



### Various industries



#### Average funding by industry



### 56% of deals took place in the Paris region



37% of transactions had at least one foreign investor 63% 37%







Speaking from a General Electric industrial site, Emmanuel Macron announced a **one billion euro plan**, part of France 2030, to support the development of new innovative nuclear reactors, notably small modular reactors ("**SMR**").

- Belfort, 10th of February 2022



#### Review of all the fundraising announced by French Deep Tech startups during the first quarter of 2022



*A Deep Tech* startup is a startup developing a complex technological asset with strong technological barriers (long R&D cycle, PhDs, research labs spinoff, patents, etc.)



**Sources**: press, internal data, Omnes analysis

# THE DEEP TECH EXPERT

by

## **OMNES**



## questions for <u>Armand Ajdari</u> cto of Arkema

### <u>What is Arkema's Open Innovation</u> <u>strategy?</u>

Arkema continues its strategic major transformation from high-volume chemicals to chemicals and performance speciality materials. This evolution implies developing a larger technology portfolio and tapping into innovation to serve many markets and customers. This needs to be supported by an Open Innovation policy that has several components.

Compared to 15 years ago, the gap between the public and private worlds in France has been significantly reduced, although it is still perfectible. Arkema, for example, works with the academic community in many parts of the world to preserve its scientific expertise locally and to be able to recruit highly trained students through a privileged channel. This relationship with the academic world goes beyond simply funding laboratories or projects but is about building authentic partnerships that offer university researchers the opportunity to work on tangible subjects, just as it allows Arkema's researchers to benefit from an intellectual haven while opening up their horizons; the real key to success is to have academic partners who are keen to commit to a long-term relationship with an industrial player.

Given the recent change in scale of the funding

This ongoing collaboration enriches our field of possibilities, and Arkema must strengthen it further.

ARKEMA

This interaction with start-up ecosystems is key in fast moving complex fields such as bio-based materials (for example new enzymatic synthesis methods). Another area is battery materials, where we are in a similar situation to that of photovoltaics 15 years ago, with very substantial investments on one side and technologies and uses at very different levels of maturity on the other side. In the end, the winning technologies will not only depend on technical or scientific merit but above all on investment cycles and subsidy schemes that can set standards in the industry. Arkema is following these themes very closely.

Conversely, Arkema can be a premium partner for promising startups to support their industrialisation and growth, thanks to Arkema's broad off-the-shelf technical solutions that can readily be ramped up to an industrial scale.

## "As to R&D, Arkema has a very strong presence in France"

The idea of relocating production in France is making a strong comeback. What are the advantages and obstacles to producing in France?

related to sustainable development (such as the Green Deal in the EU), Arkema is also increasingly working with governmental agencies and European institutions and is significantly developing its presence in this ecosystem.

"The real key to success is to have academic partners who are keen to commit to a long-term relationship with an industrial player."

#### And what about interacting with startups?

Arkema also works extensively with start-ups, which often intelligently combine technology, market needs and new business models. These collaborations avoid the pitfall of singlemindedness, as in-house expertise sometimes relies on only a few (bright) individuals to make technological choices. Arkema has historically maintained a strong industrial footprint in France, while it continues to expand its industrial platforms worldwide to be able to serve locally our customers everywhere. So there is no relocation subject as such.

As to R&D, Arkema has a very strong presence in France, supported in its dynamics by the Research Tax Credit (which allows R&D in France to be on par or less expensive than in China, and competitive in Europe). This scheme is often challenged, but its historical stability is a strong argument when important investment decisions are made. There is also a more dynamic ecosystem for subsidies than 10 years ago to industrialize new technologies, at the EU level, but also significantly from territorial and national entities. This is a real competitive advantage. On the other hand, improvements are still needed in terms of simplification and administrative reactivity, eg compared to other European countries.

- Chief Technology Officer at Arkema since January 2022
- Executive Vice President R&D of Saint-Gobain between 2017 and 2021
- Researcher at the CNRS for 15 years
- PhD in Theoretical Physics Université Pierre et Marie Curie
- Graduate of the Ecole Polytechnique

The Deep Tech Expert gives the floor to a significant leader to share their views on the Deep Tech ecosystem





Résumé of

**Armand Ajdari**