National Institutional Acceleration

Digital National Institutional Acceleration (D-NIA)

Outline

National Institutional
Acceleration (NIA)

DIGITAL NATIONAL INSTITUTIONAL ACCELERATION

D-NIA

Press Release

R&D Program, FY 2024.

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Program thesis and context

Doing R&D in the Moroccan environment.

Introduction

In 2017, Morocco invested 0.8% of its GDP in research and development (R&D), a significant increase from the 0.34% spent in 2016. However, this is still below the 2.3% average recorded in OECD countries. The latest statistics on budgetary allocation among R&D entities show that higher education institutions are the top recipients, receiving about 45% of the total budget. Public research institutions follow with 23%, and the remainder is allocated to the private sector and international cooperation. These figures highlight Morocco's emphasis on universities playing a crucial role in the technology transfer ecosystem.

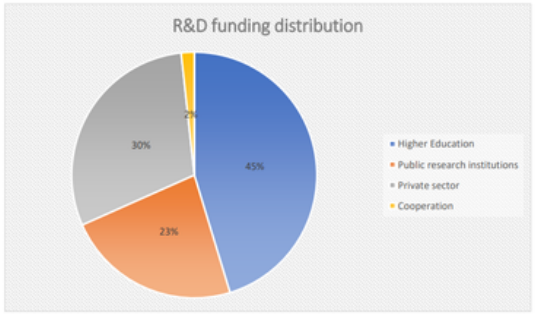

Figure 5: R&D funding distribution, 2010.
Source: Hassan II Academy of Science & Technology, Développer la recherche scientifique et l'innovation pour gagner la bataille de la compétitivité, 2012.

Funding Mechanisms

Despite the numerous institutions involved in R&D, there is no single entity overseeing overall financing. Instead, several funds have emerged to support research in priority sectors such as mining, agriculture, and clean energy. These funds are administered through tenders or open calls for research and innovation projects in thematic areas of interest to the funding entity. The CNRST remains the primary entity involved in most initiatives, aligning with its mission to be a dynamic actor and facilitator in R&D, participating in implementation, evaluation, and follow-up stages.
Technology transfer in Morocco is predominantly inward, facilitated by bilateral and multilateral agreements to enhance knowledge exchange and strengthen capabilities in key sectors. Prominent research centers like IRESEN and OCP's R&D centers have increased their presence in Moroccan universities to accelerate knowledge transfer. At the firm level, technology transfer is led by multinational companies, while Moroccan companies, primarily MSMEs, have low R&D expenditure.

Technology Transfer

Despite the numerous initiatives undertaken by Morocco to promote technology transfer, current efforts remain riddled with challenges. From the perspective of a research institution, commercialising and promoting research outputs is difficult not only due to lack of resources, but also researchers lack of understanding regarding the commercial value of their work. Bridging the proverbial "Valley of Death" had been difficult due to the industry's lack of absorption capacity, compounded by the difference in cultures between academia and their respective industries.
Bridging this gap in culture is particularly important as universities file the highest number of patents in the country, but rarely succeed in commercializing them, a task that is often assigned to technology Transfer Offices (TTOs). The most notable examples of TTOs in the country were highlighted in the previous section, but such structures remain scarce and lack the substantial skills, expertise, and means required to play an active role in assisting universities in commercialisation.

However, despite the challenges in the current state of affairs, Morocco's strategic plans aim to address these inefficiencies through various government-led reform initiatives.

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Declaration of Intent

In response to domestic needs, the NIA Association launched the D-NIA program, guided by exemplary national reform plans and aimed at addressing industrial and technological challenges.
Aligned with the demands and opportunities of the national landscape, the D-NIA program will initiate new efforts focused on two primary objectives: enhancing support for young researchers and doctoral students across multidisciplinary scientific fields, and accelerating nationwide technology adoption.

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Program Overview

Period of the Implementation

Total of three years from FY 2024 to 2027, for a maximum implementation period of each R&D project fixed to three Fiscal Years.

Mission

Advancing the S&T Moroccan State of the art.

Pillars

University-based R&D projects.
Muti-patry Reaseach Consortiums.
Industrial partnerships.

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Program Strategy

In pursuit of its mission to accelerate Moroccan technological adoption and transfer, the Digital National Institutional Acceleration (D-NIA) program is structured around several strategic pillars:

- Network-Based Institution:
NIA will operate as a network-based institution, facilitating collaboration among qualified researchers and coordinating collaborative R&D projects. Connecting various academic actors and creating cross institutional and multidisciplinary synergies as a strategy of decentralizing both human and material resources within the universities.

- State-of-the-Arts Reports & National Reform Plans:
Part of D-NIA's approach is to align the strategic scope of science and technology projects with the recommendations outlined in national reform plans. This approach prioritizes areas of utmost importance to the advancement of technology and science in Morocco, ensuring relevance and impact in national development efforts.

- Adoption of Silicon-Based Methods:
D-NIA will operate in favor of silicon-based R&D projects, leveraging software, simulation, and automation to lower experimentation costs and enhance R&D efficiency. This proactive stance ensures D-NIA remains agile in addressing current challenges and capitalizing on emerging opportunities in science and technology, strategically addressing the funding challenges posed by the current national economic landscape.

- Partnership and Consortium Agreements:
D-NIA will seek to establish sustainable partnership agreements with talented researchers and practical consortium agreements with other NGOs and institutions sharing common objectives. These collaborations enhance synergies, catalyze a network effect to innovation, and leverage resources for impactful outcomes.

Through these strategic initiatives, D-NIA aims to catalyze innovation, promote sustainable development, and drive economic growth by harnessing the collective expertise and capabilities of its network stakeholders.

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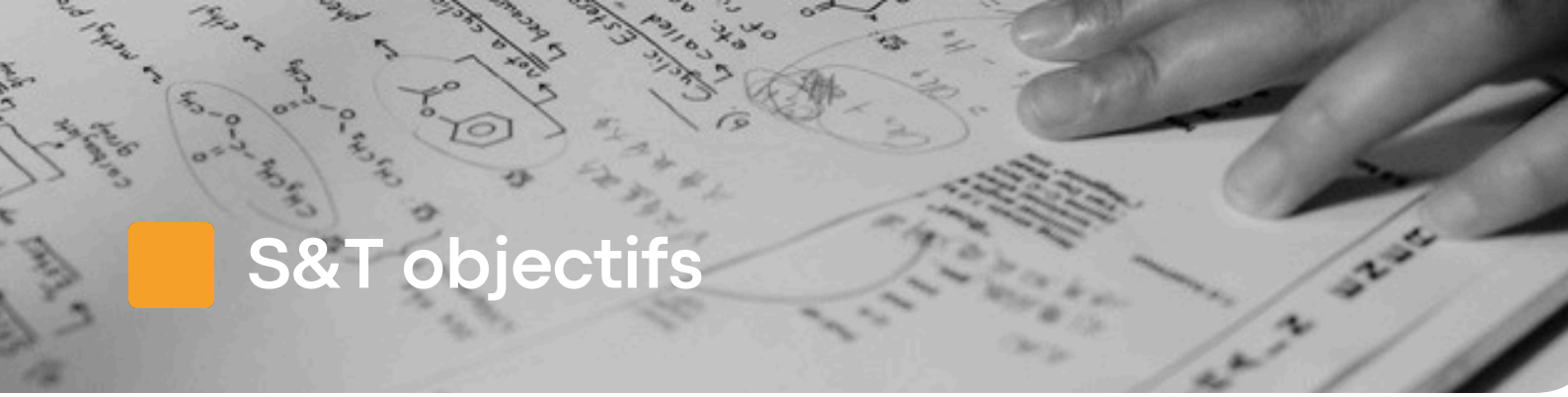

S&T objectifs

- The development of innovative methods and technologies, conceptualization and implementation of new scientific approaches and advanced information technologies.
- Analyzing cases of technological and scientific issues and making recommendations based on Moroccan national reform programs.
- Designing tangible measures related to the digitization of public services.

D-NIA Program

Domains of Investigation and R&D

The program's R&D projects will target promising areas sucjh as ; **Health Sciences**, **Artificial Intelligence**, **In Silico Medicine**, **Software development**, as well as **Juridical and Social Sciences**.

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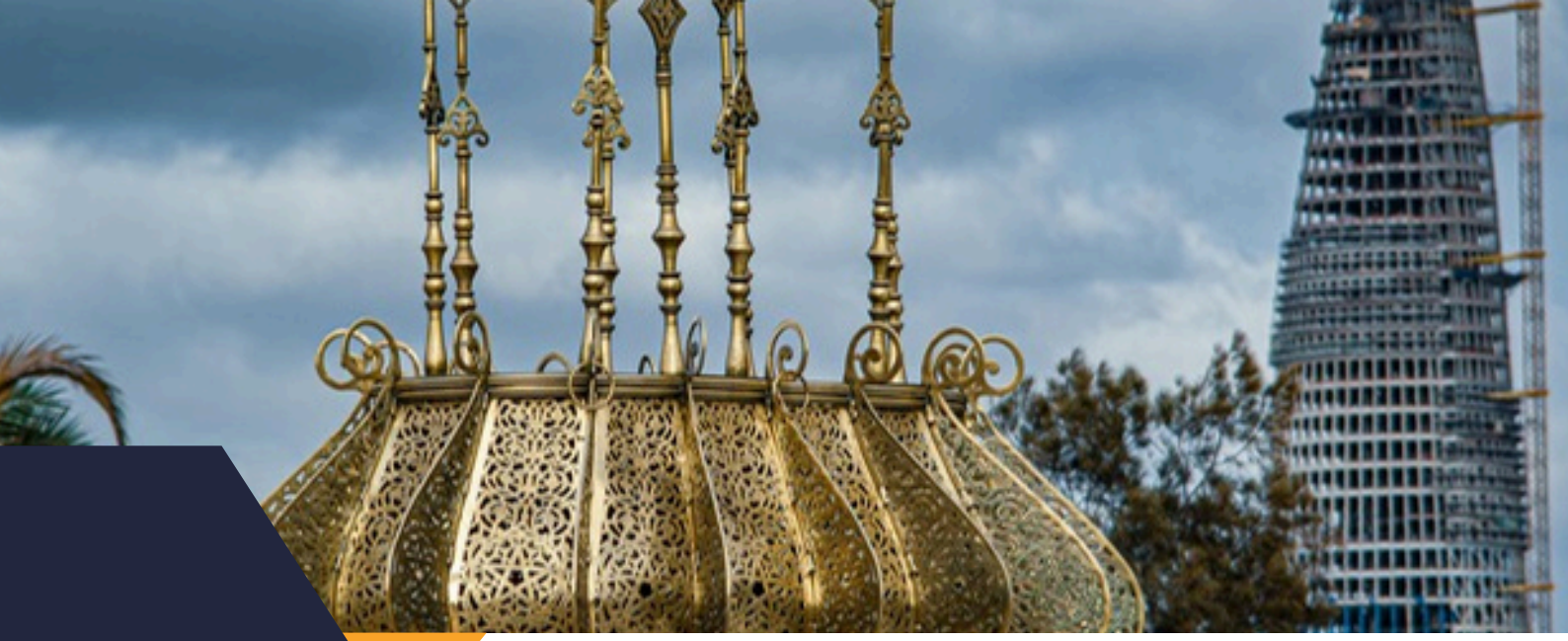

D-NIA Program

PROGRAM IMPLEMENTATION

The D-NIA Program will serve as a Researcher Think Tank, by providing analyses of domestic and international trends in science and technology and proposals for high impact projects in our country.

Implementation Structure

Implementation Roadmap

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PROGRAM IMPLEMENTATION

D-NIA Program

Implementation Structure

We welcome qualified and visionary researchers in their respective fields to participate in the D-NIA Program.

NIA as Host Research Institution

You can participate in our program by becoming a Research Member in our Think Tank.
To participate in D-NIA, you can either:

Join a Research Team

You may submit your application via our website portal to join an Incubated project's team, as a Researcher member in NIA.

Submit a Project

You may submit your own R&D project proposal to be considered for incubation as part of the program.

To ensure clarity on eligibility criteria and learn more about how you can participate in shaping the future of innovation through the D-NIA program, visit our website : https://associationnia.org/digital-nia/

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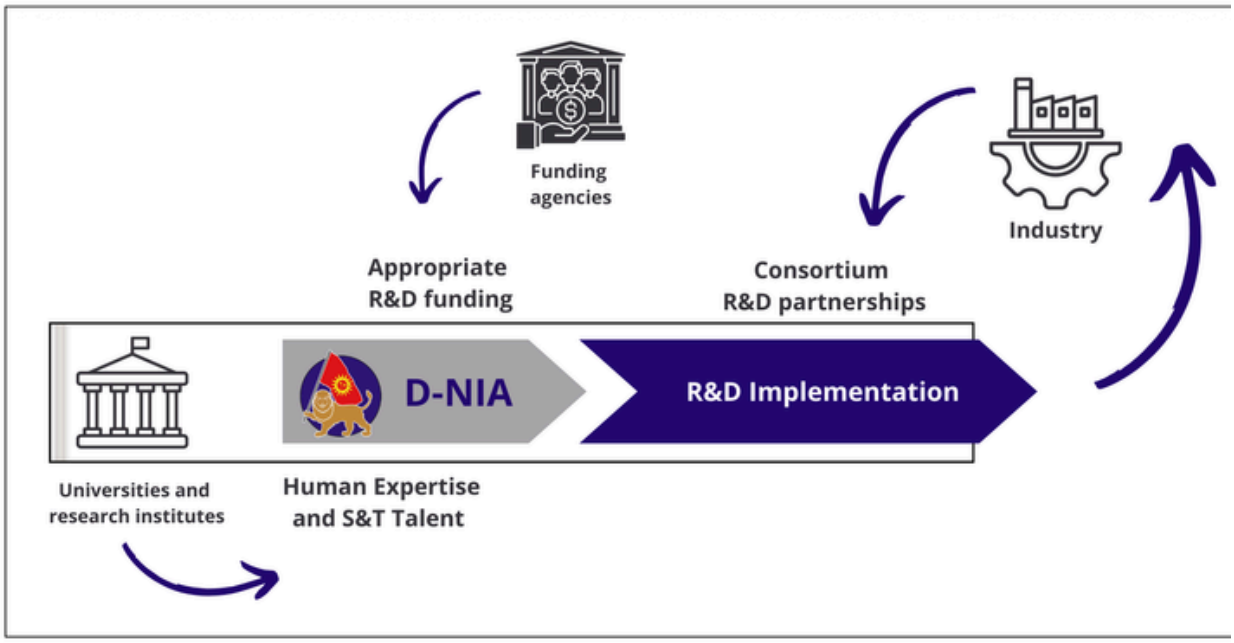
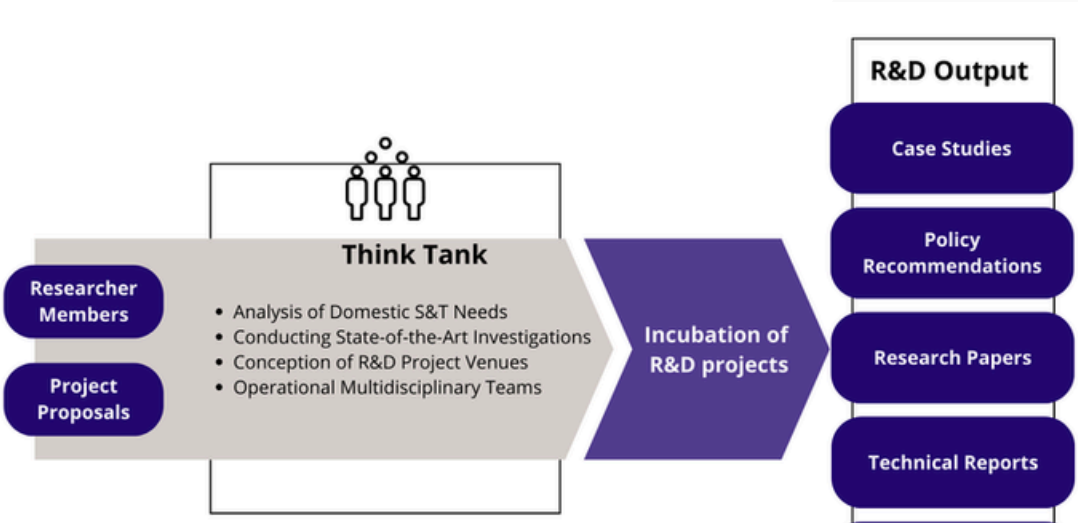
PROGRAM IMPLEMENTATION

D-NIA Program

Implementation Roadmap



NIA as Host Research Institution



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Incubation

The “D-NIA” R&D program is set to establish a diversified and pertinent portfolio of R&D projects that will be incubated by NIA’s organism. This initiative aims towards the accomplishment of its Innovation and Reform objectives.

Autonomy and Direction

- This program will be directed with complete scientific and creative autonomy by fellow Researcher Members affiliated with NIA during the research and implementation periods of their respective projects.

Support and Management.

- NIA will provide the necessary funding for these projects, handle the overall management to ensure smooth operation, and offer strategic guidance and direction to ensure that projects reach their final stages of technological and developmental maturity.

Outcomes and Deliverables

- Throughout the implementation phases, various projects may materialize in several forms, including:

- Research Thesis
- Case Studies
- Scientific Papers
- Reform Plans

By fostering these projects, the D-NIA program aims to contribute significantly to scientific and technological advancements, aligning with national priorities and addressing both domestic and international challenges and opportunities.

For more information on NIA’a approach to management of innovation and Incubation of R&D projects visit our website page : https://associationnia.org/incubation-nia/

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Projected impact

Engaging Young Talent in Industrial and Technological Domestic Issues:

By involving young researchers in real-world industrial and technological challenges, NIA aims to harness their creativity and fresh perspectives to address domestic issues effectively.

Promoting University-Based R&D Projects :

NIA advocates for the development and support of R&D projects within universities, ensuring that academic research is both relevant and beneficial to the industrial sector.

Ingraining a Culture Where University is in Line with the Industrial Landscape :

NIA strives to create a culture where universities and industries collaborate closely, aligning academic research with practical industrial needs and fostering mutual growth.

Promoting this Inclusive Model to be Adopted in the Academic Milieu :

NIA encourages the adoption of its collaborative model across academic institutions, promoting inclusivity and ensuring that research efforts are aligned with industry requirements.

Bringing High-Impact Projects to Fruition :

NIA is committed to seeing high-impact projects through to completion, ensuring that innovative ideas and research are transformed into tangible outcomes that benefit society.

Contributing to the Innovative and Technological Landscape of Morocco :

Through these efforts, NIA aims to make a significant contribution to the innovation and technological advancement of Morocco, driving progress and competitiveness on a national and global scale.

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Get In Touch

National Institutional Acceleration

"SPEARHEADING A NOVEL APPROACH TO SCIENTIFIC EDUCATION AND R&D."

Association NIA

A non-profit organization dedicated to fostering innovation and national technological advancement for Morocco and beyond.

Scan to learn more

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