

# KEYRUS

insight into value



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**FRANCE,  
THE NEW CRADLE  
FOR DIGITAL  
ENTREPRENEURS!**  
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At the time of the great explorers, preparations for an expedition were littered with obstacles and objective reasons for abandoning the project. The ocean crossing always turned out to be uncertain, eventful, and chaotic, but the promise of unexplored lands increased strengths tenfold and pooled energies. The acceptance of risk by a small number of visionary adventurers made this period one of the most prolific in terms of discoveries and the creation of riches and value. Today, we are experiencing a very similar situation with new virtual, abstract, and digital territories, lying at the crossroads between man, the machine, and its development, waiting to be conquered. Whilst the risks are no longer what they were, the stakes involved in this exploration retain a universal dimension.

NBICs (Nanotechnologies, Biotechnologies, IT, and Cognitive sciences) offer just as many virgin territories to be discovered, and today we are just making the first sightings of their shores. From now on, the new explorers are inventors, researchers, and entrepreneurs. Five centuries after the time of the great discoveries by Christopher Columbus, Vasco da Gama, and Ferdinand Magellan, it turns out to be that same audacity, spirit of adventure, and a certain thirst for conquest that make it possible to conduct a project, build an enterprise, and make it lasting.

Our century will be that of the mastery of Information and Artificial Intelligence. We are now already feeling the effects of this digital innovation that marks a Darwinian break on our evolutionary ladder. The convergence of NBIC technologies gives us new keys for controlling our destiny and increasing our ability to act and understand real life. It also reduces the randomness that has driven the evolution of Homo Sapiens until now. By affecting all sectors of human activity, the digital transformation is upsetting economic, sociological, and geopolitical balances. Medicine, teaching, the legal sector, defence and security, finance, marketing, and journalism... will go through fundamental changes under the combined effect of robotization and the growing importance of artificial intelligence. Systems for collecting and analyzing massive and multistructured data already make it possible to optimize complex processes and establish very reliable forecasts. By becoming more widespread, these systems will broaden their functional spectrum and become accessible to all enterprises, whatever their size and the sector they are in. There will no longer be a field reserved for human expertise alone. Prospective studies affirm that more than half of professions in the 2030s do not yet exist, but that they are likely to favor creativity and collective or emotional intelligence (\*).

The major players in the digital economy now hold strategic positions on the global chessboard. In terms of influence, they are able to compete head-on with States in their public and industrial policies. If you add up the stock market capitalizations of the fifteen leading digital companies (\*\*) in the world ranking, you arrive at the exact value of France's 2015 GDP, namely 2400 billion dollars. This financial power is transforming the global economic fabric. It also acts as a driver of innovation and scientific progress when profits are

redirected towards the research and development departments of these major groups or towards their partner laboratories in the public sector. National schemes for supporting enterprise creation have proved to be highly effective. Hence, the French Public Investment Bank (Bpifrance) supports a FrenchTech that is particularly dynamic and internationally recognized. Its motto of «To serve the future» is part of a stated ambition to encourage the emergence of tomorrow's champions, from seed funding through to stock market flotation. In the France category, the 2016 crop of under-35-year-old innovators distinguished by the MIT Technology Review\*\*\* has just honoured ten creators of highly promising startups, confirming once again the excellence of French-style innovation.

New ecosystems with a very high technological potential are emerging on all continents, from California's Silicon Valley, through Israel's Start-up nation and London's Fintech, to Health Valley in French-speaking Switzerland. These pockets of intense innovation act as real engines and producers of growth and wealth for the States hosting them. In 2014 France sought to create the Paris Saclay technological center and the Paris Saclay University, bringing together within one large hub two universities, around ten prestigious, higher education schools, and seven research organizations. This development is likely to reach a sufficient critical mass to compete with high-level research and training structures like Stanford University, Caltech and MIT.

Major French companies are helping to develop the Paris Saclay hub and its reputation, notably by acting as partners of the «Data Scientist» Chair that was created in October 2014 at the Ecole polytechnique and is now training new battalions of data analytics experts (Data & Computer Sciences). Similarly, the «Machine Learning for Big Data» Chair, set up by Télécom ParisTech, meets enterprises' Big Data needs with a very broad range of training on offer. On the international front, these same companies have joined forces with leading research centers (like Cambridge University) to offer their clients predictive emotional (Feel Data Sciences) and behavioural (Computational Behavioural Sciences) data analytics models, which are becoming increasingly relevant.

This type of cooperation between the private sector and centers for research and academic teaching today represents the most effective force for France in terms of driving innovation, the incubation of new business ideas, and entrepreneurship. It is the model that best enables the country to succeed in its digital transformation and thus meet the complex challenges posed by NBIC convergence.

(\*) Wagepoint Report (infographics), «Jobs in the Future - The Career Path of Generation Y & Z», Canada, 2013; <http://blog.wagepoint.com/h/i/70994661-jobs-in-the-future-the-career-path-of-generation-y-z-infographic>

(\*\*) Global Top 100 Companies by market capitalisation - PwC, 31 March 2015 update, pp 40 <https://www.pwc.com/gx/en/audit-services/capital-market/publications/assets/document/pwc-global-top-100-march-update.pdf>

(\*\*\*) MIT Technology Review - Innovators under 35 <http://www.innovatorsunder35.com/innovators-under-35-france>