

ISRAEL AI

National AI Program
2024

רשות החדשנות
Israel Innovation
Authority





Shaping the Future

Navigating Tomorrow

Israel's National AI Program tackles the challenge of developing a long-term AI strategy in a fast-evolving world. It sets a clear path for the future while maintaining flexibility in the face of rapid technological and regulatory shifts.

Startup Nation Innovation

The strategy capitalizes on Israel's entrepreneurial spirit, multidisciplinary collaboration, and innovative culture, aiming to leverage AI for societal and economic gains.

Holistic Vision

The program holistically addresses the different pillars of government activity, spanning research, infrastructure, talent, ethics & regulation, data accessibility, experimentation & sandboxing, public sector adoption of AI, and the continued investment in AI based private sector innovation. Collectively, these elements comprise a long term, integral government strategy.

Responsible Innovation

This approach aims to ensure Israel's long-term leadership on AI, outlining a path that balances technological advancement with ethical, human-centric and safe practices.

Israel holds a distinguished position


Consistently ranked in the world's top ten

Israel is consistently ranked among the world's leaders in artificial intelligence, a testament to its strong focus on research and development, as well as its innovative spirit.

Innovation is a cornerstone of Israel's economy and society, reflecting a persistent drive to explore new frontiers. The key role of AI within the Israeli innovation eco-systems is reflected through 2,200 Israeli AI-based companies leading in diverse sectors such as healthcare, food, energy, agriculture, transportation, manufacturing, and construction

1 |  UNITED STATES

2 |  CHINA

3 |  SINGAPORE

4 |  UNITED KINGDOM

5 |  CANADA

6 |  SOUTH KOREA

7 |  ISRAEL

8 |  GERMANY

9 |  SWITZERLAND

#7
overall

#2
Per capita

Strengths



Commercial



Development



Talent

Areas for Advancement



Government strategy



Infrastructure



Operating environment

ISRAEL'S National AI Program

Securing Israel's sustained leadership in AI

Israel has acknowledged the economic and societal benefits that arise from investing in artificial intelligence for the present and future and has consequently marked AI as an area of national priority.

The strategy is built around three recognized pillars, with a view to strengthening them in order to maintain global leadership.

Government strategy

Developing a cohesive, holistic, long term, government strategy for sustained growth in AI



Operating environment

Fostering an enabling pro-innovation environment, to promote AI adoption within the private and public sectors

R&D Infrastructure

Enhancing the facilities and resources available for research and development activities



Government Strategy

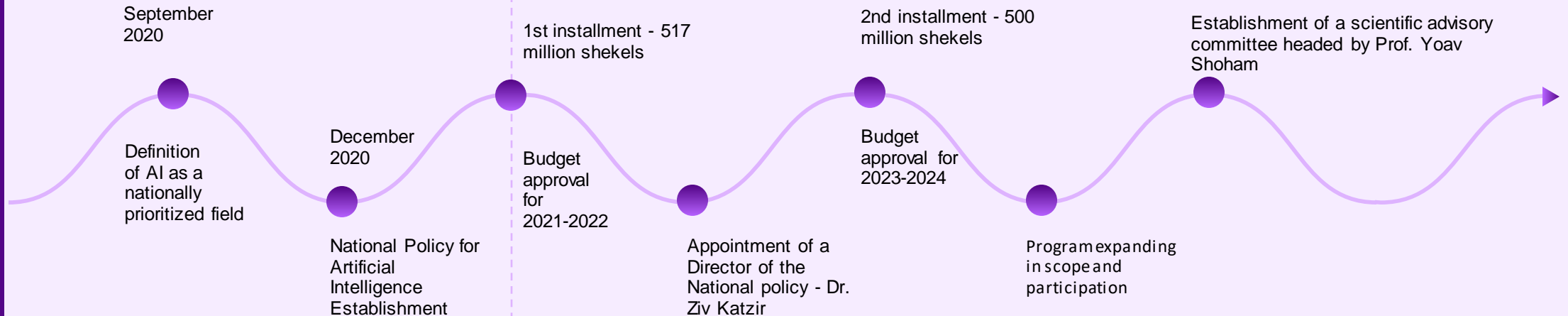
A coordinated and collaborative effort across government bodies and authorities, with 1B NIS of funding so far

Strategic Planning & Funding

Israel's strategic foresight in AI crystallized through establishing a national strategy, swiftly followed by a significant financial commitment. This combination of clear planning and robust funding set the stage for transformative technological initiatives.

Leadership and Action

With expert leadership in place and two major funding installments secured, Israel's AI strategy moved from blueprint to action. This phase marked a series of concrete steps, through which the nation's AI ambitions became tangible projects and collaborations, positioning Israel as a dynamic force in the global AI arena.





Responsible Innovation

Along with its many advantages and great economic and societal benefit potential, the use of artificial intelligence presents major challenges for regulators and policy makers in Israel and across the globe. Israel's Responsible Innovation approach addresses these challenges, by approaching innovation and human-centric considerations as synergetic. This lays the foundations for a modern, agile regulatory approach, which emphasizes technological advancement and experimentation, while minimizing the risks of adverse impacts.

- Human-centric AI
- Equality & non-discrimination
- Reliability, robustness, security & safety
- Accountability
- Transparency & explainability



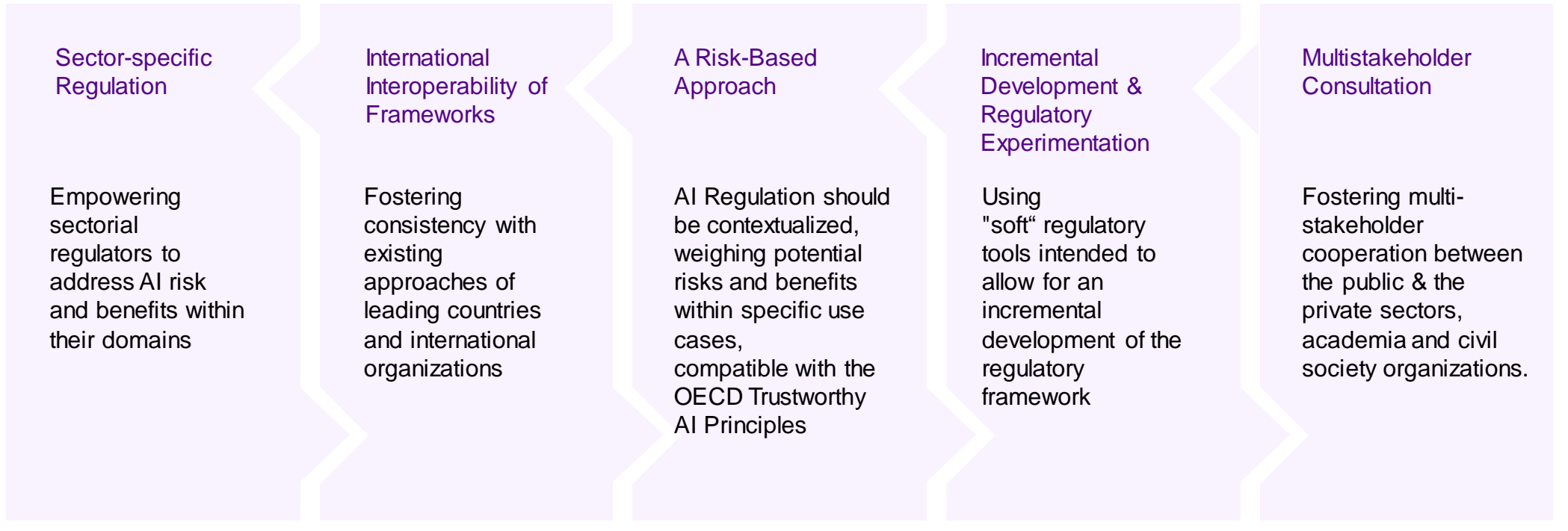
Promoting growth,
sustainable
development &
Israeli leadership in
innovation



Israel's Policy on Artificial Intelligence Regulation and Ethics

Principles

With respect to private sector applications, Israel's AI Policy is premised upon the concept of "Responsible Innovation", which captures the need to support innovation while simultaneously fostering accountability and ethically-aligned design and uses of AI.





Infrastructure

Unlocking AI's benefit potential is highly dependent on the availability of knowledge, talent, compute and data infrastructure, as well as on the availability of localized language processing capabilities.

Facilitating accessibility of the innovation eco-system to the required infrastructure elements, and removing barriers to innovation both stand at the core of Israel's AI strategy



Research

The AI value chain starts with pioneering intellectual property and leading-edge research. Accordingly, Israel's National AI Program allocates specific funding for high-risk, high-reward research initiatives within academic circles and the private sector, fueling innovation from the ground up.



Talent

A robust talent pipeline is critical for AI research and development across academia and industry. Current enrollment for advanced academic degrees in the field has not kept pace with the growing demand for AI expertise which is driven by increasing integration across various industries and scientific fields. Israel's National AI Program prioritizes education and skill development, focusing on the cultivation, enhancement, and diversification of AI talent to bridge this gap and spur innovation.



Computing

Recent years have witnessed a surge in the computational power needed to train cutting-edge AI models. Concurrently, the worldwide availability of specialized GPU hardware has been constrained. This has elevated the barriers to innovation, impacting the creative potential of startups and academic researchers. Israel's program is designed to secure access to advanced, scalable computing resources for AI development and scientific computations. Moreover, it promotes groundbreaking research in computational methods and hardware through the establishment of an AI High-Performance Computing (HPC) laboratory.



Infrastructure



Databases

Data is the cornerstone of AI advancement, driving research and innovation. However, access to comprehensive and quality-assured data remains a significant challenge. Israel addresses this issue by cultivating specialized data repositories, utilizing its unique data reserves, and enhancing data access through the promotion of privacy-centric AI technologies and secure data-sharing platforms



Localized Natural Language Processing

Advancements in natural language processing (NLP) have transformed human-machine interaction, paving the way for a surge of inventive products and services. Thus far, the complexity of developing contemporary language models, and its attendant costs, have confined such innovations to a handful of widely-spoken languages. Israel's national AI program is dedicated to elevating Hebrew and Arabic NLP, mirroring the proficiency of English language models. Through strategic investments in specialized datasets, models, and tools, the program aims to empower the local innovation ecosystem with these advanced capabilities.



Operating
Environment

AI Implementation in the Public Sector

Public sector use of AI can unlock the potential of AI technologies. Among its many societal benefits, it can bridge equality divides, improve health, education, mobility and employment, and enhance environmental sustainability. Public sector use of AI, is promoted through dedicated funding, technological assistance to the relevant government units, and guidance in the fields of trustworthy AI and risk management.



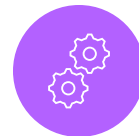
Improving Public Sector Services

Leveraging AI to make public sector services more easily accessible, quicker and personalized. Increasing government responsiveness and improving delivery of services to its citizens while reducing bureaucracy and administrative burdens.



Improving Decision Making Processes Based on Data

Trustworthy use of AI within the context of public-sector decision-making processes, can address existing human biases, uncover blind spots and assist decision makers in resolving complex cases based on data and evidence



Increasing Public Sector Efficiency

By automating repetitive routine tasks, AI can assist public sector employees to focus on those tasks that require human judgement or creativity – developing strategy, formulating goals, and resolving particularly complex cases



Experimentation & Sandboxing

There is an inherent tension between the swift pace of innovation and the lengthy process to develop regulation.

This is particularly evident in artificial intelligence, where technological and regulatory evolution are occurring on two different timelines. Synchronizing these timelines is a key challenge for policy makers around the world. In Israel, one aspect of the **Responsible Innovation** paradigm involves using experimental "sandboxes" early in the lifecycle of technological development. Within this experimental environment, mutual maturation is key — technology evolves, and regulators learn how to engage with it effectively. Below are the main steps of Israel's approach to AI experimentation:

Identifying potential use cases

Focusing on the intersection of potentially disruptive technological developments, with mature and regulated markets

Vetting & filtering

Evaluating the opportunity based on factors such as the anticipated market value, the presence of an emerging private sector hub, the regulatory environment and potential obstacles.

Creating a multi-stakeholder consortium

A collaborative framework comprising oversight authorities, business entities, subject matter specialists, and a specialized team for program administration

Elaborating an tailored experimentation program

The program is based on a gradually increasing level of complexity that will facilitate simultaneous technological and regulatory maturity

Implementing Alternative Regulatory Safeguards

In experimental contexts, safeguards could include measures such as time and location constraints, additional human supervision, and limits on the number of end-users.

Collaborative Horizon

Given the cross-border implications of AI developments, partnerships and collaborations with countries and companies from across the globe are imperative. Our new strategy aligns Israel with the international community, addressing shared challenges through enhanced collaboration.

Domestically, a multistakeholder approach is key to Israel's National AI Program. It requires ongoing dialog with and involvement of – the public and private sectors, academia and civil society organizations.

International collaboration with like-minded international partners based on common values is more than a pathway to mutual advancement—it's a pledge to take an active role in an interconnected world where collective progress and shared success are the cornerstones of prosperity.

As our policies and regulations evolve, our strategy ensures that Israel's advancements in AI will not only improve the well-being of our citizens but also contribute to building a better, more sustainable future for all.





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