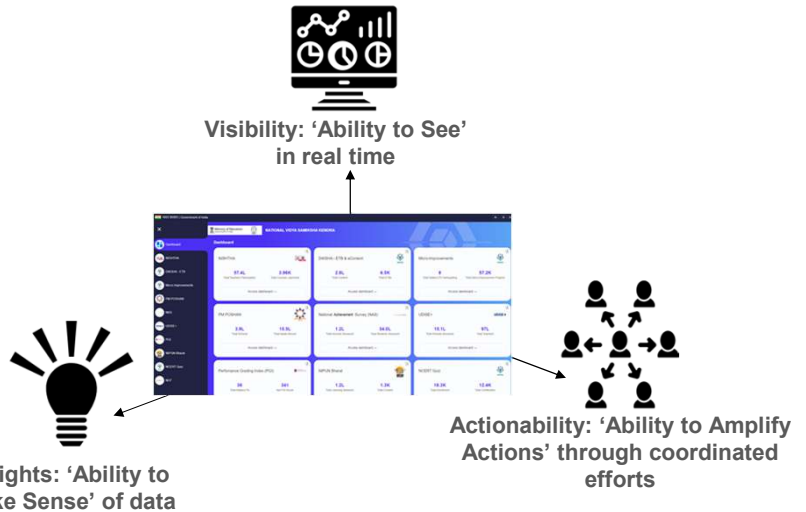


24

## Vidya Samiksha Kendra : helping us see & monitor policy implementation and drive reforms



DATA FROM DIKSHA PROVIDES THE ABILITY TO SEE AND EMPOWER RELEVANT STAKEHOLDERS

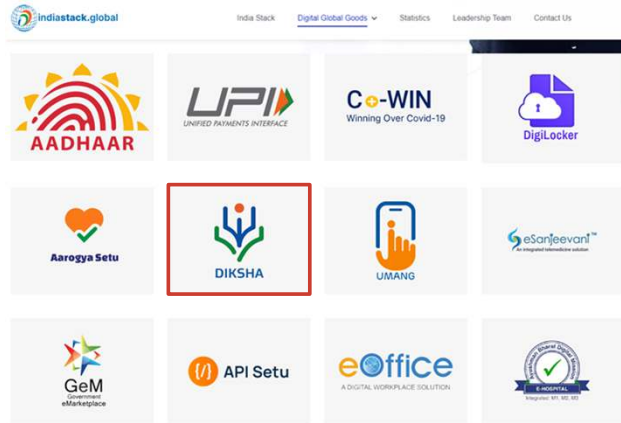


## The UNESCO King Hamad Bin Isa Al-Khalifa Prize for the Use of Information and Communication Technologies in Education



Awarded to CIET-NCERT for "Initiatives for Inclusive and Accessible Education" through PM-eVidya & DIKSHA

## DIKSHA Infrastructure has been identified as a Digital Global Good by the Govt. of India



<https://www.indistack.global/diksha/>



"India's digital platform... DIKSHA...one of the 12 Digital Global Goods...is now in public domain...India became the first country in the world to provide QR coded textbooks to elementary school children through this platform."

@WorldBank  
[pib.gov.in/PressReleasePa...](http://pib.gov.in/PressReleasePa...)

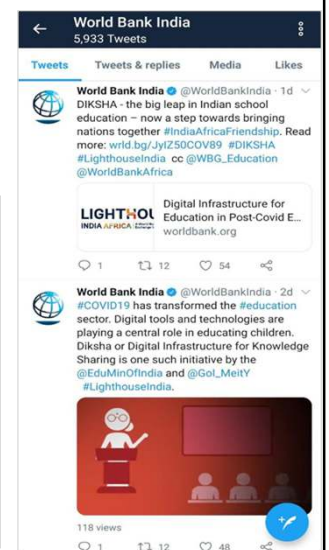
5:40 pm · 15 Oct 2022 · Twitter for iPhone

27

## World Bank Group has been propagating the 'DIKSHA model' internationally as well...



#DIKSHA is a unified digital platform for education is bringing together countries across continents. cc @EduMinOfIndia @GoI\_MeIT @WBG\_Education @WorldBank @WorldBankAfrica @NandanNilekani @JUNAIDWBG Watch to learn more about India-Africa knowledge exchange.





## Hon'ble Finance Minister offered DIKSHA to all interested countries : Meeting held at World Bank, Washington DC office on 14th October, 2022



The Finance Minister states further that India's digital platform, DIKSHA, which has been identified as one of the 12 Digital Global Goods by India, is now in public domain. Last year, Smt. Sitharaman said, India became the first country in the world to provide QR coded textbooks to elementary school children through this platform. The Finance Minister also offered DIKSHA to all interested countries and stated the world Bank can consider this opportunity to scale up digital education globally.



**Smt. Nirmala Sitharaman**  
Union Finance Minister  
October 2022

## DIKSHA as Digital Public Good



**DIKSHA software code can be easily offered as Digital Public Good to the world.**  
(<https://diksha.gov.in/help/diksha-oss/> )



**DIKSHA programs' open data can be offered as Digital Public Good to the world.**



**DIKSHA Content can be offered as Digital Public Good to the world.**



**NDEAR policy framework document, which maps and explains every building block, is available on the website can be offered as Digital Public Good to the world.**



## Several Ministries / Departments in India are leveraging DIKSHA infrastructure



National Urban Learning Platform

Ministry of Housing & Urban Affairs



Department of Personnel & Training



कृषि एवं किसान कल्याण विभाग

DEPARTMENT OF

**AGRICULTURE & FARMERS WELFARE**

सत्यमेव जयते

Department of Agriculture - Agri Digital Learning Platform

... And interest expressed by many more Ministries / departments

31

## What it takes to adopt & implement DIKSHA like national scale education infrastructure



### Take & Tweak



Technology

Content



Know How

### Enabled by



Funds

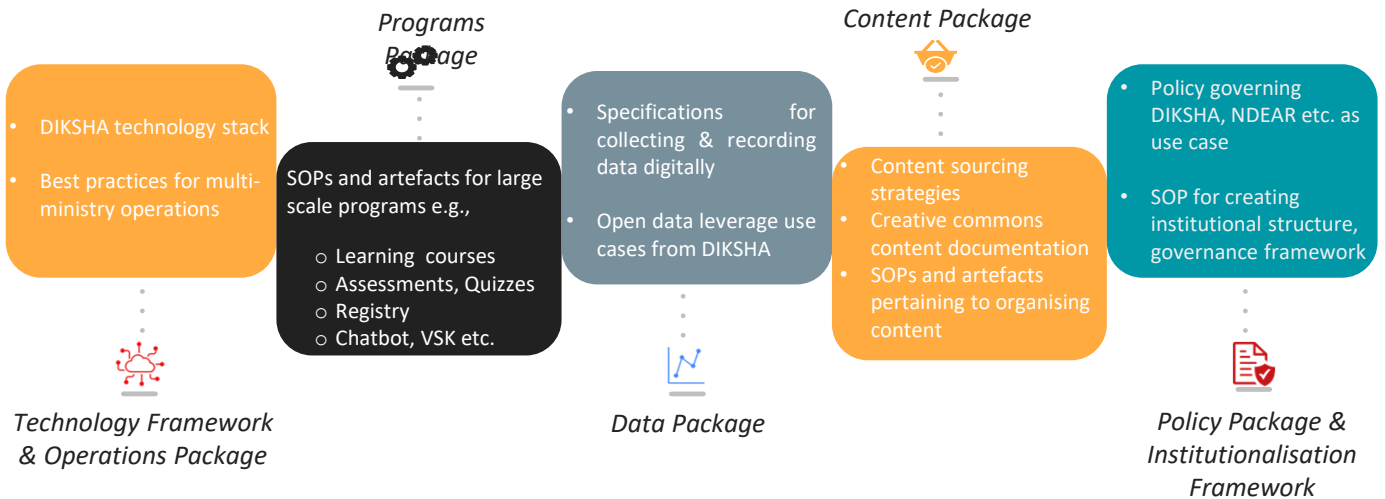
Technology & PMU Partners



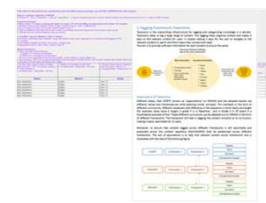
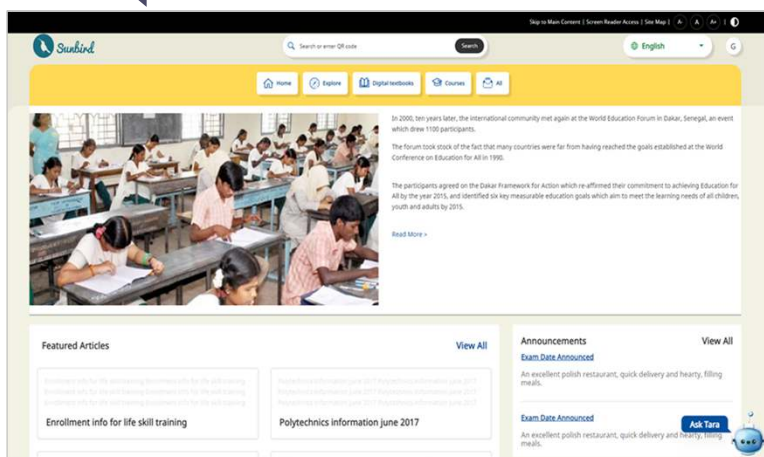
**The DIKSHA starter package eases the adoption and implementation**



## DIKSHA Starter package comprises of the following



## Some of the components of the starter package



## Engagement Models

The envisioned Models for countries to leverage the DPGs and establish their Digital Education initiatives



The interested country can implement their digital education initiatives by themselves leveraging the starter pack shared by the Government of India

### DIY



Interested countries can sign MoU with GOI for taking advisory support on:

1. Adopting Starter package
2. Leveraging Best practices
3. Budget allocation

### Advisory



GOI partners with organisations like World Bank, ADB, UN etc. to set up projects in interested countries by

1. leveraging starter pack
  2. Allocating funds
- IFIs can support implementation, maintenance and support

### Partner led

# Thank you