3. NITI Aayog's Vision for Ai Powered India - Economy

Smt. Nirmala Sitharaman and Shri Ashwini Vaishnaw launch NITI Aayog's 'AI for Viksit Bharat Roadmap' and 'Frontier Tech Repository'. NITI Aayog has launched a set of transformative initiatives under its Frontier Tech Hub to position India as a global leader in Artificial Intelligence and leverage it to achieve the Viksit Bharat @ 2047 vision. These initiatives provide a strategic roadmap and actionable frameworks to integrate AI into India's economic and governance fabric.

Key Initiatives Unveiled

1. **'AI for Viksit Bharat Roadmap' -** A detailed, sector-specific action plan designed to unlock productivity and innovation through AI integration, aiming for sustained GDP growth of over 8%.
2. **'Frontier Tech Repository' -** A curated platform of scalable, real-world technology use cases to inspire and enable states and districts to adopt frontier technologies for tangible impact.
3. **Frontier 50 Initiative -** A program where NITI Aayog will support 50 Aspirational Districts/Blocks to select and deploy impactful use cases from the Frontier Tech Repository, accelerating service saturation.
4. **NITI Frontier Tech Impact Awards -** An award to recognize and support three states that have excelled in using technology to improve governance, education, healthcare, and livelihoods, helping them scale their transformative solutions.

The AI for Viksit Bharat Roadmap - Vision and Economic Impact

The roadmap's primary objective is to bridge India's GDP growth gap, capture 10–15% of the global AI value chain, and establish the nation as a trusted, responsible global AI leader. This will be achieved through two main levers - accelerating AI adoption across industries and transforming R&D with generative AI.

Projected Economic Impact of AI on India's GDP by 2035

Source of AI Impact	Projected Incremental GDP Contribution (by 2035)
Accelerated AI Adoption (across industries)	USD 500-600 Billion (due to increased productivity)
Generative AI-driven R&D	USD 280-475 Billion
Overall Potential GDP Uplift (under Viksit Bharat)	USD 1.7 Trillion (raising total GDP to USD 8.3 Trillion)

The global economy is expected to see a USD 17–26 trillion boost from AI adoption during the same period.

India's Unique Opportunities in the AI Era

India is uniquely positioned to capitalize on the AI revolution due to several inherent advantages -

1. **Demographic Dividend -** Home to the world's largest STEM workforce and a vast young population, India can channel AI adoption into productive employment.
2. **Data Advantage -** India's massive, diverse, and multilingual datasets can make it the "global data capital." Scaling initiatives like AI Kosh to build certified, interoperable, and anonymized datasets in genomics, manufacturing, and finance is key.
3. **AI for Inclusive Growth -** AI-driven solutions can effectively bridge regional disparities by delivering last-mile services in critical sectors like agriculture, healthcare, and education.

Sector-Specific Transformation - The Three Major Unlocks

The roadmap identifies three primary avenues for AI-led growth, with a focus on priority sectors.

1. **Accelerating AI Adoption Across Industries (30-35% of growth step-up) -**
    1. Financial Services - AI for enhanced compliance, fraud detection, and creating hyper-personalized banking experiences.
    2. Manufacturing - Developing smart-factory corridors, implementing predictive maintenance to reduce downtime, and creating AI-ready industrial parks.
    3. By 2035, AI could contribute up to 20-25% of the sectoral GDP in both financial services and manufacturing.
2. **Transforming R&D with Generative AI (20-30% of growth step-up) -**

1. Pharmaceuticals - Slashing drug discovery costs by 20–30% and reducing development timelines by 60–80%.
2. Automotive - Using AI-designed components and developing Software-Assisted Vehicles (SAVs) to position India as a global hub for advanced automotive innovation.

3. **Strengthening Technology Services (15-20% of growth step-up) -** Moving beyond traditional IT services to provide high-value, AI-powered global solutions, reinforcing India's status as a technology leader.

Challenges to Overcome

1. **Data & Infrastructure Gaps -** Lack of high-performance computing, fragmented data ecosystems, and reliance on legacy IT systems.
2. **Talent Shortages -** An insufficient number of AI-specialized professionals, especially in core sectors like manufacturing and biopharma.
3. **Regulatory & Governance Risks -** Concerns over data privacy, lack of explainability frameworks for AI models, and challenges in getting global patent recognition for AI-generated innovations.
4. **Inequitable Access -** The high cost and complexity of AI risk leaving MSMEs and smaller institutions behind, creating a digital divide.

The Way Forward - A Multi-Pillar Strategy

The roadmap outlines a comprehensive strategy built on strengthening national missions, fostering collaboration, and aligning with global standards.

Strengthening the IndiaAI Mission

The government's flagship IndiaAI Mission, approved in March 2024, will be central. It is built on seven pillars - Compute Capacity, Innovation Centers, Datasets, Applications, Skills, Startup Financing, and Safe AI Deployment.

Ensuring Global Alignment

To ensure Indian industries remain competitive in export markets, the roadmap emphasizes harmonizing India's AI frameworks with global standards.

Key Provisions of the EU AI Act (2024)

Category	Provisions
Prohibited Uses	Social scoring, manipulative AI, indiscriminate scraping of facial data.
High-Risk AI	Mandatory risk assessments, human oversight, and transparency for AI in healthcare, law enforcement, etc.
Generative AI	Requirements for training data transparency, copyright compliance, and clear labeling of deepfakes.
Penalties	Severe fines up to €35 million or 7% of global revenue.

The EU AI Act is seen as a global template, influencing AI legislation in the US, China, India, and other nations. The UNECE also plays a key role in harmonizing AI standards at a broader UN level, particularly in transport and trade.

Promoting Inclusive and Collaborative Adoption

1. Public-Private Collaboration - Build joint ecosystems for co-creating AI solutions and regulatory sandboxes.
2. Sector-Specific Initiatives - Establish AI-ready industrial parks and create national datasets for key sectors.
3. Inclusive Adoption - Extend AI access to MSMEs, Tier-2/Tier-3 cities, and gig workers through subsidies, skilling programs, and robust digital infrastructure.

Source - https - //www.pib.gov.in/PressReleasePage.aspx?PRID=2166867