Research Unit
Press Information Bureau
Government of India

Smart India Hackathon 2024

Ministry of Education

December 11, 2024

"Through Smart India Hackathon, the youth power of the country is extracting the Amrit of solutions for developed India."

- Prime Minister Narendra Modi

Introduction

The **7th edition** of the **Smart India Hackathon (SIH)** is being held concurrently at **51 nodal centres** nationwide. The **Software Edition** is to run nonstop for **36 hours** and the **Hardware Edition** will continue from **11 December 2024** to **15 December 2024**, bringing together the brightest young minds to showcase innovative solutions.

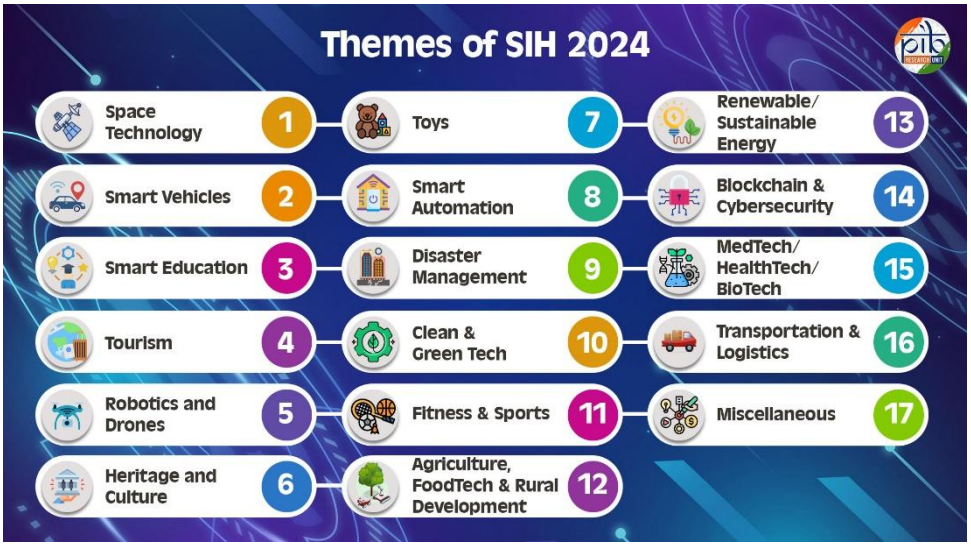
This initiative, spearheaded by the **Ministry of Education's Innovation Cell**, has established itself as the **world's largest open innovation model**. It offers students a unique platform to address real-world challenges, promoting a culture of creativity, problem-solving, and innovation. This year more than 250 problem statements were presented. Some of the interesting problem statements of this year's edition include '**Enhancing Images of Darker Regions on the Moon**' presented by **ISRO**, '**Developing a real-time Ganga Water Quality Monitoring system using AI, satellite data, IoT, and dynamic models'** presented by **Ministry of Jal Shakti**, and '**Developing a Smart Yoga Mat integrated with AI**' presented by **Ministry of AYUSH**.

Ministries and Departments in SIH 2024

The success of SIH 2024 is bolstered by the active participation of **40 Central Ministries and**

Departments, 6 State Governments, and 6 PSUs, reflecting its holistic and inclusive approach.

Themes of SIH 2024

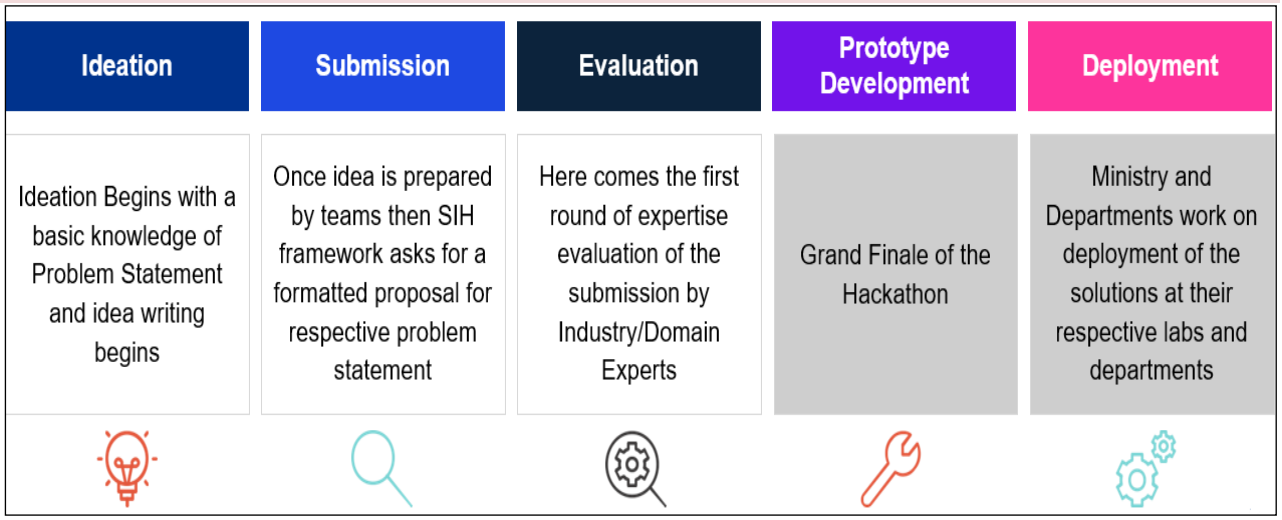


SIH 2024 features **17 carefully curated themes** that resonate with national priorities and global challenges. Each theme is designed to challenge participants to think beyond conventional solutions and create impactful innovations. These themes enable participants to innovate in sectors that directly impact society and the economy.

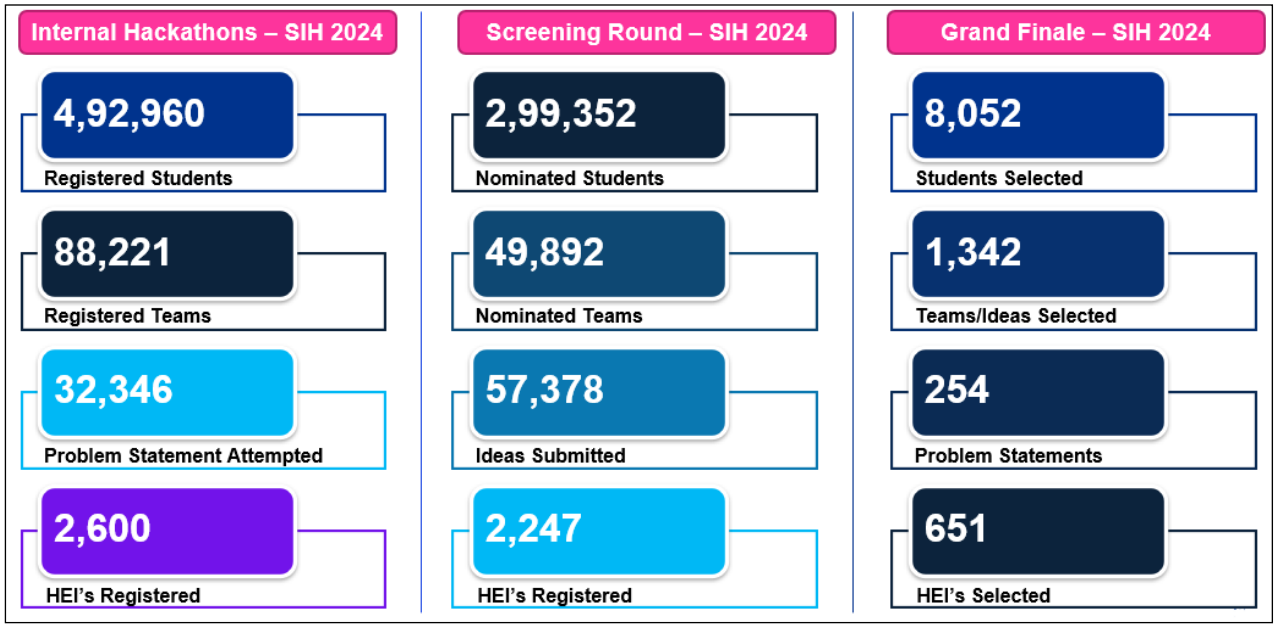
Problem Statements and Process Flow

SIH 2024 received an impressive **254 problem statements**, categorized into **186 software-related** and **68 hardware-related** challenges. These problem statements were developed by various ministries and industry partners to address pressing issues.

Process Flow of Smart India Hackathons



Statistics for SIH 2024



SIH: Building India's Future, One Hack at a Time

Since its inception in 2017, SIH has positively influenced the lives of over **13.91 lakh students**, providing a platform to showcase their ideas and talents. With almost **2 lakh teams** participating in the hackathons, it has led to a **7x increase in idea submissions** over the years, reflecting the growing interest and enthusiasm among students. The SIH has gained significant popularity among students, offering valuable career advancement opportunities. India is ranked **39th** out of 139 countries in the **2024 Global Innovation Index (GII)**. With its growing participation, SIH has had a broad, both direct and indirect, impact. It has not only directly addressed **problem-solving** but has also fostered a **hackathon culture** across the country, encouraging various government departments and higher education institutions to organize their own hackathons.

International Tie-ups and Hackathons

SIH's international collaborations highlight India's commitment to **global innovation partnerships**:

- **Singapore-India Hackathon (2018, 2019, 2023)**: The first of its kind international hackathon, organized at **NTU Singapore (2018), IIT Madras (2019)** and **IIT Gandhinagar (2023).** Motive of Singapore India Hackathon was to develop innovative & out-of-the-box solutions for social problems by collaboration through exchange of ideas & culture between two countries.
- **ASEAN-India Hackathon 2020**: Focused on blue economy themes, this hackathon brought together participants from **India and all the 10 ASEAN** nations. Students received mentorship from **Coast Guard, INCOIS** in India as well as from other participating nations. It was a completely online hackathon with its **own online platform** for collaborative effort. This hackathon also witnessed massive **training sessions** by Indian marine counterparts for better solution design.

These tie-ups strengthen diplomatic ties and foster mutual learning.

The Yukti Initiative

YUKTI - National Innovation Repository (NIR), an initiative by the Ministry of Education, aims to create a repository of innovations and startups from academic institutions, providing mentorship, funding, and connections to investors and incubation units. The Yukti Initiative has been pivotal in supporting SIH alumni. To date, over **100 startups** with **9654 SIH Alumni** members have emerged from the SIH ecosystem, tackling critical challenges in sectors like healthcare, education, and sustainability. Alumni also serve as mentors and evaluators, perpetuating a cycle of innovation and guidance.

Design Week Celebration

The **Design Week Celebration**, launched in June 2023, focuses on improving the design aesthetics of prototypes developed in the SIHs. **Innovation Design and Entrepreneurship (IDE) Bootcamps** were conceptualized and organized in collaboration with the Wadhwani Foundation. Over **25 bootcamps** in the **first edition** across **three phases**, emphasizing product design, ergonomics, and business modeling. In **second edition, 20** more sessions are planned, with **9 already completed** this year. This initiative has significantly enhanced the quality and market readiness of SIH projects.

Solutions Implemented by Government Ministries

Ministry of Ayush has accepted a total of 8 solutions till 2022, in which 4 were funded by AICTE and 4 were funded directly by the ministry. The screening of projects to be accepted for the year 2023 is still in process and the projects for 2024 will be screened post the grand finale of SIH 2024.

ISRO has accepted 4 solutions for in-house development about tilt angle adjustment of solar panel, a video geotagging application, deep learning based on cyclone intensity estimation using INSAT-3D IR Imagery and development of a blockchain based storage solution for large geospatial datasets.

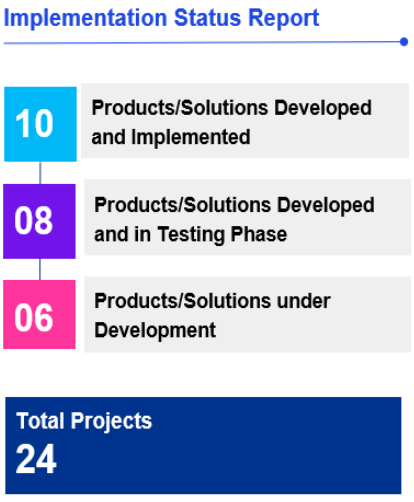
DST has accepted 4 solutions for incubation through NIDHI Prayas Scheme for solar panel with solar tracking device without power consumption, 3D printed smart knee brace, hydrogravitricity and wheelchair with attachment for B-type oxygen cylinder for COPD patients.

DRDO has accepted one project for in house development about gesture enabled commands for operating laptops/PCs for frequently used operations.

Statistics of Projects Implemented under SIH 2022

In 2022, **24 projects** were successfully implemented across domains like water, social welfare, education, Ayush, science and defence.

S. No.	Name of Ministry/ Department	No. of Beta Prototype/ Projects ready to be Tested/ Projects in Testing Phase (Subject to actual work conditions at concerned Ministry/ Department)
1	Water Resources, River Development, and Ganga Rejuvenation, Ministry of Jal Shakti	6
2	Empowerment of citizens with Disabilities, Ministry of Social Justice	3
3	AICTE, Department of Higher Education, Ministry of Education	2
4	Ministry of AYUSH	4
5	Department of Science and Technology	4
6	DRDO	1
7	ISRO, Department of Space	4
Total		**24**

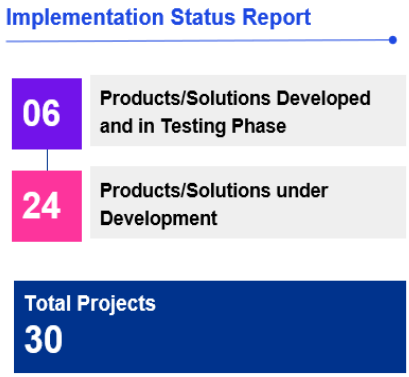


Statistics of Projects Implemented under SIH 2023

In 2023, **30 projects** were successfully implemented across domains like information and broadcasting, power, ayush, water, animal rearing, disaster management, science, technology,

railway and administration. These projects have not only enhanced operational efficiency but also addressed critical societal challenges.

S. No.	Name of Ministry/ Department	No. of Beta Prototype/ Projects ready to be Tested/ Projects in Testing Phase (Subject to actual work conditions at concerned Ministry/ Department)
1	Ministry of Information and Broadcasting	3
2	Ministry of Coal (CIL)	1
3	Ministry of AYUSH	10
4	Ministry of Jal Shakti	1
5	Ministry of Animal Husbandry and Dairying	1
6	National Disaster Response Force (NDRF)	3
7	Power Grid Corporation of India Ltd	1
8	National Technical Research Organization (NTRO)	6
9	Indian Space Research Organization (ISRO)	2
10	Ministry of Railway	1
11	Govt. of Jharkhand	1
Total		30



Startups from SIH

Startups born out of SIH have tackled challenges in diverse areas, including **healthcare**, **sustainability and education technology.** These startups are supported by government initiatives and industry partnerships, ensuring their growth and success. These startups are Raffesia Technologies Pvt. Ltd., Tune AI, Viji, Privaseverse Cyberspace Pvt. Ltd., Ridemap: IGNITE SKYLABS, Blockly Technologies Pvt. Ltd., ACDC, Cyber Chakra Technology, IGNIT Technical Solutions Pvt. Ltd. and Janta24.

Conclusion

The **Smart India Hackathon** stands as a beacon of innovation, collaboration, and opportunity. By addressing real-world challenges and fostering a culture of problem-solving, SIH empowers India's youth to contribute meaningfully to the nation's progress. As each year's event concludes, its impact continues to resonate across industries and government ministries/departments.

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