

CYBERSECURITY START-UPS IN FRANCE

A BOOMING ECOSYSTEM

CONTACTS



GABRIEL AMIRAULT
gabriel.amirault@wavestone.com



G R ME BILLOIS
gerome.billois@wavestone.com

Cybersecurity is now the focus of everyone's attention - the protection of personal data and defense against cyberattacks have become priorities for companies and governments alike. In a field where the nature of the threat is constantly evolving, innovation is an absolute necessity. While the United States and Israel dominate, France is starting to make a name for itself thanks to the dynamism of its cybersecurity start-ups and the diversity of the schemes set up to support them. This article takes a closer look at the specificities of the ecosystem in France.

A dynamic base of over 100 start-ups

There are currently over 100 innovative start-ups and SMEs active in the field of cybersecurity in France. This constantly growing number reflects the dynamism of the sector in France and the advantages it offers in this area. The sector represents over 1,000 direct jobs. And while that may not seem a lot, this number is expected to increase significantly over the next few years.

Most start-ups choose to reinvent security solutions that are already well established

60% of start-ups enter the market with the intention of improving on security solutions that already have a proven track record (device security, network security, email security, identity management, etc.).

As a general rule, tackling an already consolidated market is not simple. But there are still windows of opportunity, particularly in application security. Many of the major players are present in this field, and yet they still do not offer truly satisfactory solutions. The innovative approaches taken by start-ups such as Sqreen, Ingen and Yagaan can provide new paths forward.

Industrial security, cryptography and reverse engineering: innovative fields in which France is well-positioned

In reality, numerous French start-ups (40%) have positioned themselves in technologies where everything remains to be done.

For industrial systems, for example, French players such as Sentryo and Seclab are particularly well placed.

This is also the case for technologies used to analyze malware, with products and services such as those offered by Tetrane and Quarkslab. Their expertise is internationally acknowledged, including by major American groups.

In cryptography, the French school of mathematics enables start-ups to enjoy access to cutting-edge expertise, difficult to access in other countries. This helps them to develop innovative vulnerability analysis tools such as Cryptosense.

On the other hand, certain fields continue to be neglected in France despite strong

growth potential, including deception techniques (that aim to provide false information to a hacker to slow them down), which are gaining popularity in Israel, and even at a European level.

French start-ups experience difficulties with communication and appreciation of their expertise

The national ecosystem of start-ups is very dynamic and even the highly specialized forms of expertise exist, helping to turn ideas into reality and launch the first products. A key point is nevertheless required for the cybersecurity market: the ability to communicate effectively. Our contact with several foreign incubators shows a striking difference in terms of communication with Anglo-Saxon start-ups able to promote their products using hard-hitting pitches and effective marketing.

This lack of commercial know-how is particularly negative for French start-ups that wish to take their products to an international level.

FRANCE - FERTILE GROUND FOR CYBER START-UPS

For several years, many initiatives have been developing to support the cyber sector in France. We could mention the government's Digital Security strategy driven by the French IT security agency (ANSSI) or

the investments made by the Ministry of Defense. Different economic clusters are involved, which in practice translates into a geographic concentration of start-ups. Paris, as is often the case, is in the lead, but Lyon, Rennes and the south of France are also very much present.

Support structures are numerous and active, but not very specialized

France is a global leader in innovation with no less than 228 incubators, and around fifty accelerators. But in comparison to Israel, Switzerland and the United Kingdom, we do not have incubation or acceleration structures dedicated specifically to cybersecurity. Certain incubators have created clusters to concentrate the necessary skills, but they still do not provide specialized support. It is therefore rare to find coaches in these structures who have an in-depth knowledge of the cyber market, its players and its specificities, particularly the product purchasing and qualifying process. Axeleo and Wavestone are perhaps the most similar to the dedicated foreign structures. Looking forwards, a regional initiative called Ocssimore will be starting in Toulouse in September 2017. «FrenchTech», which enjoys excellent international visibility, has recently begun to focus on the issue of cybersecurity with the creation of the Security & Privacy network.

METHODOLOGY FOR THE CONSTRUCTION OF THE START-UP RADAR

Since 2015, Wavestone has been actively monitoring the start-up ecosystem as part of its ShakeUp program. With its many contacts and activities within the ecosystem of cybersecurity innovation in France, the start-up radar now lists almost 400 structures across Europe and the world, with a special focus on France. The criteria for joining the French radar: registered office in France, less than 35 employees, and a legal structure that is less than 7 years old (excluding for major hubs).

Following these monitoring activities by the cybersecurity practice and digital trust teams, we meet up with the most innovative start-ups to evaluate their solution, and some are selected to join ShakeUp, the Wavestone accelerator program.

www.wavestone.com/shakeup

The French cybersecurity start-ups ecosystem in 2017

Radar consisting of **100** cybersecurity innovative start-ups spread right across mainland France

Organized into **20** categories the TOP 5 of which are :



They position themselves as follows:





A favorable, but perfectible funding ecosystem

France has real strengths when it comes to funding innovation, and many start-ups are evidence of its effectiveness. The «Programme Investissement Avenir» (invest in the future) invests 22 billion euros in research; the Research Tax Credit and the status of «Jeune Entreprise Innovante» (young innovative enterprise) help to reduce the costs of R&D, social charges, and corporate taxation.

For its part, BPI France provides a wide range of funding opportunities for entrepreneurs and support activities thanks to its partners (banks, investors, local authorities, etc.) and, through accelerators, it offers participatory loans and can stand as guarantor for the banks.

Many forms of regional support are also available. At the same time, we are seeing a distinct increase in corporate ventures, as well as Business Angels who are often even in competition with each other to invest in the best cyber start-ups.

Nevertheless, the complex ecosystem with its many different players often makes finding funding complicated. The formalities

for raising funds often resemble a real marathon, with bureaucracy still very much present. It is necessary to have a detailed plan of attack, to apply for every scheme at the right time with the right application... but without sacrificing the time needed to grow the start-up! Finally, few major French groups tend to acquire start-ups, with the latter being tempted to accept offers from foreign companies.

CORPORATE ACCOUNTS: ESSENTIAL BUT COMPLEX TARGETS

The economic fabric of France relies heavily on big groups that have substantial investment capacity. For start-ups seeking to market their cybersecurity offers, these are the prime customers. However, the rigid and complex processes of these large companies constitute a major obstacle for start-ups.

After all the pitfalls involved in identifying the multiple budget holders in the structure (ISSM, architect, expert, IT Manager, purchasing, etc.), it remains very difficult to sign the first contract. The purchasing process can take from three to six months, and is too complex for the way that start-ups

operate, with them being asked for proof of profitability, years and years of experience, and references from other customers - impossible for the first contracts.

This situation is exacerbated for cybersecurity as start-ups often cannot count on the innovation hubs created by the corporate accounts to facilitate their exchanges with the innovation ecosystem. On the one hand, because start-ups struggle to convince businesses of the benefits provided by their proposed solutions, and on the other because the innovation teams have difficulty understanding the practical benefits given the specific nature of the issues. Feedback on successes shows that cybersecurity departments in the corporate accounts often have to be the driving force, or even develop the relationships with the cyber start-ups themselves.

Attitudes that must change within the large companies

Once contact has been established, there remains the step of carrying out tests in live conditions (Proof of Concept). It's an example of the difficulty that start-ups have in competing with the established cybersecurity developers in the corporate



world. These tests are needed to evaluate the effectiveness of the new solution. The big developers, with substantial financial resources, offer 'PoCs' free of charge to their customers, who in turn have become used to these 'free' tests carried out for their benefit.

For start-ups, however, the situation is different as their working capital requirements are acute and carrying out such tests free-of-charge can endanger their very existence!

It is therefore necessary for the big groups to have suitable budgets, often in the order of only a few thousand euros, to test the innovative solutions proposed by the start-ups.

Positive feedback from interactions between start-ups and corporate accounts in France

However, successful collaboration between start-ups and corporate accounts shows that these two worlds can work together. And the effort made pays back in a big way. Start-ups like Alsid and Idecsi thus benefit from the testimony of large customers that are in a position to reassure other companies and the investors.

A French cybersecurity ecosystem that values innovation

In France, the presence of an ecosystem that regularly promotes innovation by including corporate accounts and start-ups is highly visible: the «*Assises de la Sécurité*» with the Prize for Innovation, the International Cybersecurity Forum (FIC) with the Innovative SME prize, and the competition devoted to cybersecurity in the banking industry, jointly organized by Société Générale and Wavestone. These initiatives help to highlight cybersecurity innovations, as well as promoting direct contact between the different players. They contribute to creating the relationship of trust needed for the corporate accounts to invest in the solutions proposed by start-ups.

The importance of having a French offer for digital sovereignty

Cybersecurity is a global issue but also affects national security. The benefits of having reliable products in this area is obvious.

Even if much remains to be done to guarantee digital sovereignty, the initiatives of certain French start-ups have made it possible to import concepts that initially existed only in other countries. This is the case, for example, with Bug Bounty's platforms. In France, three start-ups, Bug Bounty Factory, Bug Bounty Zone and Yogosha offer services in this field. Over time, this could make it possible to retain knowledge of sensitive vulnerabilities within Europe or indeed in France.

It is important to note that the French domestic market for cybersecurity is largely driven by players in the defense sector, both public and private, who invest and help start-ups to grow. But these growth opportunities are, at the same time, an obstacle to exports and make it more difficult to communicate references.

TOMORROW: SUCCESSFULLY GROWING BEYOND NATIONAL BORDERS

The research sector is becoming structured

Research in cybersecurity is also very active in France with many laboratories being involved and some leading-edge initiatives. The Allistene grouping, which includes INRIA, CEA, CNRS and a number of higher education institutions is just one example. Prominent chairs have been

devoted to cybersecurity issues and its practical applications, for example for autonomous vehicles. Together with the initiatives launched by the big companies, this all adds up to the creation of fertile ground for numerous start-ups to bloom and grow.

Overcoming purely French considerations to grow internationally

France has much talent in terms of cybersecurity, fertile ground to facilitate the emergence of start-ups, and a market that can support these structures. But this very positive situation must not be allowed to mask the principal difficulty currently faced by our start-ups: achieving international success and growth.

Apart from a few success stories, such as Qualys in the past, and more recently Linkurious in the United States, French start-ups struggle to go beyond their own borders. They face barriers in terms of their ability to communicate effectively in English, the weakness of French customer references, legal issues, and also psychological barriers to expatriation. Whereas the quality of French cybersecurity specialists is widely acknowledged, the quality of the start-ups remains unknown.

Breaking through this glass ceiling requires joint initiatives with the government, large companies, and the strong entrepreneurial spirit of start-up founders.

Let's start working together, pooling all our strengths, so that this becomes a reality in years to come.

WAVESTONE

www.wavestone.com

Wavestone is a consulting firm, created from the merger of Solucom and Kurt Salmon's European Business (excluding retails and consumer goods outside of France). The firm is counted amongst the lead players in European independent consulting.

Wavestone's mission is to enlighten and guide their clients in their most critical decisions, drawing on functional, sectoral and technological expertise.