

## India

### *National AI Strategies*

Recognizing the potential of AI to transform and advance its economy, the government of India has initiated and implemented multiple strategies to address research, development, innovation, governance, standards setting, and accountability of AI in India. The *Task Force on Artificial Intelligence for India's Economic Transformation*,<sup>422</sup> which has produced a benchmarking report (2018),<sup>423</sup> has played a role in setting forth India's vision regarding AI.

In 2017, India's Ministry of Congress and Industry established NITI Aayog, an AI hub which includes a functioning AI Commission. Its mandate is to establish a National Program on AI to guide research and development initiatives in AI, among other tasks. NITI Aayog adopted a three-pronged approach to meet this mandate: Undertake exploratory proof-of-concept AI projects; Craft a national strategy for building a vibrant AI ecosystem in India; and Collaborate with experts and stakeholders.<sup>424</sup> In June of 2018, NITI Aayog published the first draft of its AI strategy advancing recommendations for India “to become a leading nation in AI by empowering human capability and ensuring social and inclusive growth.”<sup>425</sup> The commission identified five strategic focus areas for AI development: healthcare, agriculture, education, smart cities and transportation.<sup>426</sup> The commission also identified five barriers that need to be addressed in order to realize the full potential of AI:

- 1) Lack of broad-based expertise in research and application of AI;
- 2) Absence of enabling data ecosystems – access to intelligent data;
- 3) High resource cost and low awareness for adoption of AI;

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<sup>422</sup> Artificial Intelligence Task Force, Ministry of Commerce and Industry, Government of India, <https://www.aif.org.in>.

<sup>423</sup> India, Department of Promotion of Industry and Internal Trade, *Report of Task Force on Artificial Intelligence* (Mar. 2018), <https://dipp.gov.in/whats-new/report-task-force-artificial-intelligence>

<sup>424</sup> [OECD.AI, 2020; Sinha et al, 2018]:

<sup>425</sup> (*National Strategy for Artificial Intelligence #AIforAll*)

<sup>426</sup> [OECD AI in Society, 2020].

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- 4) Privacy and security, including a lack of formal regulations around anonymization of data; and
- 5) Absence of collaborative approach to adoption and application of AI.

In November 2020, NITI Aayog published an additional draft outlining its AI Strategy, *Enforcement Mechanisms for Responsible AI for All*.<sup>427</sup> In this draft, which allowed for public participation and comments, NITI Aayog proposed an oversight body and articulated its role and proposed duties. These include:

- Manage and update Principles for Responsible AI in India,
- Research technical, legal, policy, and societal issues of AI,
- Provide clarity on responsible behavior through design structures, standards, guidelines,
- Enable access to Responsible AI tools and techniques,
- Education and awareness on Responsible AI,
- Coordinate with various sectoral AI regulators, identify gaps, and harmonize policies across sectors,
- Represent India and other emerging economies in International AI dialogue on Responsible AI

The 2020 draft is an important addition that adds oversight and accountability to the initial 2018 strategy, which made key recommendations to promote research, education, and protection of civil liberties in AI development, including the following:

- 1) Create two-tiered research institutes to nurture both academic and industry research;
- 2) Establish learning platforms for the workforce skill/reskill development;
- 3) Create targeted data sets and incubation hubs for start-ups to facilitate cooperation; and
- 4) Establish a regulatory framework for data protection and cyber security.

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<sup>427</sup> NITI Aayog, *Working Document: Enforcement Mechanisms for Responsible #AIforAll* (Nov. 2020), <https://niti.gov.in/sites/default/files/2020-11/Towards-Responsible-AI-Enforcement-of-Principles.pdf>

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Finally, the 2018 strategy discusses important issues in ethics and AI—including fairness and bias, transparency and explainability, privacy, and security—and advances visions for responsible AI development in its government.

The #AIForAll strategy proposes a two-tiered framework to AI research and development: the creation of Centres of Research Excellence in AI (COREs), which will be academic research hubs; and the creation of International Centres for Transformational Artificial Intelligence, which will be industry-led.

### *Quad Group*

This year at a strategic meeting the foreign ministers of India, United States, Australia, and Japan discussed a collective vision for national security (Quadrilateral Security Dialogue), and India also expressed support of AI policies that favor democratic nations.<sup>428</sup> In an address at a ministerial meeting of the Quad Group in Tokyo, external affairs Minister also spoke about upholding “rules-based international order.” In addition to this, the NITI Aayog has specifically recommended that India seek out ways to harmonize its approach to AI with other emerging economies and OECD countries.

### *AI Policy Development and Oversight*

As discussed previously, India's Ministry of Congress and Industry AI commission (NITI Aayog), is charged with developing a National Program on AI to support innovative AI projects, craft a national strategy for building an AI ecosystem in India, and facilitate collaboration with experts and stakeholders in key sectors. The NITI Aayog published a draft report that sets out the goals, functions, and operations of India's AI Oversight Body.<sup>429</sup>

In addition to the NITI Aayog, the *Ministry of Electronics and Information Technology* (MeitY) is also pursuing work on AI policy. The

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<sup>428</sup> The Indian Express, *Jaishankar at Quad Meet: India committed to respecting territorial integrity* (Oct. 6, 2020), <https://indianexpress.com/article/india/quad-jaishankar-india-us-china-6705339/>

<sup>429</sup> NITI Aayog, *Working Document: Enforcement Mechanisms for Responsible #AIForAll* (Nov. 2020), <https://niti.gov.in/sites/default/files/2020-11/Towards-Responsible-AI-Enforcement-of-Principles.pdf>

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MeitY four AI Committees charged with promoting AI initiatives and developing policy frameworks to address 1) platforms and data on AI; 2) leveraging AI for identifying national missions in key sectors; 4) mapping technological capabilities, key policy enablers required across sectors, skilling, reskill; and 4) cybersecurity, safety, legal and ethical issues.<sup>430</sup> (

Recommendations have emerged from each of these committees, including:

- Development of an Open National AI Resource Platform (NAIRP) to become the central hub for knowledge integration and dissemination in AI and ML;
- Stakeholders need to deliberate on whether AI systems should be recognized as a legal person in the event of a civil liability claim;
- Sharing of best practices by the government around security, privacy, and other issues;
- Constitute a stakeholder committee to review existing laws to understand needed modifications for AI applications;
- AI framework should provide broad principles, and organizations should design their internal compliance programs to maximize flexibility with changing technologies;
- Standards should be set to address the AI development cycle. The Bureau of Indian Standards (BIS) has established a new committee for standardization in AI;
- Develop rigorous government safety parameters and thresholds so that AI applications are designed to minimize harm to people and property.

### *India's AI Stack and Aadhaar*

In 2009, India created UIDAI (Unique Identity Authority of India) and embarked on the creation of an ambitious digital biometric identity

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<sup>430</sup> Government of India, Ministry of Electronics and Information Technology, *Artificial Intelligence Committee Reports*, <https://www.meity.gov.in/artificial-intelligence-committees-reports>

ecosystem, the Aadhaar identity system. This ecosystem utilizes AI and machine learning techniques throughout. To facilitate a fully digital, cashless society and economy, a large number of open application programming interfaces or APIs are now associated with the Aadhaar ecosystem. When these APIs are linked to services or data, including those utilizing AI, it is called "The India Stack."<sup>431</sup> The India Stack is the largest system of its kind in the world, and by extension, among the largest AI/Machine Learning based systems in the world.

The Aadhaar system, originally a voluntary pilot program, became mandatory overtime and was tied to many services, which eventually created substantive human rights and privacy issues.<sup>432</sup> However, a series of landmark rulings from the Supreme Court of India, culminating in the landmark Aadhaar Privacy Decision of 2018,<sup>433</sup> greatly curtailed the negative uses of the Aadhaar system and created a significant national mandate for technological, procedural, and policy improvements.<sup>434</sup> Because of this, throughout India there is a strong impetus toward implementing mitigations for privacy and autonomy concerns in the Aadhaar system, the India Stack, and in general, AI systems in India. This mandate includes public participation in, and understanding of, AI systems. Since the Aadhaar ruling, many improvements regarding have been made regarding AI-based identity systems and services, the "India Stack."

In 2019, to further address concerns of standardization of AI development, the *Department of Telecommunications* formed an AI standardization committee to develop interface standards and design India's *AI Stack*, a framework designed to provide standards for all sectors addressing: data privacy, protection, federation, and minimization; defined data structures; interfaces and protocols; ethical standards; digital rights;

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<sup>431</sup> *The India Stack*, <https://www.indiastack.org/about/>

<sup>432</sup> Pam Dixon, A Failure to "Do No Harm" – India's Aadhaar biometric ID program and its inability to protect privacy in relation to measures in Europe and the U.S., *Health Technology* (May 4, 2017), <https://link.springer.com/epdf/10.1007/s12553-017-0202-6>

<sup>433</sup> Software Freedom Law Center, Full text of decision (Sept. 26, 2018), <https://sflc.in/updates-aadhaar-final-hearing/aadhaar-judgement>

<sup>434</sup> The Hindu, *Reactions to the Aadhaar verdict: Original Aadhaar petitioner Justice Puttaswamy welcomes parts of the judgment* (Sept. 26, 2018), <https://www.thehindu.com/news/national/reactions-to-aadhaar-verdict/article25046282.ece>

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and trustworthiness.<sup>435</sup> The committee released a report in 2020, and invited public comments on the design of India’s AI Stack.

In addition, in January 2020 the NITI Aayog released recommendations that an AI-explicit computer framework (AIRAWAT) be established to serve the needs of innovation hubs, AI research, and students, as well as a new discussion paper regarding the issue of *Responsible AI*.

### *Public participation*

The government of India has conducted several public consultations on AI policy. Most recently, in July 2020, the AI policy commission of India (NITI Aayog) requested public comments on its working document “*Towards Responsible #AIforAll*.”<sup>436</sup> In addition, the Department of Telecommunications invited public comments on the AI standardization committee’s design of India’s *AI Stack*, a framework designed to provide standards for all sectors addressing: data privacy, protection, federation, and minimization; defined data structures; interfaces and protocols; ethical standards; digital rights; and trustworthiness (AI Standardization committee, 2020). The Ministry of Electronics and Information Technology (MeitY) publishes reports from each of its four AI Committees, each charged with promoting AI initiatives and developing policy frameworks.<sup>437</sup>

In November 2020, the SFLC wrote to the Chairperson of the of the Joint Parliamentary Committee regarding the Personal Data Protection bill.<sup>438</sup> The SFLC noted “core deficiencies in the draft bill “including the lackof surveillance reforms, wide exemptions and the problems with the Data Protection Authority.” The NGO asked the Committee to invite civil society organizations that “defend the rights of citizens in the digital space for consultation on the draft Data Protection Bill.”

And in November 2020, the NITI Aayog “proposed setting up of an oversight body to set up standards, guidelines and benchmarks for use of artificial intelligence across sectors, which will be mandatory for public

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<sup>435</sup> AI Standardisation committee, 2020.

<sup>436</sup> AI Standardisation committee, 2020.

<sup>437</sup> Ministry of Electronics and Information Technology, *Artificial Intelligence Committees Reports*, <https://www.meity.gov.in/artificial-intelligence-committees-reports>

<sup>438</sup> SFLC, *Letter to Joint Parliamentary Committee on inviting civil societies for consultation on draft Data Protection Bill*, (Nov. 18, 2020), <https://sflc.in/updates-aadhaar-final-hearing/aadhaar-judgement>

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sector procurement. The body is expected to have field experts from computer science, AI, legal experts, sector specialists and representatives from civil societies, humanities and social science.”<sup>439</sup> The overarching body would also be responsible for educating and creating awareness on responsible AI, coordinate with various sectoral AI regulators as well as identify gaps and harmonize policies across sectors. “Further, it would represent India (and other emerging economies) in International AI dialogue on responsible AI.

### *OECD/G20 AI Principles*

As a G20 member, India endorsed the G20 AI Principles at the 2019 G20 Leader’s Summit in Japan. According to the OECD, most but not all, of the OECD AI principles are addressed in the national AI strategy.<sup>440</sup> Notably, India has not addressed Accountability or International Cooperation for Trustworthy AI.

### *Data Protection*

The Supreme Court of India's Aadhaar privacy decision (2018) created meaningful opportunities for public participation in AI policy, and a series of assertive architectural, procedural, legislative, and other improvements have been undertaken. For example, the Aadhaar biometric identity ecosystem in the post-Aadhaar privacy decision era has been demonstrably improved, though vigilance will be needed. Additionally, in 2019 India laid before its Parliament a draft national privacy bill that further addresses AI.<sup>441</sup> The Aadhaar privacy decision, which reaffirmed the centrality of privacy in one of the world's largest AI-based identity systems, has provided a strong legal foundation for data protection and respect of the individual

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<sup>439</sup> Yogima Seth Sharma, *NITI Aayog wants dedicated oversight body for use of artificial intelligence*, The Economic Times, <https://economictimes.indiatimes.com/news/economy/policy/niti-aayog-wants-dedicated-oversight-body-for-use-of-artificial-intelligence/articleshow/>

<sup>440</sup> OECD G20 Digital Economy Task Force, *Examples of AI National Policies* (2020), <https://www.mcit.gov.sa/sites/default/files/examples-of-ai-national-policies.pdf>

<sup>441</sup> Personal Data Protection Bill, 2019, India. Section 3(31), processing, 3(32), profiling, 3(34) re-identification, 3 (36) sensitive personal data (inclusive of biometric data), among other sections.

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### *Algorithmic Transparency*

Prime Minister addressed directly the issue of algorithmic transparency in October 2020.<sup>442</sup> Speaking the Responsible AI for Social Empowerment (RAISE) summit, he said “It remains our collective responsibility to ensure trust in how AI is used. Algorithm Transparency is key to establishing this Trust. Equally important is accountability. We must protect the world against weaponisation of AI by Non-State Actors.”

### *Human Rights*

India was among the original 48 countries that voted in favor of the *Universal Declaration of Human Rights* in 1948. According to Freedom House, India receives generally high marks for political rights and civil liberties.<sup>443</sup> Freedom House reports “India maintains a robust electoral democracy with a competitive multiparty system at the federal and state levels, though politics are marred by corruption. The constitution guarantees civil liberties including freedom of expression and freedom of religion, but harassment of journalists and other government critics has increased.”

### *Evaluation*

India has endorsed the G20 AI Principles. India has set out a national strategy that addresses key concerns about the use of AI, has a Constitutional guarantee for data protection, and has created meaningful opportunities for public participation in AI policy. But there are still significant gaps in the national AI policy as well as concerns about the expanded use of the Aadhaar database.

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<sup>442</sup> PM Narendra Modi, *We want India to become a global hub for Artificial Intelligence* (Oct. 5, 2020), <https://www.narendramodi.in/text-of-pm-s-address-at-the-inauguration-of-responsible-ai-for-social-empowerment-2020-summit-551754>

<sup>443</sup> Freedom House, *Freedom in the World 2020 – India* (2020), <https://freedomhouse.org/country/india/freedom-world/2020>