



NITI Aayog Unveils “Reimagining Agriculture: A Roadmap for Frontier Technology Led Transformation”

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NITI Aayog’s Frontier Tech Hub unveiled a groundbreaking roadmap titled “Reimagining Agriculture: A Roadmap for Frontier Technology Led Transformation” in Gandhinagar, Gujarat today. The launch event was graced by Chief Minister of Gujarat Shri Bhupendrabhai Patel; Shri Rameshbhai Bhurabhai Katara, Minister of State, Agriculture and Farmers Welfare, Cooperation, Animal Husbandry and Cow Breeding, Government of Gujarat; Shri Jitubhai Vaghani, Minister of Agriculture/Farmers Welfare/Cooperation/Animal Husbandry/Cow Breeding/Fisheries, Government of Gujarat; Shri B.V.R. Subrahmanyam, CEO, NITI Aayog; Dr. Hasmukh Adhia, Principal Advisor to CM, Gujarat; Dr. Anju Sharma, Additional Chief Secretary, Government of Gujarat; Dr. Neelam Patel, Programme Director, NITI Aayog; Ms Debjani Ghosh, Distinguished Fellow, NITI Aayog; distinguished representatives from industry, academia, and innovation ecosystems; and other eminent dignitaries.

The roadmap outlines a strategic vision to harness frontier technologies, including climate resilient seeds, digital twins, precision agriculture, agentic AI, and advanced mechanisation to enhance productivity, sustainability, and incomes across India’s diverse agricultural landscape. By segmenting farmers into three primary archetypes, i.e. Aspiring, Transitioning, and Advanced, the roadmap offers tailored, actionable solutions sensitive to the varied challenges faced by smallholders to commercial cultivators.

The roadmap highlights that with the right interventions, India can unlock new levels of agricultural resilience, inclusive rural prosperity, and global competitiveness in agri-tech innovation, contributing meaningfully towards the vision of Viksit Bharat by 2047.

Shri Bhupendrabhai Patel, Chief Minister of Gujarat, said, “Gujarat is uniquely positioned to lead India’s agricultural transformation. Through initiatives such as the Digital Crop Survey, Digital Agri Farm Registry, and the i-Khedut portal, we are building a seamless ecosystem that integrates technology across every stage of farming. These innovations are helping our farmers combat crop diseases, enhance productivity, and adopt next-generation seeds and tools that lower the cost of cultivation. Digital integration is not just about improving efficiency; it is empowering our farmers. Farmer sashaktikaran is essential for realising the vision of Viksit Bharat 2047. By harnessing AI, data, and precision technologies, we can ensure that every acre becomes more productive, every drop of water more valuable, and every farmer more prosperous.”

Shri B.V.R. Subrahmanyam, CEO, NITI Aayog, emphasised, “No two farmers in India are the same, and technology must reflect that diversity. The real impact of frontier technologies will come from how well we customize solutions—whether for a smallholder or a commercial cultivator; a farmer growing staples or a horticulturist. This roadmap rightly emphasizes differentiated strategies for aspiring, transitioning, and advanced farmers. If we design with empathy and deploy with precision, technology can truly transform livelihoods, making agriculture more resilient, inclusive, and future-ready.”

Ms. Debjani Ghosh, Distinguished Fellow, NITI Aayog, added, “Agriculture stands on the brink of a profound technological renaissance. For decades, progress was measured in hectares and yields; the next revolution will be measured in data, intelligence, and design. This is the new frontier—where speed, scale, and smart integration will define success. The question is no longer *whether* we transform, but *how fast* we can make every farmer a co-creator of this new future”

Developed in collaboration with knowledge partners – BCG, Google and CII -under the guidance of experts from industry & academia, the roadmap launch witnessed enthusiastic participation from stakeholders committed to shaping India’s agricultural future.

Access the Roadmap here: <https://bit.ly/47oecKM>

About NITI Frontier Tech Hub:

The NITI Frontier Tech Hub is an action tank for Viksit Bharat. Collaborating with over 100 experts across government, industry, and academia, it is developing 10-year thematic roadmaps spanning 20+ sectors to harness frontier technologies for transformative, inclusive growth. The Hub drives coordinated action today to build a prosperous, resilient, and technologically advanced India by 2047.

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