



National Digital Library of India (NDL India)

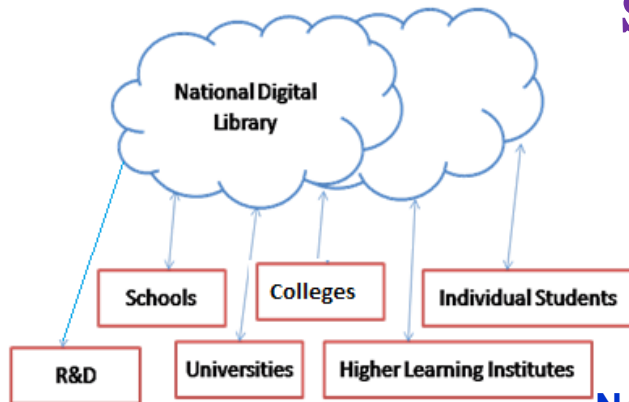


Towards Building a National Asset

A PILOT PROJECT

Ministry of Road Transport and Highways Workshop on Strategy, Institutional Framework and Action Plan for Transforming Road Research and Standardization in the Road Sector in India

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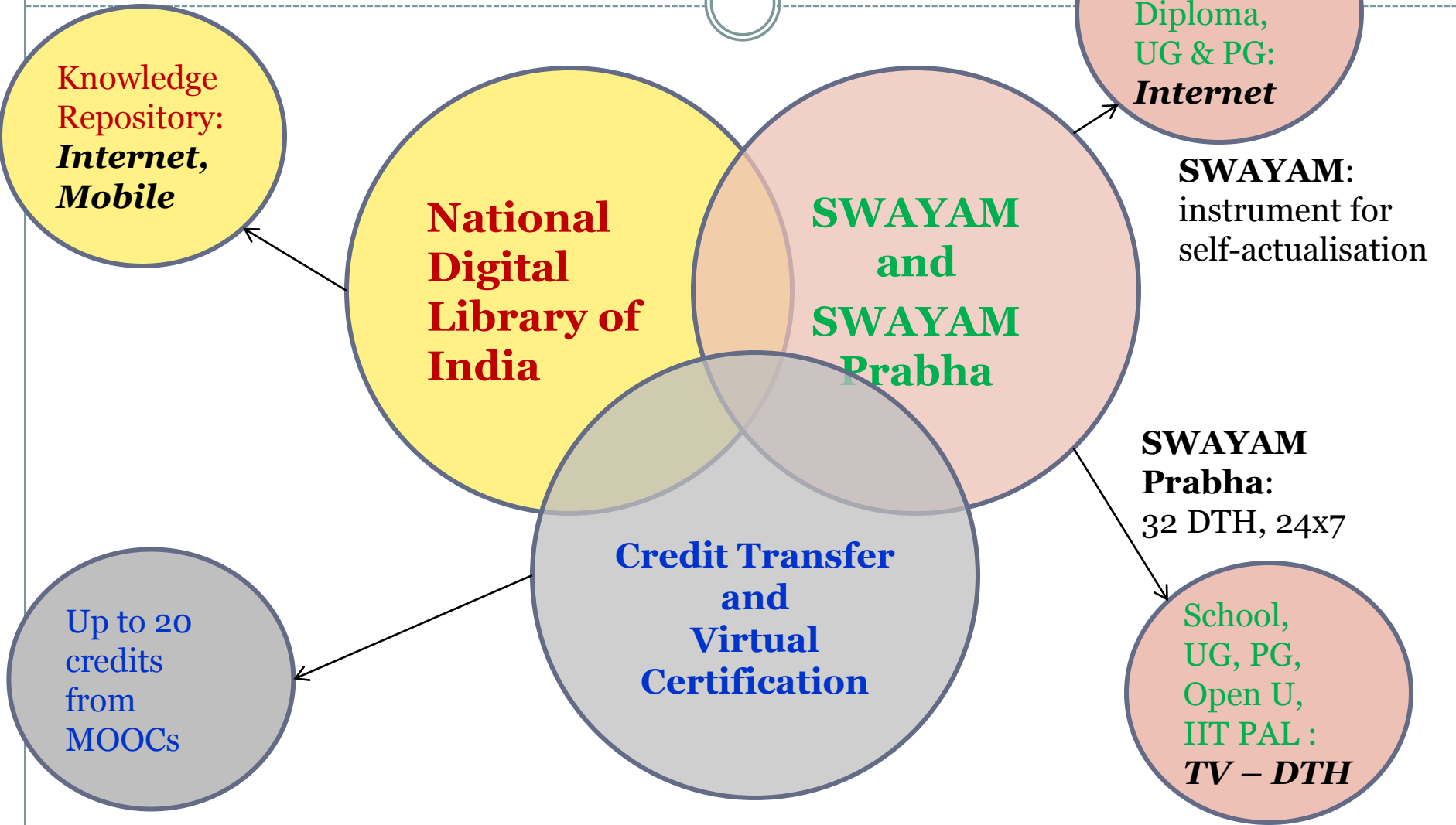
NDL Perspective

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- Over 7 Cr. students in our higher education system:
Largest in the world
[Source: FICCI Report 2013 “Higher Education in India: Vision 2030”]
- Through brick and mortar institutions alone, we need to build 6 universities and 270 colleges each and every month for 20 years:
Impractical
[Source: FICCI Report 2013 “Higher Education in India: Vision 2030”]
- To handle the situation, effective use of **Digital technology** was initiated
 - *Large volume of e-Contents got created*
 - *Options like SWAYAM, SWAYAM Prabha, ePathshala, eAcharya emerging*
 - *Various nation-wide digital infrastructure like BADAL coming up*
 - *Virtual University vision is going to be realized*
- An integrated, **Open & Inclusive, National Digital Library of India** is an enabler of the Digital eco-system for education and research

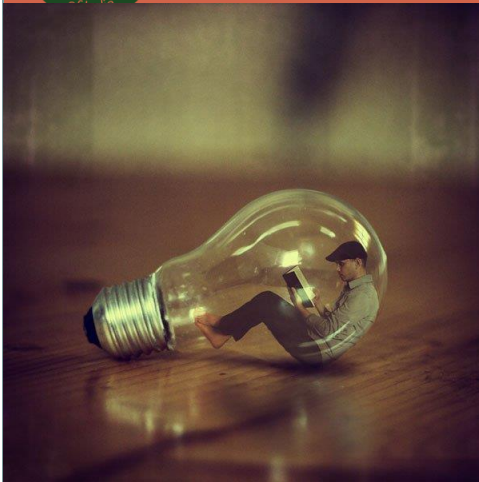


The Big Picture



National Digital Initiative in Education

Vision

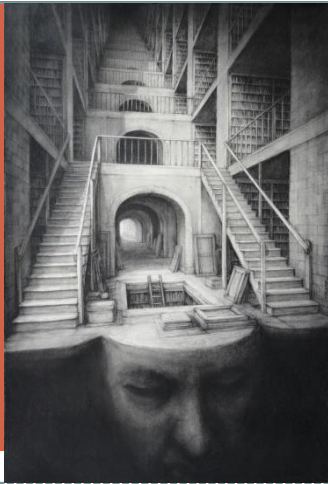


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**BUILD UP
NATIONAL DIGITAL LIBRARY OF INDIA
AS A NATIONAL KNOWLEDGE ASSET –**

**THE KEY DRIVING FORCE FOR EDUCATION,
RESEARCH, INNOVATION, AND
KNOWLEDGE ECONOMY IN INDIA**

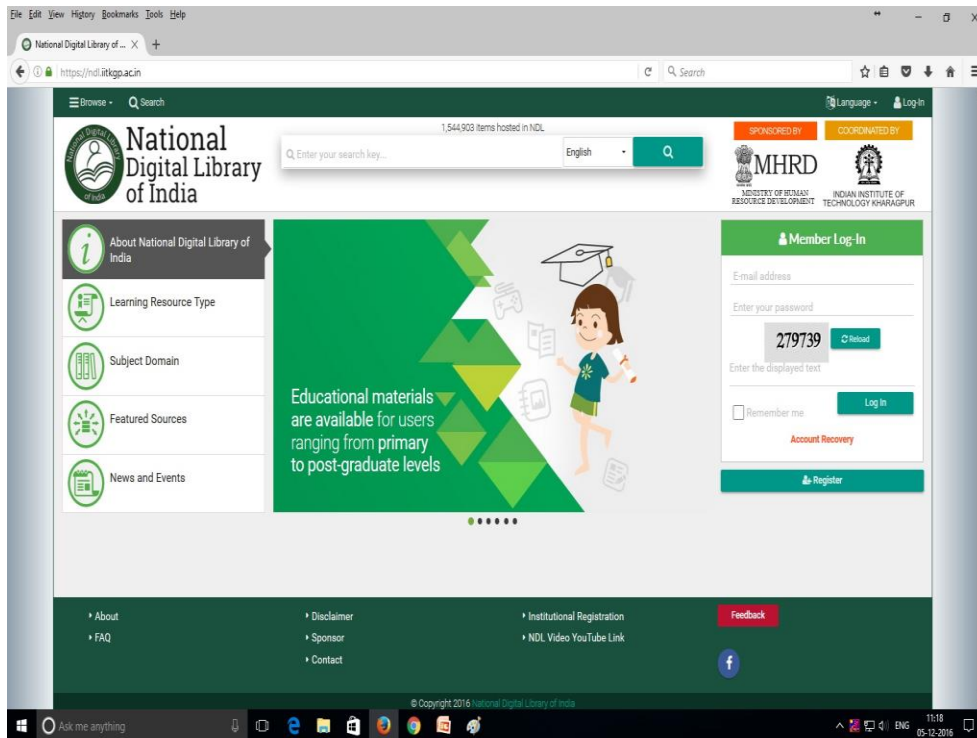


NDL India Mission

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TO CREATE A 24X7-ENABLED INTEGRATED NDL
AS A UBIQUITOUS DIGITAL KNOWLEDGE
SOURCE OF THE NATION – CATERING TO
IMMERSIVE E-LEARNING FOR
ALL LEARNERS AT ALL LEVELS IN ALL AREAS
TO INITIATE A MOVEMENT FOR INTEGRATED
DIGITAL LEARNING ACROSS INDIA
TO DEMOCRATIZE EDUCATION IN INDIA

Web App (<https://ndl.iitkgp.ac.in>)



Mobile App (Google™ PlayStore) (Apple™ iTunes Store)





NDL Uniqueness

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- **Single window multi-lingual search and access**
 - No need to visit individual sites
- **Covers entire spectrum of users**
 - Primary to highest level
 - All domains
- **Multi-media contents**
- **User interface for differently-abled users**
- **Personalization**
 - Search results filtered/ranked as per user profile
 - User experience-based customised search results
- **Immersive learning/information environment**
 - All materials required for a specific purpose available in a single url
- **National license**
 - Democratization of education

Road and Transport Sector: Information Need

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- Sector very vital for economy
- MoRTH already initiated several actions, like the current study, to develop an institutional framework for Road Sector research, to ensure that the sector plays its role effectively in growth of the economy
- Information and data are key components for
 - Policy making
 - Planning
 - Funding
 - Execution
 - Research
 - Skill development

Road and Transport Sector: Information Need

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- Some example of information/data needs
 - Ministerial guidelines
 - Global practices
 - Case studies
 - Project reports
 - Standards and Codes
 - Research papers/articles
 - Journals, Magazines and Conference Proceedings
 - Books
 - Theses
 - Data: Cost, Usage, Congestion, Accidents, etc
 - Experience sharing
 - Feedbacks

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- Leveraging internet and e-contents, an information infrastructure may be built so that stakeholders can access required data/ information in least effort/time and in an immersive environment to perform respective role efficiently
 - Policy makers and planners
 - Administrators
 - Architects and engineers
 - Builders
 - Industry
 - Professional bodies
 - Researchers
 - Academicians
 - Students
 - Users and Public

Stakeholders

Roles and Responsibilities



- **To develop this information infrastructure all stakeholders need to collaborate**

Stakeholder	Roles and Responsibility
Government	1. MoRTH <ul style="list-style-type: none"> - Sponsor and facilitator - Contribute contents and metadata <ul style="list-style-type: none"> • Departments • R & D Labs • Use and Feedback - License contents 2. Other Ministries <ul style="list-style-type: none"> - Contribute contents
Institutions	- Contribute contents and metadata
International Bodies/ Professional Bodies/ Publishers	<ul style="list-style-type: none"> - Contribute contents and metadata - Enter license deals (where required)
Industry/Builders	- Contribute contents and metadata
Public • NGOs/ Individuals	<ul style="list-style-type: none"> - Use and Feedback - Contribute metadata

NDL interacting with several Ministries

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- To make similar things happen in other sectors, NDL already interacting with several Ministries
 - Ministry of Steel
 - Ministry of Environment, Forest and Climate Change
 - ✦ Botanical Survey of India
 - ✦ Zoological Survey of India
 - Ministry of Earth Sciences
 - Ministry of Mines
 - ✦ Geological Survey of India
 - Ministry of Communications and Information Technology



NDL as Knowledge Management Centre for Road Sector

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- NDL architected to host any form of digital contents; so can seamlessly host all Road Sector contents, globally, including RDT Projects Outputs
 - Research paper
 - Data
 - Simulation
 - Video
 - Audio
 - Application
- Designed for domain vertical-wise view
 - A Road and Transport vertical may be added
- Metadata structure is open-envelop based
 - Can easily accommodate metadata for Road Sector contents



NDL as Knowledge Management Centre for Road Sector

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- Experience Tracking
 - Facilitates customized search results
 - User focussed dissemination of Road Sector contents
- Facilitates immersive/collaborative environment
 - All Road Sector related contents can be accessed through a single-window and in a single environment
- 3rd Party developers may build Applications around it through API
- NDL already established as knowledge platform: can be a good vehicle for dissemination of Road Sector contents
 - 1 million active users (acquired in a short time)
 - Daily hits > 50k
 - Available as Web App, Android™ App and Apple™ App



NDL as Knowledge Management Centre for Road Sector

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- Road Sector contents can be hosted as an IDR (Institutional Digital Repository)
 - Under exclusive control of MoRTH or its authorized institute
 - MoRTH can implement necessary Copyright or IPR Policy with respect to each RDT Project Output by setting necessary access control on individual content of the IDR
 - NDL can facilitate
- NDL harvests metadata from the above IDR and disseminate through NDL Portal
 - Users will fetch full-text contents by clicking link in NDL Search results
 - Thus addresses Copyright or IPR related issues
- NDL thus can function as a Global Knowledge Management Centre for Road Sector and be a digital pivot for the Sector



NDLIndia Live:

<https://ndl.iitkgp.ac.in/>

NDLIndia on Facebook:

<https://web.facebook.com/NDLIndia/>

NDLIndia on YouTube:

<https://www.youtube.com/watch?v=LEwAyHGKeLw>

<https://www.youtube.com/watch?v=qIZB-G9ywFo>

<https://www.youtube.com/watch?v=UCoJwfPrQFs&t=115s>

NDL Project:

<http://www.ndlproject.iitkgp.ac.in/ndl/>



Thank You