



India's Science and Technology Innovation Ecosystem

Why in News?

Recently, **YUVA Portal** was launched to connect and identify potential young start-ups in India's [science and technology innovation ecosystem](#).

- **"One Week - One Lab"** campaign was launched earlier. [Astronomy lab](#) in Haryana's Karnal was also launched, which provides opportunities for **people with disabilities to excel in various forms of skill, art, and craft**.

What are the Recent Developments in India's S&T Innovation Ecosystem?

- **About:**
 - India is leading global excellence in **technology, innovation, and start-ups**, as emphasised by the Prime Minister's recent address at the **108th Indian Science Congress**.
 - India is ranked 40th out of 132 among the top innovative economies globally as per the [Global Innovation Index \(GII\) 2022](#).
- **Indian Sign Language AstroLab:**
 - The [Indian Sign Language AstroLab](#), equipped with **65 pieces of equipment including a large telescope and audiovisual aids**, offers virtual access to educational videos in Indian sign language, promoting inclusivity and accessibility.
- **CSIR-NPL:**
 - [Council of Scientific and Industrial Research \(CSIR\)- National Physical Laboratory \(CSIR-NPL\)](#) has played a role as the **custodian of Indian Standard Time (IST)**, generated using an atomic time scale consisting of Cesium atomic clocks and Hydrogen masers and in **standardising measurements of gas and airborne particles** for monitoring atmospheric pollution.
 - The **CSIR Labs** specialise in various areas of **research, from genome to geology**, food to fuel, minerals to materials, and more, contributing to India's scientific and technological advancements.
 - NPL conducts **multidisciplinary R&D to establish futuristic quantum standards and upcoming technologies**, develops import substitutes under the **"Make in India"** program, and provides training under the "Skill India" program.
- **One Week - One Lab Campaign:**
 - **"One Week - One Lab"** program aims to create awareness about the technologies and services offered by **CSIR-NPL**, provide solutions to **societal problems, and develop scientific temperament among students**.
 - **180 schools in Delhi-NCR have been exposed to NPL labs** for different activities, and more schools will be included in future interactions.
- **Science and Heritage Research Initiative (SHRI)**
 - Under the [SHRI program](#), the **sound proofing qualities of Pattamadai mat**, a mat made by **weaving or interlacing korai grass with the cotton threads**, has been explored for **use in noise guarding classrooms as well as recording studios** against external noise disturbances.
 - This can increase the demand for this **traditional art of Tirunelveli, Tamil Nadu**.
- **Institute of Advanced Study in Science and Technology (IASST):**

- Scientists from the **IASST** have developed **biodegradable, biopolymer nanocomposite** which can detect relative humidity and can find **application as smart packaging materials, especially for the food industry.**
- **National Initiative for Developing and Harnessing Innovations (NIDHI):**
 - It is an end-to-end plan for **start-ups to double the number of incubators** and start-ups in the duration of five years.
- **National Start-up Awards:**
 - This program recognizes and rewards **outstanding start-ups and ecosystem** enablers contributing to economic dynamism by stimulating innovation and stimulating competition.

[Source: PIB](#)

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