



**NITI Aayog**



# **NATIONAL DATA AND ANALYTICS PLATFORM**

## **VISION DOCUMENT**



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## **MESSAGE**

It gives me immense pleasure that NITI Aayog will be developing the “National Data and Analytics Platform” (NDAP), an initiative aimed to aid India’s progress by promoting data-driven discourse and decision-making.

Over the years, India has made tremendous progress in generating and harnessing data for social good. Data is increasingly becoming an important medium to facilitate decision-making and discourse at all levels of government and civil society. Data journalism and innovative empirical research is also steadily increasing and contributing to our understanding of complex issues.

The progress to date provides a strong foundation to make further improvements. Currently, there are various pockets of excellence when it comes to data management and use. However, lessons and best practices are not uniformly applied. While some datasets are updated online regularly, visualised insightfully, and readily available for further analysis, many datasets miss this mark. Further, various datasets exist in silos, resulting in a loss of cross-sectoral insights.

NDAP’s mission to be a one-stop platform for all published government data will go a long way in helping fill these gaps. On this portal, various government datasets will be available in a standardised, usable format, enable advanced analytics, and user-friendly with compelling visualisations.

We will aim for this platform to be comprehensive, simple, and user-friendly, such that it is widely used by policy makers, academia, media, and civil society.

However, it is an ambitious task and I seek the cooperation of all stakeholders, specially the government agencies who generate substantial amounts of data to work with NITI Aayog in this nation-building effort.

(Rajiv Kumar)



एक कदम स्वच्छता की ओर

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### **Message**

“National Data and Analytics Platform” (NDAP), is a flagship initiative of NITI Aayog in the space of promoting larger access and better use of data.

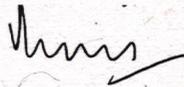
As India’s premier arm for policy innovation and research, NITI Aayog has always championed and actively promoted the use of data in all spheres of governance. In the Aspirational Districts Programme, NITI Aayog enabled the use of survey and administrative data to rank districts on socioeconomic performance as well as inform their block-level resource allocation decisions.

NDAP is a critical next milestone in the use of data for NITI Aayog and indeed the nation. NDAP will be a one-stop platform to utilise, analyse and visualise all published government datasets. It will be a critical tool in the hands of policy makers, researchers, journalists, and civil society leaders, enabling them to do their work better.

NDAP would encompass critical features such as allowing easy access to all the published datasets through a single platform and using cutting edge technology to enable analytics and visualisation for drawing better insight. Perhaps most importantly, NDAP will strive to ensure that datasets are merged with each other using temporal and geographical identifiers.

NDAP has the potential to deepen our understanding of India’s dynamic economy and social conditions. This will in turn help improve crores of lives by making the government’s actions more scientific and data-driven.

I am confident that we will succeed in this bold initiative and look forward to a new data-rich future! I encourage all of you to join hands with NITI Aayog in this important initiative.



(Amitabh Kant)

Place-New Delhi  
Dated- January, 2020

# National Data and Analytics Platform

**Vision:** Democratize access to public Government data through a world-class user experience.

**Mission:** Standardize data across multiple Government sources, provide flexible analytics and make it easily accessible in formats conducive for research, innovation, policy making and public consumption.

## Objectives

### User-centric

Data access is user-friendly and engaging, tailored to the needs of policymakers, bureaucrats, researchers, innovators, data scientists, journalists and citizens alike

### Coherent

Multiple data sets are presented using a standardized schema, by using common geographical and temporal identifiers

### Up-to-date

Standard Operating Procedures are set to ensure data is updated regularly

## Data Sources

- Websites of over 50 Ministries and Departments of the Central Government and data.gov.in
- Websites of all Departments and Ministries of the State Government, not exceeding 250

(Detailed list of data sources can be found in the RFP titled 'Selection of Consultant for Development and Operation of National Data and Analytics Portal' released on 18.07.2019)

## Overview

**India has rich publicly available data.** Government departments have digitised various processes and reporting requirements, which in turn are feeding into management information systems and interactive dashboards. This data is being used to track and visualise progress and make iterative improvements on the ground.

**However, the data landscape can improve.** All public government data should be easily accessible to all stakeholders in a user-friendly manner. Further, data across sectors should be coherent to support analysis and dissemination. In addition, there should be easy access to the most recent data, published reliably.

## Challenges

**Data is not published in a user-centric manner.** The current data formats are often not conducive for research and innovation. Many departments maintain public dashboards with visualisations, and options to download data in analysable formats. However, some datasets are only available in PDF, webpage or as an image, making it difficult for further analysis. If this issue is resolved, researchers and data scientists will significantly save time and resources in cleaning and preparing government datasets for analysis

**Data ecosystem is incoherent due to different standards.** Ministries and Departments do not use a shared standard for common indicators. Attributes like region and time period defined differently. This makes it difficult for datasets to speak to each other and present a coherent picture. If we can solve this, many use-cases can emerge. For example, a District Magistrate can access data across all departments for their district, easily, in one platform.

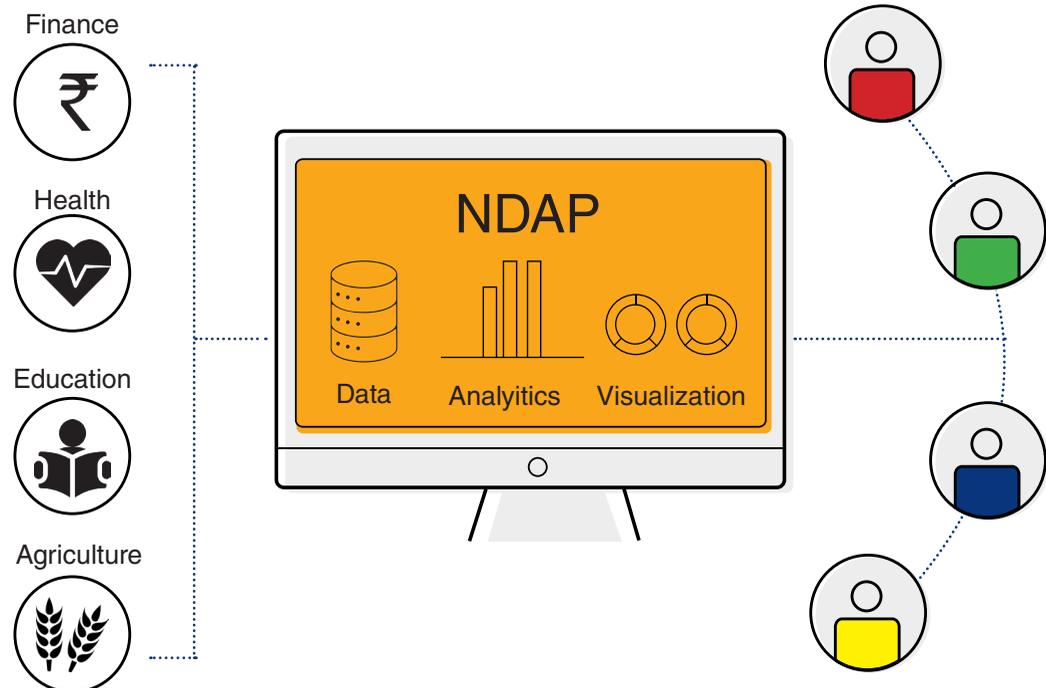
## Approach

**We intend to draw inspiration from the best platforms around the world.** Significant progress in improving user experience while accessing data generated by the public, as can be seen in platforms such as 'datausa.io' and 'data.gov.sg'. The main utility of such platforms is to provide a seamless, interactive experience in accessing data across multiple socio-economic indicators in one place. Also, they provide datasets in a machine-readable format.

**We also seek to build on the success of existing Indian data platforms.** Over the years, notable improvements have taken place in the data publishing ecosystem. For example, data.gov.in provides ready access to data from 165 departments. DISHA, by the Ministry of Rural Development, provides access to data from 42 schemes across 20 ministries. Various states also have a ‘Chief Minister’s Dashboard’. Initiatives like these provide a rich source of data for NDAP.

**NDAP will take a user-centric approach to providing access to data.** The platform will be powered by a user friendly search engine, backed by seamless navigation, with a world-class user interface. Data will be provided in a machine-readable format with customisable analytics. Dynamic visualisations will be generated based on user search terms. The platform will be designed and optimised to the needs of policymakers, bureaucrats, researchers, innovators, data scientists, journalists, and citizens.

**NDAP will provide access to data from multiple sectors in one place.** Data will be sourced from different Central and State Ministries and Departments. This will be presented using a common schema, with clear definitions and narratives to help the user navigate the differences between similar data from different sources.

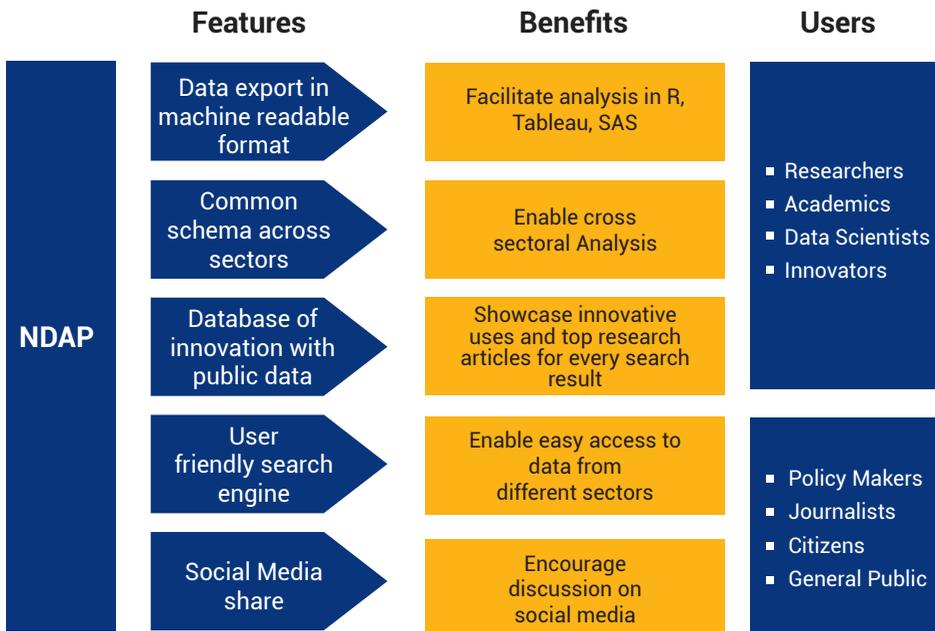


**NDAP will be a reliable platform for up-to-date data.** Standard Operating Procedures (SOPs) will be developed to keep data updated. There will be regular tracking of compliance to these SOPs. Further, APIs, web-crawling and other methods will be used to keep the data fully up-to-date.

**Success of NDAP relies on effective collaboration.** NDAP goes beyond just developing a platform and will require extensive consultation. Inputs will be needed from data producers in the government to identify data sources and develop data processing techniques for the datasets to be coherent. Regular feedback from users -- policymakers, bureaucrats, researchers, innovators, data scientists, journalists, and citizens -- will also assist in ensuring the platform stays relevant.

**NDAP has the potential to transform data-driven discourse, research, innovation, and decision-making in India.** There are a large number of benefits for up-to-date and reliable data. NDAP's vision is to democratise access to public government data and provide a worldclass user experience. We strongly believe it will be an important tool for the nation's progress

## Features



## Governance Structure

### High Powered Steering Committee

A high powered inter-ministerial steering committee under the chairmanship of Vice Chairman, NITI Aayog will be set up to provide direction, oversee progress, guide on data sources, and address various inter-ministerial issues on collating data.

### Technical Advisory Group

A Technical Advisory Group consisting of sector and technology experts will be established to provide expert consultation. TAG will provide guidance on the development of the platform, management of data, and aligning the platform for user-needs.

### Project Management Unit

Established at NITI Aayog to coordinate with different stakeholders and manage various facets of NDAP

### Technology Vendor

A technology vendor will be engaged for development and operation of NDAP

## Technical Advisory Group

Current members of the Technical Advisory Group include:

- Dr. Mudit Kapoor, Professor, Indian Statistical Institute
- Mr Ajit Pai, OSD, Vice Chairman, NITI Aayog
- Dr Asha Subramanian, Founder & CEO Semantic Web India
- Dr Monojit Choudhury, Principle Researcher, Microsoft
- Dr Lalitesh Katragadda, Founder, Indihood
- Dr Yamini Aiyer, President and Chief Executive of CPR
- Dr Sam Asher, Co-Founder, Development Data Lab

Additional members would be added as the platform matures. Omidyar Network India has selected IDInsight to provide support to NITI Aayog for this initiative.

## Way Forward

The first version of National Data and Analytics Platform is proposed to be released in 2021

NDAP is a pan-India initiative by NITI Aayog. Its success requires extensive support and cooperation of various stakeholders such as Central Ministries, State Governments and guidance from experts to realise the vision and meet the timelines.

**We invite you to join us on this journey!**





सत्यमेव जयते

**NITI Aayog**