PM-USHA Portal

Enhancing Higher Education in the light of NEP 2020

Edited by **NEETA CHAUHAN**

To align with the five pillars of the New Education Policy (NEP) 2020—accessibility, quality, equity, accountability, and affordability—the Ministry of Education, Government of India, has launched the Pradhan Mantri Uchchatar Shiksha Abhiyan (PM-USHA) scheme under the Department of Higher Education. This initiative aims to enhance the overall quality of State Higher Educational Institutions (HEIs) by promoting adherence to established norms and standards and by encouraging accreditation as a framework for quality assurance.

PM-USHA is a centrally sponsored scheme led by the Ministry of Education, targeting both Government and Government-aided Higher Education Institutions. The scheme focuses on elevating educational quality by advancing teaching methodologies, refining accreditation processes, enhancing digital infrastructure, and establishing model academic institutions to foster a progressive educational landscape. The Higher Education

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With aims to cater to the five pillars of the NEP 2020, viz. accessibility, quality, equity, accountability, and affordability in the higher education sector of India, Pradhan Mantri Uchchatar Shiksha Abhiyan (PM-USHA) Scheme has been launched by the Dept. of Higher Education, Ministry of Education, Government of India. The main objective of the scheme is to improve the overall quality of existing state Higher Educational Institutions by ensuring their conformity to prescribed norms and standards and adoption of accreditation as a quality assurance framework.

Informatics Division of NIC serves as the technology partner, responsible for designing and developing the PM-USHA Portal.

Key Modules

The portal streamlines the onboarding of key stakeholders, including the National Project Directorate (NPD), State Project Directorate (SPD), State Approval Authority (SAA), as well as uploading signed MoUs with states and state-provided data for Focus Districts. It integrates with AISHE and supports onboarding of State and District Nodal Officers. Key functionalities include workflow-driven credential creation, proposal submission from institutions, states, and districts, proposal short-

listing by states, state-level approvals, and approval/rejection by the Project Approval Board (PAB) at the national level. Additional features include automated proposal scoring, progress tracking of approved projects, submission of progress and inspection reports, utilization certificates, completion certifications, and comprehensive monitoring of Rashtriya Uchchatar Shiksha Abhiyan (RUSA)

> The PM USHA Portal helped in timely evaluation of proposals submitted by various States/UTs. It will help in regular monitoring of RUSA and PM-USHA projects.
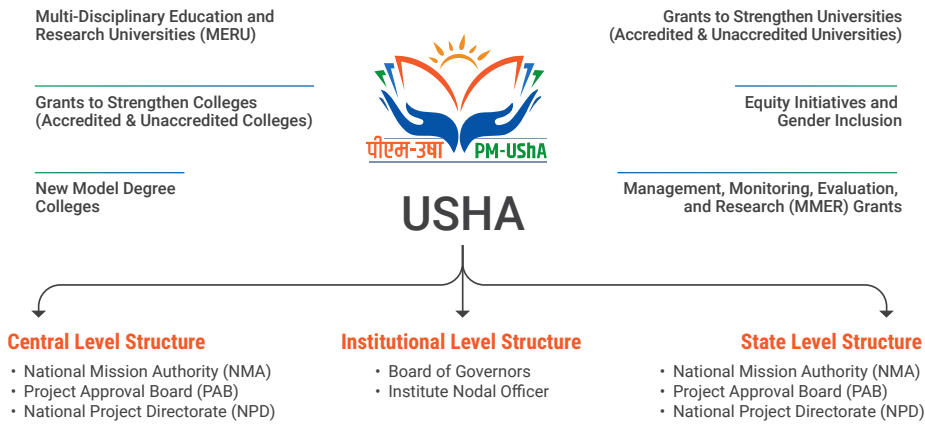
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and PM-USHA, along with MIS reporting.

Key Features

PM-USHA's key features encompass essential tools and functionalities that empower stakeholders, reinforce transparency, and support data-driven decision-making:

- Develop a comprehensive databank encompassing all components of PM-USHA to centralize information.
- Implement an analytical dashboard featuring KPIs and performance indices, providing a clear view of project metrics and progress.
- Integrate a Decision Support System for the Ministry (NPD/SPD) and other stakeholders to facilitate data-driven decision-making.
- Offer quantitative insights to inform policy-making and strategic planning, ensuring alignment with long-term goals.
- Enable evidence-based decision-making through advanced information analysis, allowing for well-substantiated adjustments to initiatives.
- Provide quantitative feedback on the effec-

▲ Fig 6.1   **PM-USHA Components**

tiveness of policies and schemes, supporting continuous improvement.

• Establish an online verification and reporting system to streamline monitoring and enhance transparency.

• Allow HEIs to apply for, track, and manage their proposals, as well as submit milestones, outcomes, and deliverables online at specified intervals.

Technology Used

This web application is REST-API driven Single Page Application (SPA) and is based on the Microservice Architecture. It uses JAVA Spring Boot framework for developing APIs. Swagger framework is used for API documentation. All of the APIs are based on OpenAPI specification 2.0. Angular framework is used for front end. In addition, application uses Bootstrap/HTML5/CSS3, Type/Java script, JQuery for designing and scripting purposes. PostgreSQL is used for database of application. JasperReports is used for generating reports at different steps. Linux RHEL is used for Servers/VMs hosted in MeghRaj (NIC-Cloud) at Shastri Park Data Centre, Delhi.

• **Website:** HTML, CSS, JavaScript, CMS tool
• **Front End:** Angular JS
• **Backend:** Rest API, Java, Spring Boot, Swagger
• **Server:** Apache, Tomcat
• **API Gateway:** NAPIX
• **Reporting Tools:** Jasper Reports Server
• **Database:** PostgreSQL
• **OS:** Linux

System Workflow

The PM-USHA Portal enables seamless interactions between multiple components and stakeholders to streamline the processing and management of proposals for various PM-USHA Scheme initiatives.

Key User Roles

▼ Fig 6.2   **PM-USHA Application Architecture**

• **Central Level (NPD/TSG/PAB):** The National Project Directorate (NPD), Technical Support Group (TSG), and Project Approval Board (PAB) at the central level hold key responsibilities. Central users can register all State Approval Authorities (SAAs), access all modules, and oversee state submissions. PAB is responsible for the final approval of state proposals, and NPD delegates proposals to TSG for scrutiny with designated logins for TSG members. Central users also maintain a comprehensive overview of all submitted proposals, including system-driven scoring.

• **State Level (SAA/SNO/SPD):** State-level users, including SAA, SNO, and SPD, manage state profiles, select Focus Districts, allocate PM-USHA components, and onboard District and Institutional Nodal Officers (DNO/INO). Only SAA can shortlist proposals submitted by HEIs and DNOs and forward these to the NPD for PAB approval using Aadhaar-based e-Sign. Additionally, they verify and update legacy RUSA data for scoring, monitoring, and reporting.

• **Institution/District Nodal Officer (INO/DNO):** Institution and District Nodal Officers, onboarded by state-level users, access the portal using unique IDs (e.g., AISHE Code for INOs). INOs can submit proposals for approved components such as MERU, University Strengthening, and College Strengthening. DNOs focus on Equity Initiative and Gender Inclusion (EI&GI) and New Model Degree Colleges (NMDC) components, with user credentials aligned to specific roles.

Core Modules

The PM-USHA Portal encompasses a range of core modules designed to optimize project management and streamline stakeholder interactions:
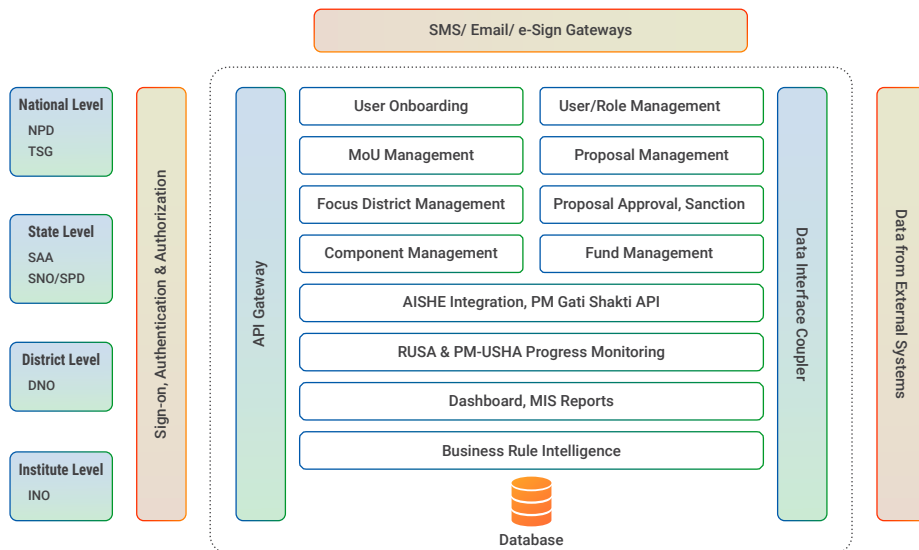
• **Automated Scoring:** Each proposal is evaluated with automated scoring across five PM-USHA components, streamlining the proposal shortlisting process.

• **Proposal Revision:** Proposals approved by PAB can be resubmitted if corrections are required.

• **MoU Management:** MoUs signed by states/UTs with the central government are uploaded by NPD, enabling SAA user creation and easy viewing.

• **Fund Demand:** States can request funds for RUSA-1, 2, and PM-USHA proposals through e-Sign, including quarterly utilization certificates (UC).

• **Document and Event Management:** The NPD can manage various documents and events, maintaining a digital repository for role-based document visibility and event tracking.
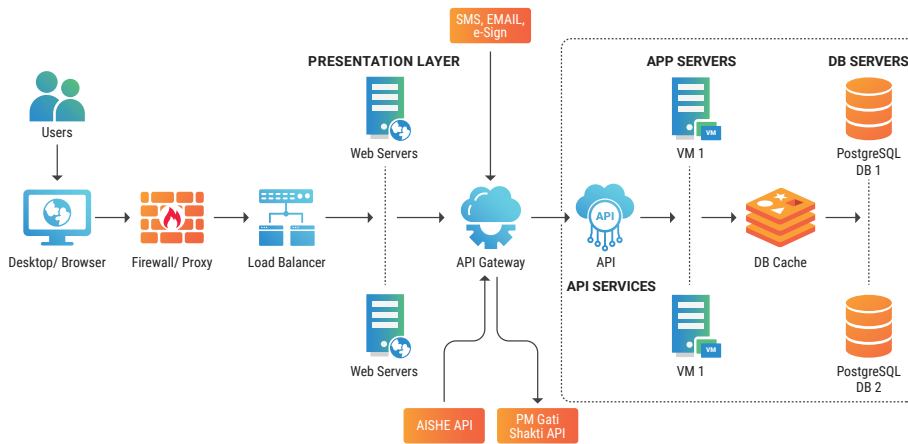
External Integrations

PM-USHA is externally integrated with the following applications and services to ensure enhanced data flow, compliance, and operational efficiency:

• AISHE
• PM Gati Shakti
• E-Sign
• SMS and E-Mail

PM-USHA Deployment Architecture

Benefits

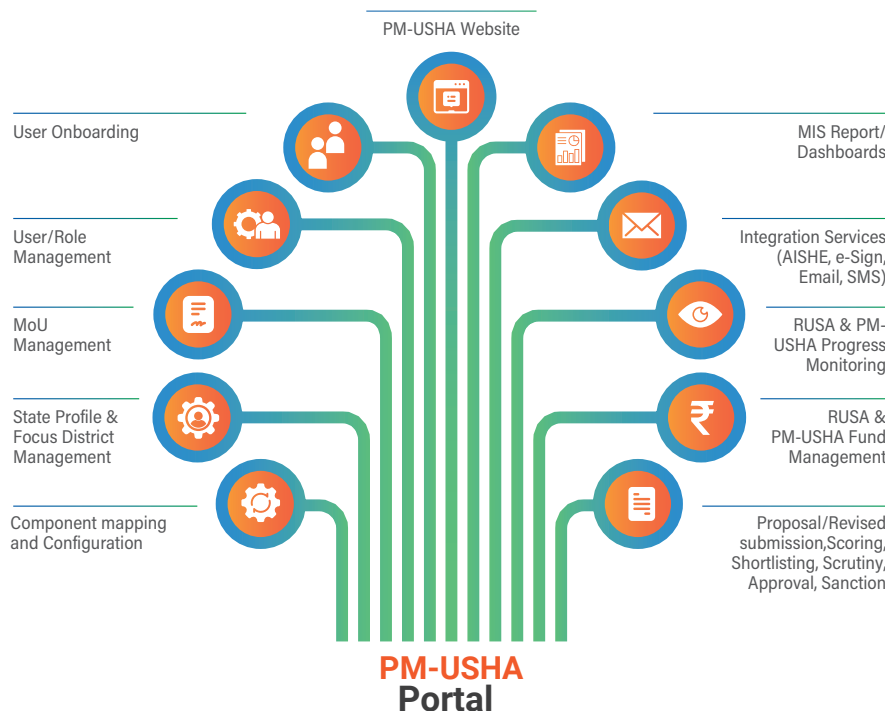The PM-USHA Portal introduces numerous benefits, driving operational efficiency, accuracy, and sustainable practices across the scheme's lifecycle:

● **Transparency in processing and sanction of the proposals:** It permits to track the proposal processing stage with just a click. This visibility ensures accountability, clarity and efficient processing and monitoring throughout the process. Additionally, no legal hassles due to transparency in system-driven score calculation. No load of RTI requirements.

● **Less prone to error:** Due to automation of Proposal processing & Management. With scoring handled by software, it is not susceptible to errors compared to manual methods. This reduces the risk of mistakes and ensures accuracy.

● **Efficient monitoring:** Unlike manual processes that require cumbersome process of gathering proposals data from HEIs/Districts, collation, compilation and manual analysis, this web application with it's comprehensive reports, enable them to monitor every stage of the proposal processing effortlessly. This simplifies oversight and enhances efficiency.

● **Quick implementation:** Easy for States as Institution/District Nodal Officer submits detail proposals themselves. States does not need to get all of the proposal details from the concerned nodal officers, collate it, compile it and then sub-
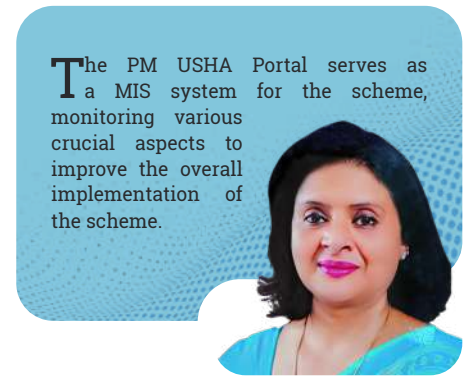
mit it to NPD. Easy to update/modify the proposals by un/locking of the proposals.

● **Paperless operation:** The system saves significant amounts of paper usage. This not only promotes environmental conservation but also streamlines operations by eliminating paper-work-related inefficiencies.

Impact

PM-USHA Portal has introduced an efficient and user-friendly system by completely automating the PM-USHA Scheme from Proposal Submission to PAB Approval & Monitoring. It helps the Dept. of Higher Education, Ministry of Education (National Project Directorate) to easily implement the scheme by eliminating the difficulties of the traditional manual approach. It also facilitates 24/7 availability, reliability, and transparency. The Portal facilitates ease of doing business and it acts as

> The PM USHA Portal serves as a MIS system for the scheme, monitoring various crucial aspects to improve the overall implementation of the scheme.

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an improved decision-making system. The portal helped the Ministry achieve the vision of quality higher education through a comprehensive, holistic, and integrated education ecosystem.

Way Forward

The PM-USHA Portal introduces a fully automated and user-friendly environment, improving efficiency and transparency across proposal submissions, approvals, and monitoring. The portal enables 24/7 access to critical data and promotes ease of business, enhancing decision support for the Ministry of Education. Looking ahead, enhanced reporting dashboards are planned to further strengthen oversight, support project monitoring, and maintain a dynamic databank of all stakeholders. This progression aligns with the Ministry's goal to create a holistic, quality-focused higher education ecosystem in India.

PM-USHA Portal Overview

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