

The contribution of business incubators in supporting and accompanying start-ups in Algeria - ANVREDET case study

مساهمة حاضنات الأعمال في دعم ومرافقة الشركات الناشئة في الجزائر - دراسة
حالة ANVREDET

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Date of submission: 03/03/2024

Date of acceptance: 28/03/2024

Abstract

Digital and legal developments have pushed more and more young graduates to embark on the entrepreneurial adventure and seize the opportunities that arise on the market. To have quality support and follow-up, idea carriers usually turn to incubators to push their thinking further and turn simple ideas into innovative projects. Business incubators have thus become among the most recent and effective trends that have contributed in supporting and accompanying start-ups in most of the world's nations. Algeria had therefore pursued many policies to encourage creativity and create start-ups, most of which focused on establishing many organisms and structures to overcome the difficulties they faced. ANVREDET, one of these organisms which is contributing to this proposal, was established with the aim of promoting and accompanying innovative ideas that represent the core of start-ups based on innovation and creativity, as well as developing and upgrading cooperation and partnership between the scientific research and economic sectors.

Keywords: Start-ups; Business incubators; Technological innovation; Economic growth; ANVREDET.

الملخص

دفعت التطورات الرقمية والقانونية المزيد من الخريجين الشباب للشروع في مغامرة ريادة الأعمال وإغتنام الفرص التي تظهر في السوق، وللحصول على دعم ومتابعة عالية الجودة، يلجأ حاملي الأفكار عادة إلى الحاضنات لدفع تفكيرهم وتحويل الأفكار البسيطة إلى مشاريع مبتكرة، وهكذا أصبحت حاضنات الأعمال من بين أهم الإتجاهات الحديثة والفعالة التي ساهمت في دعم ومرافقة المؤسسات الناشئة لدى أغلب دول العالم. لذلك قامت الجزائر بإنتهاج العديد من السياسات لتشجيع الإبداع وخلق مؤسسات ناشئة، تركز أغلبها على إنشاء العديد من الهيئات والهياكل للتغلب على الصعوبات التي تواجهها، وتعتبر الوكالة الوطنية لتنمين نتائج البحث والتنمية التكنولوجية (ANVREDET)، إحدى هذه الهيئات التي تساهم في هذا الطرح، فقد أنشئت

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بهدف تدعيم ومرافقة الأفكار المبتكرة والتي تمثل لب المؤسسات الناشئة القائم على الابتكار والإبداع، إضافة إلى تطوير وترقية سبل التعاون والشراكة بين قطاع البحث العلمي والقطاعات الاقتصادية.

الكلمات المفتاحية: المؤسسات الناشئة؛ حاضنات الأعمال؛ الابتكار التكنولوجي؛ النمو الاقتصادي؛ أنفردت.

Introduction

In recent years in Algeria, there has been a lot of talk about start-ups, whether from official, media and academy organisms, as a new and promising way to invest out of hydrocarbon, and restructure the economy, the government has developed this type of institutions as a different entity in its characteristics, its way of operation and its success factors, through the consideration of finding appropriate solutions for its advancement, by encouraging individuals to enter the world of entrepreneurship from the gateway to create start-ups and develop an adequate and robust ecosystem aimed at diversifying and multiplying the hardware allocated to support and accompany start-ups to make them the locomotive driving the transition of Algeria's economy from a rent system to a model based on other productive sectors and the knowledge economy. One of the most important support mechanisms adopted by many states, including Algeria, even late, to ensure the support of start-ups is the establishment of so-called business incubators as organisms that provide all forms of support and accompaniment from feasibility studies and funding sources through investments to marketing and export services. Thus, during the development of this research document we will try to answer the following question:

How can business incubators support and accompany start-ups in Algeria ?

Questions of the study:

- Is there an ecosystem for start-ups and business incubators in Algeria ?
- What results have been achieved by the ANVREDET as a business incubator in supporting start-ups ?

Hypothesis of the study:

- Algeria has been able to lay the foundations of an ecosystem suitable for start-ups and business incubators.
- The ANVREDET has contributed to the establishment and success of start-ups.

Objectives of the study:

Our research paper aims to determine the particularities of start-ups and business incubators and demonstrate their interrelationship, and thus verify conformity of business incubators' theoretical objectives with results achieved in the field, with the ANVREDET as an incubator model.

Importance of the study:

The importance of the study comes from the importance of the topic as one of the topics that has become much more talked about. In 2020, the Algerian authorities

announced several new resolutions to implement a strategy to support and accompany start-ups.

Methodology of the study:

This study is structured as follows: we first plan to address some basic elements on start-ups and business incubators, then we will illustrate the role of business incubators in supporting and accompanying start-ups, with the ANVREDET as a model.

1. Theoretical framework of start-ups and business incubators:

As more people have been creating their own businesses as part of the tech start-up craze, the number of startup incubators has also increased, which help entrepreneurs solve some of the problems commonly associated with running a start-up by providing workspace, seed funding, mentoring, and training, the sole purpose of a start-up incubator is to help entrepreneurs grow their business.

1.1 Basic concepts of start-ups:

The term Start-up began to be used immediately after World War II, with the beginning of the emergence of risk capital companies, and the word Start-up consisting of two parts, "Start", which refers to the idea of starting and "Up", which refers to the idea of strong growth (Roberto Vaz, 2022, p. 07).

1.1.1 Definition of start-up:

The startup is defined as: " A young and innovative company, especially in the field of new technologies, with great potential for growth " (Passy, 2021, p. 48).

1.1.2 Characteristics of start-ups:

Start-ups emerge as one of the forms of enterprises that can offer new characteristics and principles, but how can we know that we are dealing with a start-up or not ? Accordingly, the various characteristics of start-ups are set out below: (Bouhaj Said, 2022)

- **Temporary Organization:** A start-up is not intended to remain so throughout its lifetime. Being a startup is not an end in itself, is a particular step, and its main objective is to move out of it.
- **Technological and innovative companies:** One of the biggest characteristics of start-ups is that they are purely innovative technological companies, in a very special economic and social context, that impose on the consumer a product that they see as important to them.
- **Its goal is great growth:** Start-ups target growth and profit as all other enterprises, but their long-term goal is to control the market they target.
- **Institutions requiring private funding:** All start-ups have many sources of finance, but they often turn to Business Angels, investors who are willing to invest a large portion of their wealth in innovative enterprises.

- **Start-ups have a business model:** Start-ups need to create their own business model, the latter describes how the company will produce, sell and make a profit. They do not have a track record, their business model has not yet been tested, and their products may not yet be ready for customers.
- **Start-ups adopt exit strategy:** It should be an idea of a long-term exit strategy, and this plan can be adjusted over time as new opportunities emerge, requiring a ready one before looking for funding sources.

1.1.3 The life cycle of start-ups:

Through some of the characteristics of the emerging institutions discussed earlier, we conclude that the emerging institutions, like other organizations, are in sequential and interrelated stages. It should also be noted that the lifespan of each institution varies according to the possibilities and efforts made, but is identical except for some details. (Peyre, 2021, p. 14)

- **First phase: Embryonic stage:** The first stage of a start-up's life cycle is the embryonic phase, this is where the founders get a creative idea for a new product or service and begin to develop it and study the feasibility of transforming it into a commercial product.
- **Second phase: Construction and Launch Phase:** The establishment of the start-up makes the project official, in which the legal form of the company is selected and administrative procedures are implemented to give life to the company and provide it with a recognized operational force, and the protection of intellectual property.
- **Third phase: Growth phase:** Once the start-up finds that the product is suitable for the market and succeeds in delivering its product or service to customers, it enters the stage of growth, where the startup begins to increase and expand its operations.
- **Fourth phase: Maturity phase:** At this phase, the company focuses on re-modernizing its business model and strengthening its position in the market. Work can also begin to focus on effectiveness and expansion in new markets, and growth rates are usually slow at this stage.
- **Fifth phase: Regression phase:** After the company peaks in growth, it enters the stage of decline or decline, and this occurs when the company becomes unable to achieve growth at its previous rates and its profits begin to decline, due to many factors, such as market change, new competition or lack of innovation.
- **Sixth phase: Exit Phase:** When a start-up reaches the end of its life cycle, it is usually acquired by another company or made public. In all possible cases, the start-up's shareholders will receive payments and the startup will cease to exist as an independent entity.

1.2 Basic concepts of business incubators:

The idea of business incubators goes back to the health incubators used in hospitals. Business incubators view each emerging project as a newborn in need of superior health care and comprehensive attention. They need an incubator that has included it since birth

in order to protect it from the risks that surround it and provide it with energy and continuity and gain competitiveness after providing it with the elements of success during the incubation period (Tsaplin Evgeny, 2017, p. 34).

1.2.1 Definition of business incubators:

Business incubators are defined as: " Stand-alone enterprises with a legal entity that provide a range of services and facilities to small investors who initiate the establishment of small enterprises, with the aim of shipping them with an initial payment that enables them to overcome the burden of the start-up phase, which can be State-owned or private or mixed enterprises " (Bayhan, 2022, p. 03).

1.2.2 Objectives of business incubators:

Business incubators aim primarily to incubate start-ups and work towards the following: (Business incubation basics, 2022)

- Provide business fundamentals and risk reduction assistance and help start-ups save operating costs and overcome the administrative, financial and technical problems and constraints to which they may be exposed, especially at the start-up and early stages of the activity;
- Increasing success rates, encouraging distinct ideas and ensuring the sustainability of incubated institutions;
- Facilitate access to bank loans, loan funds and guarantee programs;
- Crediting the company, which helps the company to obtain loans and credit facilities from financial institutions;
- Providing a temporary place for the construction of projects, which helps them to exchange experiences and information among the various projects in the incubator;
- To promote the creation of appropriate working conditions for the development and assistance of emerging enterprises in order to achieve high rates of growth, quality and competitiveness in the market;
- Provision of accounting or financial management assistance;
- Having a strong network of influential people who can connect start-ups or enterprises with companies and experienced people;
- Evaluate the work of continuously incubated projects in order to identify their weaknesses and try to avoid them in other projects;
- Help them acquire marketing skills and assist in marketing and public relations for new companies to create brands;
- Providing access to higher education resources and assisting in market-related research;
- Leverage networks of experienced entrepreneurs and retired executives and connect companies with strategic partners;
- Helping to reach landlords' investors and venture capital;
- Act as advisory and guidance boards and provide intellectual property management.

1.2.3 Categories of business incubators:

Business incubators can be classified according to several criteria, namely:

1.2.3.1 According to the objective of her stay: Divided into 7 sections: (Allahar, 2016)

- **Full-service incubators:** They provide a full package of services and facilities for incubated projects, whether financial, marketing or consulting, and even provide the place for the project's stay within the incubator.
- **Metaphorical incubators:** They continue to provide some services to institutions from which they have graduated after the start-up period, and provide services to projects outside the incubator's borders.
- **Incubators associated with large enterprises:** Based on the exploitation of incubators' machinery for the achievement of research or productive projects or the development of technologies by deepening the partnership between certain enterprises and large companies and the owners of ideas or small enterprises that can serve these enterprises.
- **Special purpose incubators:** Specialized in a particular service to be provided to those in need, such as persons with disabilities.
- **Incubators for the promotion of sub-small enterprises:** They provide assistance to small entrepreneurs at a very small scale to serve urgent social ends.
- **International business incubators:** They Seek to attract foreign capital, transfer technology, facilitate foreign companies' entry into and development of domestic markets for these countries, and qualify local companies for expansion and employment in foreign markets.
- **Incubator for students and students abroad:** A large proportion of students leave the country to complete their university studies, so it was necessary to encourage these students to return home, especially after their university education.

1.2.3.2 According to nature of services: Divided into 07 sections: (Mutabazi, 2017)

- **Regional incubators:** aims to develop a specific region and works to use natural local resources and invest the potential of unemployed young people.
- **Industrial incubators:** They provide services to large and small enterprises alike in the field of industrial business, after determining their needs for nutritious industries and supporting services, where benefits are exchanged between large factories and small enterprises affiliated with the incubator.
- **Specific sector incubators:** They serve a particular sector or category such as engineering sector, programming sector...etc.
- **Technological incubators:** They accompany emerging enterprises with sophisticated technological content. The goal of incubating emerging enterprises is not to create new jobs but to market new technologies.
- **Research incubators:** They are usually established within research centers and universities to develop research for undergraduate students and faculty.
- **Internet Incubators:** They provide services to Internet companies, software and e-commerce.

- **Industrial business incubators:** Which provide services and assistance to industrial companies.

2- Mechanisms to support and accompany the National Agency for Valuation of Research Results and Technological Development of start-ups:

The National Agency for Valuation of Research Results and Technological Development provides many support and escort services to emerging institutions. However, it has not received a "business incubator" mark to date. It relies mainly on university incubators to support and accompany emerging institutions.

2.1 Steps of accompanying and services provided by the National Agency for Valuation of Research Results and Technological Development to innovative entrepreneurs:

2.1.1 Steps of accompanying the National Agency for Valuation of Research Results and Technological Development to innovative entrepreneurs:

Innovative projects are obtained by inviting projects to be offered at the university and research center level or by organizing competitions and selecting the best projects. After reviewing and selecting the projects bearing a new idea, the valuation and accompanying process begins through the following steps: (ANVREDET, 2023)

- To identify and verify the seriousness of the project and its potential for realization;
- The project is presented in technical evaluation workshops with experts in the project-related area;
- Involve the economic party in order to finance and exploit the project;
- Support the innovator by facilitating administrative and legal procedures (coordination with Algeria's National Institute for Industrial Property and/or the World Intellectual Property Organization);
- Provide all forms of support and escort until the establishment of the institution.

2.1.2 Services provided by the National Agency for Valuation of Research Results and Technological Development to innovative entrepreneurs:

The Agency is responsible for developing a program of work that allows for the practical reflection of the capabilities of innovation and creativity in the social/economic sectors, through the selection stages of value-added ideas, technological assessment, legal aspects of the enterprise, especially consultancy in intellectual property law, even the establishment of technological infrastructure, and through market study, marketing, and the development and evaluation of the business scheme (Pettersen, 2016, p. 03).

2.1.2.1 Business blueprint for innovative projects:

The Agency provides innovative project holders with a business blueprint adapted to their needs in order for escort to be more effective. They design the Business Scheme according to the details of each project to assist innovative project holders in the

establishment of their organization. The blueprint includes the following elements: (ANVREDET, 2023)

- Summary;
- Presentation of the nature of the project and an outline of the institution to be established;
- Strategic objectives of the innovative project;
- Market analysis and study;
- Financial planning and budget;
- A section devoted to the project's achievements and risks;
- List of annexes.

2.1.2.2 Intellectual property:

The Agency helps to liberalize the patent, protect innovation and ensure innovators' rights, through its legal consultation. Its intellectual property policy focuses on: (ANVREDET, 2023)

- Preserve the idea through confidentiality;
- Identifying and protecting innovation;
- Preservation of innovators' rights.

* In the direction of innovators:

- Access to exploitation rights;
- To frame innovative contracting;
- Market control and technical and commercial vigilance.

* Protection Tools:

The Agency adopts WIPO's policy. Protection tools are:

- **Patent:** Its owner is granted an exclusive right to invent it and ensures its protection for a specified period of time;
- **Brand:** is a distinctive sign referring to goods or services produced or supplied by a particular person or company;
- **Industrial Design:** The decorative or aesthetic appearance of the body resulting from industrial or artisan production;
- **Authors' rights:** All rights enjoyed by creators in literary and artistic works (including automated media programs);
- **Protection bodies:**
 - **At the national level:** Algeria's National Institute of Industrial Property.
 - **At the international level:** World Intellectual Property Organization.

In general, the Agency's support and escort services for innovative project holders can be summarized as follows: (ANVREDET, 2023)

- **Financial:** Provided in the form of an advance used to finance external services, such as market study or patent acquisition.

- **Humanity:** by placing in their service individuals with competencies capable of accompanying projects and forming corporate founders (business, legal and other formations).
- **Physical:** By giving them a building to house emerging institutions.
- **Regulatory:** (information systems, quality control, procedures...), as well as advice and guidance on procedures for establishing institutions.
- **Technology:** Provide them with advice on how to value their projects and develop patents.

2.2 Outcome of activities of National Agency for Valuation of Research Results and Technological Development:

The outcome of the Agency's activities will be covered over the first two periods from 2002 to 2012 and the second from 2013 to 2022, as follows:

2.2.1 First period: Outcome of activities completed (2002-2012)

This phase has been marked by the completion of the following operations:
(ANVREDET, 2023)

2.2.1.1 Valuation Activities:

- 544 projects studied and evaluated, where 174 projects were accepted by the specialized technological committees as an innovative project;
- Organization of 32 appraisal workshops.

2.2.1.2 Organization of scientific events:

- A forum on business incubators in 2003;
- Organizing the First Forum on Research and Development (FORED 1) in May 2005, which focused on scientific products and services, with 279 projects;
- Configurations about intellectual property.

2.2.2 Second period: Outcome of activities completed (2013-2022)

This phase has been marked by the completion of the following operations:
(ANVREDET, 2023)

2.2.2.1 Valuation activities: Valuation is the Agency's primary activity and is based on the following themes:

- Detection and evaluation of projects;
- Intellectual property protection;
- Project escort;
- Technological conversion.

2.2.2.1.1 Project discovery and evaluation:

This period was marked by a set of results related to the discovery and evaluation of projects that can be summarized in the following table:

Table n°(01): Outcome of the Agency's valuation activities for the period 2013-2022

Years	Number of projects				Source of projects		
	Evaluated	Accepted	Rejected	Reformulated	NRP*	Universities	Freelancers
2013	20	14	04	06	06	06	08
2014	83	26	23	34	38	20	25
2015	51	17	16	18	07	15	29
2016 - 2020	We have not been provided with data by the Agency during this period.						
2021 - 2022	Number of projects	Accepted	Areas		Rejected	Under evaluation	
	18	04	01 Health		05	09	
			01 ICT*				
			02 Mechanics				

* **NRP:** National Research Programs * **ICT:** Information and Communications Technology

Source: Prepared by the researcher based on data provided by the Agency.

2.2.2.1.2 Protection of intellectual property:

The Agency's contribution in this area is carried out by advising and directing inventors to write and edit descriptive notes and patent applications at the national and international levels. The following table shows the various projects that the Agency assisted in protecting during this period:

Table n°(02): Projects that the Agency protected their intellectual property (2013-2022)

N°	Project	Areas of activity	Level of protection
01	System for improving fish detection, positioning and fishing	Electronic	National
02	Prim Algeria Software	ICT	National
03	Smart Greenhouse	Agriculture	National
04	Earth error current interface (3DI + RED)	Electronic	International
05	Hydroponics methods for multipurpose plants	Agriculture	National
06	Project management software	ICT	National
07	Manufacture of half-full solid panels with standard composition by Arndo Donax cane	Agriculture	National
08	CU/AL COMPOSITE obtained by separation after high frequency electromagnetic fusion	Technology and industry	National
09	Swap Platform Tensile Tide	ICT	National
10	Physical and statistical study of the spread of vegetation fires	Technology and industry	National

Source: Prepared by the researcher based on data provided by the Agency.

The National Agency for Valuation of Research Results and Technological Development has also protected its own business:

- **Support manual for an innovative project:** which shows different stages of escort;

- **My idea challenge for change:** The name of the Agency's innovative project selection competition;
- **Coffee talk JALASSET:** The Agency's sessions through the Zoom platform to address and address emerging modern topics in the areas in which it is active;
- **ANVREDET Valorisation and Innovation:** A directory of information about the agency.

2.2.2.1.3 Project escort:

The Agency's portfolio of innovative projects requiring accompanying them consists of projects emanating from various sessions of the Organization during the year, as well as projects emanating from programs and competitions supported by the Agency.

In order to mature these projects and create innovative institutions, the Agency has developed an incubator that provides many services for project holders such as accommodation, training, finance, integration into professional networks, promotion and marketing.

During September 2013, a space was created within the agency to receive, mentor and support project holders called "INTILAQ Incubator". It has been provided with various services such as equipped offices, common services (Internet, telephone and fax) and a committee of trainers. The following table shows the stages of the escort process:

Table n°(03): Stages of the Agency's accompanying process for project holders

Stage	Operations	Escort
Before incubation	- Technical-Economic Validation - Preparation of the business model	- Training - Funding - Accommodation - Cooperation and partnership
incubation	- Technological Development - Economic maturity - Entrepreneurial Culture Education	
After incubation	- Establishment of an emerging institution - Upgrade Innovation	

Source: Prepared by the researcher based on data provided by the Agency.

*** Incubated Projects:**

57 projects were sponsored by the National Agency for Valuation of the Results of Research and Technological Development in 2015. 40 projects were funded by the Agency after receiving financial support from the Wills Authority of the Directorate-General for Scientific Research and Technological Development. The remaining 17 projects were not funded.

During the project escort phase, UNRWA noted a discrepancy in entrepreneurs' wishes to continue the various stages of reaching out to their institutions, with some showing no interest in continuing the support and escort program even with funding available, while others insisting that their project be realized even in the absence of funding. In order to

address this situation, the Agency decided during this period to reconsider the incubated projects, resulting in the termination of support contracts for 24 projects and the renewal of 28 other projects.

In 2018, projects were re-examined and their progress tracked, as 08 projects were terminated and 20 projects were retained.

In 2020, the remaining projects were re-examined by assessing the project's rate of progress, which led to the retention of only 09 projects. The following table shows the list of projects that have been retained:

Table n°(04): List of projects under Agency's supervision

N°	Project theme	Areas of activity
01	Project management software	ICT
02	Swap Platform Tensile Tide	ICT
03	Encryption from numbers theory to consensual improvement	Mathematics / ICT
04	Physical and statistical study of the spread of vegetation fires	Technology and Industry
05	Hydroponics methods for multipurpose plants	Agriculture
06	Precision brass/AI composite made from high frequency fusion	Technology and Industry
07	Manufacture of half-full solid panels with standard composition by Arndo Donax cane	Agriculture
08	Ultrasonic characterization of tissues and materials that mimic biological tissue	Health
09	Surgical poison extract	Health

Source: Prepared by the researcher based on data provided by the Agency.

These activities culminated in their efforts to create only two start-ups:

- Project Tightening Tide Swap Platform.
- Project Management Software Project.

For the remaining seven projects to date, 02 have withdrawn and only 05 projects remain under escort.

*** Escort under international programs:**

• PACEIM Program:

It is a program to support and accompany innovative enterprises of French-based entrepreneurs from southern Mediterranean countries. The Agency is the centrepiece of Algeria to accompany the emerging institutions of the program entitled "Le Programme d'Aide à la Création d'Enterprises Innovantes en Méditerranée".

This program aims to provide assistance to students and holders of French degrees during the process of establishing an innovative institution in the Southern Mediterranean region, starting from a 15-month incubation period, taking place in France and then in the start-up's country of origin.

This program has been offered in three cycles. The first cycle and the second cycle is about 1.000.000 DA and the third cycle is 1.700.000 DA. For Algeria, 20 innovative projects have been incubated by the program, of which 10 have been able to establish emerging institutions.

• **MEET Africa Program:**

It is a program launched in 2016, targeting African entrepreneurs with a French or German composition. This program aims to establish a sustainable and structured relationship between diaspora and target African countries to build strong economic bridges, formalize new or existing partnerships and facilitate the identification of opportunities for African communities in France. This initiative is exemplified by the development of a European-African platform that brings together offers and support services for entrepreneurs among expatriates residing in Europe and funding their establishment of enterprises.

The Agency's role under this program is as follows:

- Ensuring residential and settlement services for Algerian entrepreneurs;
- Provision of support, escort and advisory services to Algerian project holders;
- Promotion and search for Algerian entrepreneurs' clients;
- Accompanying Algerian project holders in protecting their projects (intellectual property and patents).

This program, like its predecessor, enables the transfer of knowledge from African expatriates in France and Germany to countries of origin.

One of its results in Algeria was the discovery and selection of 15 projects, as part of the support and accompanying process by the National Agency for Valuation of Research Results and Technological Development. The following table shows the accompanying results under this program:

Table n°(05): Results of escort under the MEET Africa program

N°	Project	Areas of activity	Project fate
01	Software Development Network	ICT	Abandon
02	Consulting Center EXIADE	ICT	Abandon
03	Web development and IT support	ICT	Abandon
04	Smart Buildings	Robots	Abandon
05	Solar and renewable energy	Construction	Abandon
06	Software Design and Development	ICT	Creating a Start-up
07	Voice Mobile Platform for Promotion and Publicity for Mobile Sounds	ICT	Abandon
08	Organization of scientific and cultural events	Culture and Science	Abandon
09	YoYo Shop Online Sale Craft Products	ICT	Abandon
10	Essential oils and fertilizers	Agriculture	Abandon
11	CAP Guidance Website on Recruitment	ICT	Creating a Start-up
12	CAFE Support and Training Center	Education	Abandon
13	FICO CAKE Shop for confectionery, madeleine and chocolate	Nutrition	Creating a Start-up

14	Sales Assistance Program	ICT	Abandon
15	Spiritual Culture of Agricultural Tourism	Culture	Abandon

Source: Prepared by the researcher based on data provided by the Agency.

2.2.2.1.4 Technological conversion:

For projects of an acceptable degree of maturity, the Agency organizes technology transfer spaces (valuation workshops) and bilateral meetings to negotiate ways and means of allowing technology transfer.

2.2.2.1.5 Various other activities:

- Organization of the International Innovation Salon 2013-2015;
- Organization of workshops in 2013 to validate: a new technical project for the production of food grains from dry dates, the project for the display of nanoscale technologies, new technologies and modern products in Tipaza, as well as the results of research on the reduction of water contamination with sugar;
- Preparation of a map on Algeria's innovation support and development structures;
- Organizing scientific events and events for universities and the economic sector to promote technological transformation;
- Organization of University-Foundation forums;
- Organization of the National Salon for the Valuation of National Programs;
- Organization of a national competition "E-Start-Up Marathon" to create innovative WAP institutions;
- National competitions for startups "ID-TOURS", a national competition organized by the Agency across all incubators in Algeria, to select the best innovative ideas under the slogan "From idea to emerging institution".

2.3 National Agency for Valuation of Research Results and Technological Development Prospects:

Through our examination of the Agency's prospects, it was found that it did not have a far-reaching strategy, but rather pursued annual work plans, and we therefore decided to present the Agency's prospects through the Action Plan 2023.

This blueprint has been developed in accordance with the Agency's strategy and tasks, namely, to discover, support and accompany innovative projects and ideas for the promotion of scientific research and innovation, technology transfer, and the development of research partnership and cooperation networks in the socio-economic field. Thus, the action plan for 2023 covers the following areas: (ANVREDET, 2023)

- Support structures and programs;
- Technology development and transfer;
- Technical and legal assistance;
- Cooperation and partnership;
- Communication and information;
- Organizing events and events.

The Agency's work plan for 2023 is as follows: (ANVREDET, 2023)

2.3.1 Managing university incubators:

As a party to all incubators established within institutions of higher education and scientific research, the Agency intends to undertake the following activities during 2023.

2.3.1.1 Technical assistance to incubator officials:

This technical assistance to incubator officials is:

- Training on the management of incubators and project support;
- Composition of two components around support services;
- Put in place an incubation system such as administrative procedures, governance tools, legal pillars, communication and partnership policies.

2.3.1.2 Training and guiding the project holders:

The Agency seeks to offer many formative courses in innovation and contracting. The following table shows the main formative courses provided by the Agency to project holders:

Table n°(06): The Agency's main formative courses for project holders

N°	Training	Number of hours
01	Design Thinking	12
02	Enterprise Finance	18
03	Preparation of a business model	12
04	Marketing & Innovation	12
05	Digital Marketing	12
06	Project management.	12
07	Training (BMC, Brand, Business Encounters)	30

Source: Prepared by the researcher based on data provided by the Agency.

2.3.1.3 Organization of project selection competitions:

Selection of projects to be accompanied at the incubator level is done in a number of ways, including organizing challenges, and the following table shows its program for 2023:

Table n°(07): The Agency's project selection competition program for 2023

Activity	Number	Date	Institution
Launch a project invitation	10	First session March – April 2023	- 05 Universities - 02 Schools - 02 Research centers - 01 Socio-Economic Partner
Pre-selection Training Evaluation	25 projects for each challenge is equal to 250 projects		
Admission to incubator	50 projects	Second session October – December 2023	

Source: Prepared by the researcher based on data provided by the Agency.

2.3.1.4 Support systems and tools:

Through the development and management of a dedicated platform for the management of incubation services, this platform offers many functions, including:

- Incubator management, administrative and technical management;
- Organizing challenges;
- Follow-up projects and conduct escort programs.

The platform will be developed and operated by the agency, and its potential users are incubators (public and private) and project holders.

2.3.2 Support for innovative projects:

Selected projects, evaluated and accepted by the Agency, will be accompanied at the level of various incubation structures and will benefit from the following services:

Table n°(08): Innovative project support services programmed by the Agency for 2023

Step	Operations	Duration	Interventions
Before incubation	Technical-Economic Validation	03 months	- Study Offices - Research Centers - Specialized organizations
	Intellectual property	06 months	- Specialized offices - Experts and consultants - Protection bodies
	Preparation of a business model	03 months	- Trainers and escorts
Incubation	Prototypes	06 months	- Research Centers - Manufacturers and Experts
	Find Partners	02 months	- Partnership Networks
	Search for sources of funding	02 months	- Partnership Networks
After incubation	Establishment Procedures	02 months	- Escorts - Jurists and Advisers
	Marketing	03 months	- Studies Offices - Specialized institutions
Training		03 months	- Experts and consultants
Management and supply		12 months	- Providers

Source: Prepared by the researcher based on data provided by the Agency.

2.3.3 Cooperation in the promotion of the innovation ecosystem:

The Agency looks forward to the development of a national innovation ecosystem by programming the implementation of the following processes:

2.3.3.1 Higher Education and Scientific Research Sector:

● **National Coordinating Committee for Monitoring Innovation and Incubators:**

- Participation in coordination meetings;
- Activate workshops and spaces to develop competencies and transfer expertise.

● **Higher education and research institutions:**

- Assistance in the provision of cuddling spaces;
- Participation in the organization of technical and scientific events on innovation;
- Technological development: models and expertise.

2.3.3.2 Socio-economic partnership:

- Presentation of technological solutions;
- Assistance in supporting and accompanying projects;
- Search for sources of finance and opportunities.

2.3.3.3 Media coverage:

In order to promote entrepreneurial culture and innovation, the Agency pursues a media policy by publishing and clarifying its functions to the largest audience, focusing on social media and strengthening links with the national written and audiovisual press.

In order to implement this scheme (Action Plan 2023), the Agency has divided it among its various regulatory services as follows:

* **Department of regulations and valuation methods:** In order to implement the Agency's 2023 prospects, the department has the following tasks:

- Organization of a forum on the negotiation of technological licenses in June 2023;
- Organization of a national patent salon in November 2023;
- Accompanying a project holder called ProSmall AgriMed in order to create a startup and market its product, the agency will contribute to the company's capital;
- Cooperation within the framework of CLDP, an American program for the development of trade rights, aimed at achieving the foreign policy of the United States of America in developing countries, through which the Agency seeks to select and accompany technological projects in Algeria in partnership with CLDP;
- Organizing formations in valuing research results;
- Organization of scientific days at universities and research centers;
- Accompanying project holders;
- Organizing a forum on the financial evaluation of patent protection rights in December 2023;
- Submit configurations in the Transactions Act during April 2023;
- Organizing valuation workshops.

* **Department of cooperation and partnership:**

● **At the national level:**

- Confirmation of a follow-up committee;

- Renewal of framework agreements with: the Algerian National Bank, University of Tizi Ouzou, National Higher School of Agronomy, Higher National Irrigation School, National Climate Change Agency, Center for the Development of Advanced Technologies, National Agency for the Promotion and Development of Technological Civilizations, National Office for Rural Development Studies;
- Preparation of partnership agreements with public bodies of the Ministry of Higher Education and Scientific Research: 06 universities, 02 research centers and 06 higher schools;
- Preparation of a partnership agreement with the Foundation for the Promotion and Management of Support Structures for Emerging Enterprises (ALGERIA VENTURE);
- Preparation of a partnership agreement with the Algerian Fund for the Financing of Emerging Enterprises (ASF);
- Prepare a partnership agreement with the SME Investment Loan Guarantee Fund;
- Preparation of a partnership agreement with Sonelgaz Foundation and the Economic Group Omar Ben Omar;
- Develop partnership agreements with various social actors and economies.

• **At the international level:**

- Preparation of partnership agreements with representatives of States and diplomats of foreign embassies in Algeria;
- Preparation of a partnership agreement with the Canadian-Algerian Development Council.

* **Department of Legal and Financial Engineering:**

• **Contracts:**

Preparation of all legal contracts relating to the Agency's activities.

• **For intellectual property:**

- Initiating the search for the primacy of patents and marks;
- Initiate the deposit of various types of intellectual property (patent, tag, marking and authors' rights).
- Organize events and lectures directly with each of the following: Algeria's National Institute of Industrial Property (INAPI), World Intellectual Property Organization (OMPI), National Authors' and Neighbouring Rights Office (ONDA). This is for the benefit of entrepreneurs, incubator officials, and emerging enterprise managers.

• **For emerging enterprises:**

- Accompanying project holders to complete the founding law of their nascent institution;
- Assisting in the development of the startup's marking (tag).

* **Department of innovation:**

• **Reverse engineering processes:**

- Project framing/guidance;
- Scientific and technical revitalization;

- Explore/search for information/develop a supplier database;
- Supply.
- **Study of projects submitted for evaluation:** through:
 - 30 experts per 10 projects;
 - For appeals, 06 experts per 03 projects were provided.

Conclusion:

The practical reality of Algeria's start-ups underscores the complexity of the environment in which they operate. such as competition, rapid technological development and large companies' control of markets, and presents many challenges, especially with regard to financing in the early stages of establishment on the one hand and careful studies of the possibility of success in the market to be accessed in circumstances of uncertainty, which has increased its volatility gap from time to time for state investment policies import and export, which explains the short life cycle of a wide range of start-ups that withdrew from the market or aborted the idea of sending them during their early stages.

As the importance of start-ups within the engine of economic advancement grows significantly The Algerian State, particularly in the past three years, has sought to create an enabling environment by taking a number of legal, regulatory and even incentive measures to provide these institutions with all forms of support and assistance to ensure that they are launched and sustained in order to achieve their objectives, for their inability to cope with the circumstances, and business incubators had a share in these actions and theoretical and applied studies have proven the effectiveness of the role played by business incubators through their work and philosophy that supports projects from the embryonic stage, that is, the stage of presenting an innovative idea for the mission of a project, in order to translate this project on the ground through the provision of technical, logistical and accompanying support and that the creation of such incubators throughout the country would greatly assist Algeria's start-ups, to overcome the dangers of the establishment stages, thereby contributing to technological, economic and social development.

Results:

Through this study we have achieved the following results:

- Start-ups play a significant role in achieving economic and social development because of their starvation of characteristics that distinguish them from other institutions, especially in terms of innovation and creativity, as they play an important role in obtaining substantial market shares and thus producing wealth and creating jobs;
- Business incubators' work is based on projects and enterprises with a range of characteristics such as innovation, technology, high growth capabilities and others, which are characteristic of startups;

- The Agency's outcomes were very weak during the first period (2002-2012), but improved during the second period (2013-2022), although they did not respond to the level of expectations it sought to support the creation of emerging institutions;
- According to the applied study of the outcome of the Agency's activities, we have reviewed the long-term of project escort, which is incompatible with the characteristics of start-ups that rely on rapidly changing technological innovation, which may result in project failure prior to its launch;
- The Agency lacks a headquarters suited to its aspirations and is allowed to operate an adequate number of tyres that will make them up to the task assigned to them, on the one hand, and a sufficient space to incubate project holders, as in this process the agency relies on university incubator spaces as a party to it, on the other hand;
- The absence of financial support for innovative entrepreneurs. The Agency emphasized that the financial support is solely for the product and not for the project, i.e. only the steps leading up to the establishment of the start-up enterprise, the location of the project is not financed, the physical or human potential of the project is not funded, the entrepreneur must seek funding that suits him and meets his needs and the incubator must only direct it to the most appropriate sources of support.

Suggestions:

The first steps to be taken by the incubators are:

- Intensify efforts to develop investment awareness of the importance of start-ups to society, familiarize entrepreneurs with the various sources of funding available and overcome financing and security requirements throughout the country without discrimination between large and small states;
- Establish special cells that carry out the task of catching holders of ideas from all segments of society, not focusing solely on university graduates, and work to transfer distinguished persons with innovative projects to incubators directly to complete and embody their projects on the ground;
- Adopt and develop programs consistent with the culture of Algeria's start-ups ecosystem, rather than world-leading incubator programs and models. There is a need for local adaptation of imported incubator programs to Algeria's cultural environment;
- Dispense with the pastoral bank loan with risk capital and Islamic finance, so that the project holder avoids the psychological pressure of religious refusal of pastoral bank loans;
- Improving their financial capacities and constant willingness to provide sources of financing by collecting as much information as possible on various sources and types of bank or institutional financing, grants, loan funds and major investors, by building relationships with various stakeholders, both locally and abroad, and by promoting the attraction of investment capital;
- Incubator managers must have leadership skills with a competent management staff, so that they can meet the challenges to the success of the project's incubation process.

References:

1. Books:

- (2022). *Business incubation basics*. USA: IFC.
- Bayhan, A. (2022). *Business incubator process: A policy tool for entrepreneurship and enterprise development in a knowledge - based economy*. USA: Competitiveness Support Fund.
- Mutabazi, B. B. (2017). *Business incubation models*. Hive Colab.
- Passy, P. L. (2021). *Les conditions de succès des Startups*. Paris: Université de Paris 1 Panthéon-Sorbonne.
- Peyre, K. (2021). *Qu'est-ce qu'une startup à succès ?* Boston: La boussole.

2. Journal articles:

- Allahar, H. (2016). Business incubation as an instrument of innovation: The experience of South America and The Caribbean. *International Journal of Innovation*, 70-93.
- Bouhaj Said, J. R. (2022). A conceptual and semantic framework of the startup: A systematic of the literature through a qualitative study. *Revue internationale du chercheur*, 228-251.
- Pettersen, I. B. (2016). Business incubation and the network resources of startups. *Journal of innovation and entrepreneurship*, 1-17.
- Roberto Vaz, S. F. (2022). Comfortable but not brilliant: Exploring the incubation experience of founders of technology-based startups. *MDPI*, 1-22.
- Tsaplin Evgeny, P. Y. (2017). International strategies of business incubation: the USA, Germany and Russia. *International Journal of Innovation*, 31-47.

3. Internet websites:

- (s.d.). Consulté le Août 11, 2023, sur Startup: <https://startup.dz/>
- (2023). Consulté le Août 10, 2023, sur ANVREDET: <https://www.anvredet.org.dz/>