

VIA Inno

Societal Innovation Center: "Veille innovation Aquitaine"





Via Inno a platform of technological intelligence

The VIA Inno platform is an accredited Societal Innovation Center (*Centre d'innovation sociétale*) associated with the University of Bordeaux's Excellence Initiative. It develops and promotes the expertise of the University of Bordeaux's Theoretical and Applied Economics Research Group (GREThA) in the field of technological intelligence. By developing dedicated and pioneering methods, the platform seeks to improve our understanding of the global scientific and technological configurations that define innovation trajectories. Who innovates? What is the structure of partnerships in the innovation process? How do universities contribute to the emergence of a particular field? Are we witnessing the emergence of new technological complementarities? What are the scientific dependencies?

The adoption of these approaches by local and regional authorities, higher education institutions and enterprises is a major challenge. These new methods provide opportunities to add significant value to political, scientific or economic decision-making processes. The assimilation of these practices by our partners exactly models how VIA Inno is seeking to develop its relationships with civil society. The aim of transferring tried and tested methods is based on the establishment of close long-term relationships in which the analyses must always be adapted to the realities experienced by our partners. Our joint laboratories and the Chair of Technological Intelligence supported by the University of Bordeaux Foundation bear witness to the socioeconomic world's interest in this process.



Acting as a hub of experimentation in the use of scientific, technological and financial databases, VIA Inno has acquired valuable experience of the relevance and limitations of these data for the analysis of innovation dynamics. We are delighted to be disseminating this expertise to numerous students enrolled in the many programs of study offered by the University of Bordeaux and the engineering schools in the region, as these same students will become the economic stakeholders of tomorrow.

« The challenge of combining the development of original and transferrable methods with the production of scientific resources will allow us to improve their relevance and transfer by implementing dedicated training programs. This approach is embodied by the implementation of these University of Bordeaux Societal Innovation Centers. »

Mathieu Bécue, co-founder and director of the VIA Inno platform

Technological intelligence deployed by the University to facilitate decision-making

VIA Inno is a technological intelligence platform developed by GREThA (Theoretical and Applied Economics Research Group) at the University of Bordeaux.

VIA Inno is organized around a team of analysts specializing in database mobilization and researchers in innovation economics and sectoral analysis. Its main mission is to contribute to the consolidation of the technological intelligence practices and competencies of French operators.

→ Technology intelligence in a nutshell



The VIA Inno initiative was first encouraged by the Nouvelle-Aquitaine Regional Council in 2009, in response to the "Shared Innovation Platform" Call for Projects, and then became a Societal Innovation Centre in the framework of the University of Bordeaux's Excellence Initiative in 2012.

Major areas of activity

1. Creation of a new approach to technological intelligence



> Extending sources of information on technological intelligence.

Understanding innovation dynamics cannot be limited to the mobilization of scientific data (publications and papers) or technological data (patents). VIA Inno is striving to extend the range of information sources that may be relevant to technological intelligence, by integrating data of a financial nature, for example.

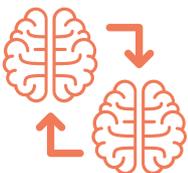
> Devising technological intelligence methods that are tailored to decision-makers' needs.

By forging close relationships with industrial and institutional stakeholders (creation of joint laboratories), VIA Inno is ideally positioned to assess their informational issues and needs. This proximity allows for the tailoring of technological intelligence methods to meet their specific needs.

> Paying particular attention to "data visualization" tools.

Strategic information is only useful if decision-makers assimilate it. VIA Inno therefore endeavors to integrate powerful visual representation tools into these methods in order to present the results of the mapping of S&T environments. For this purpose, VIA Inno has joined forces with Immersion, the European leader in immersive and collaborative 3D technologies.

2. Competency transfer in technology transfer



> VIA Inno has created a customized training program for its partners

to help them create or develop technological or economic intelligence units. In 2016, VIA Inno, with the backing of researchers from GREThA, began developing a University Diploma (DU - *diplôme universitaire*) program open to all professionals (senior executives, economic intelligence officers, etc.) seeking training in economic intelligence.

> VIA Inno is committed to training

a new generation of technological intelligence specialists. The methods developed by VIA Inno are taught to students on the University of Bordeaux's Master 2 EIVS (Innovation Economics and Business Intelligence) program. The team also proposes advanced awareness-raising sessions for students at engineering schools.

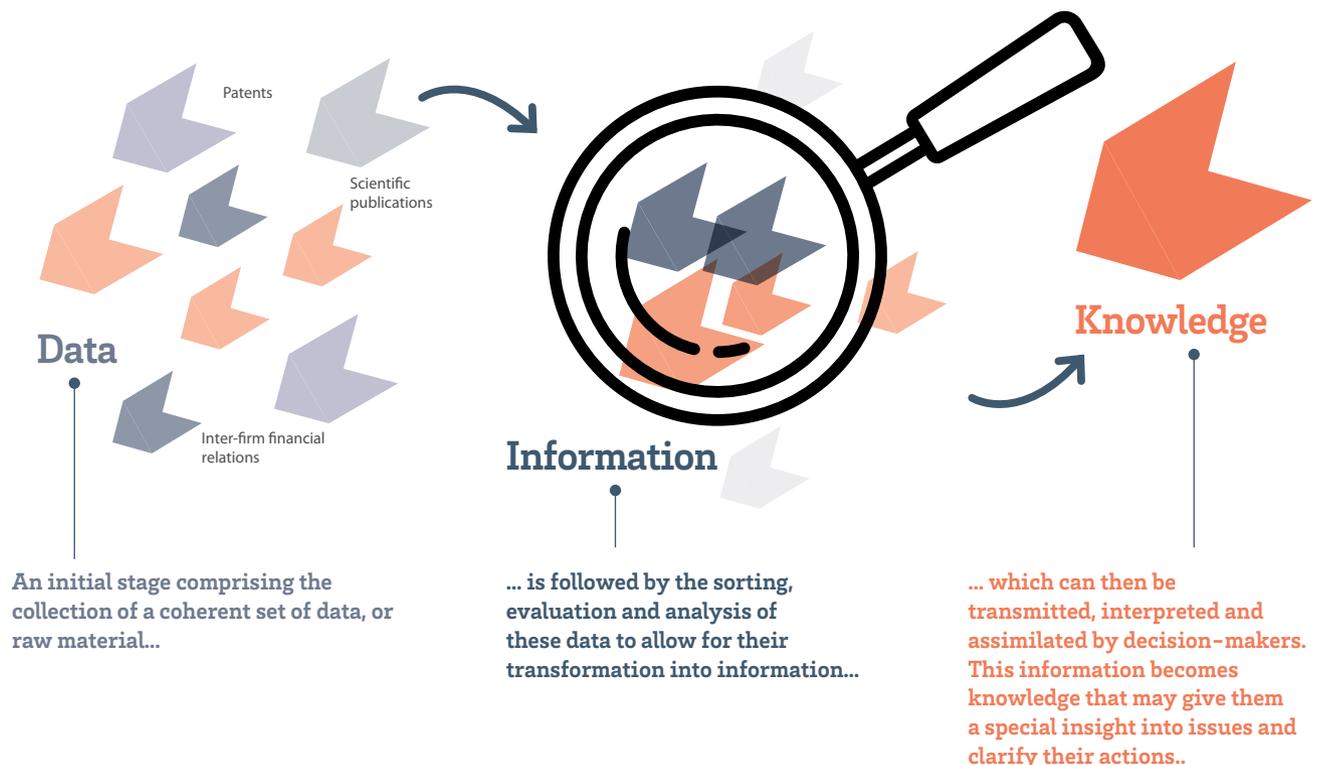
3. Ad-hoc environment mapping projects



At a subsidiary level, VIA Inno also carries out **scientific and technological mapping** to support certain operators at key moments of their lives: elaboration of funding applications, bids for research projects, etc. These ad-hoc mapping projects can also be carried out in order to demonstrate the validity of the VIA Inno approach and engage in more formal collaborations on a longer-term basis.

An innovative methodology: discovery of knowledge using structured databases

Among the vast range of existing approaches to technological intelligence, VIA Inno specialises in Knowledge Discovery in Databases (KDD) or "data mining". This involves identifying relationships and trends within a vast set of data which would be impossible to perceive by processing these data individually. Consequently, all of the technological intelligence methods developed by VIA Inno are sequenced in the following manner:



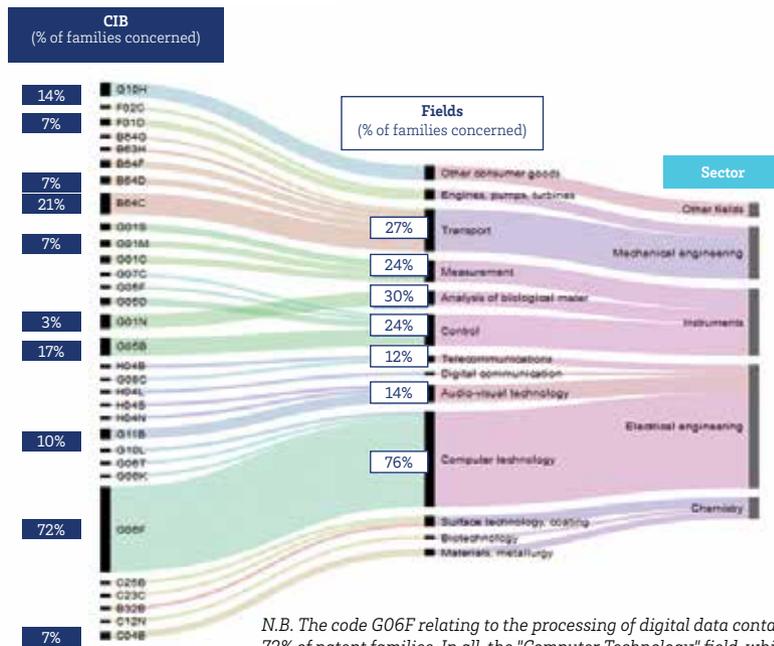
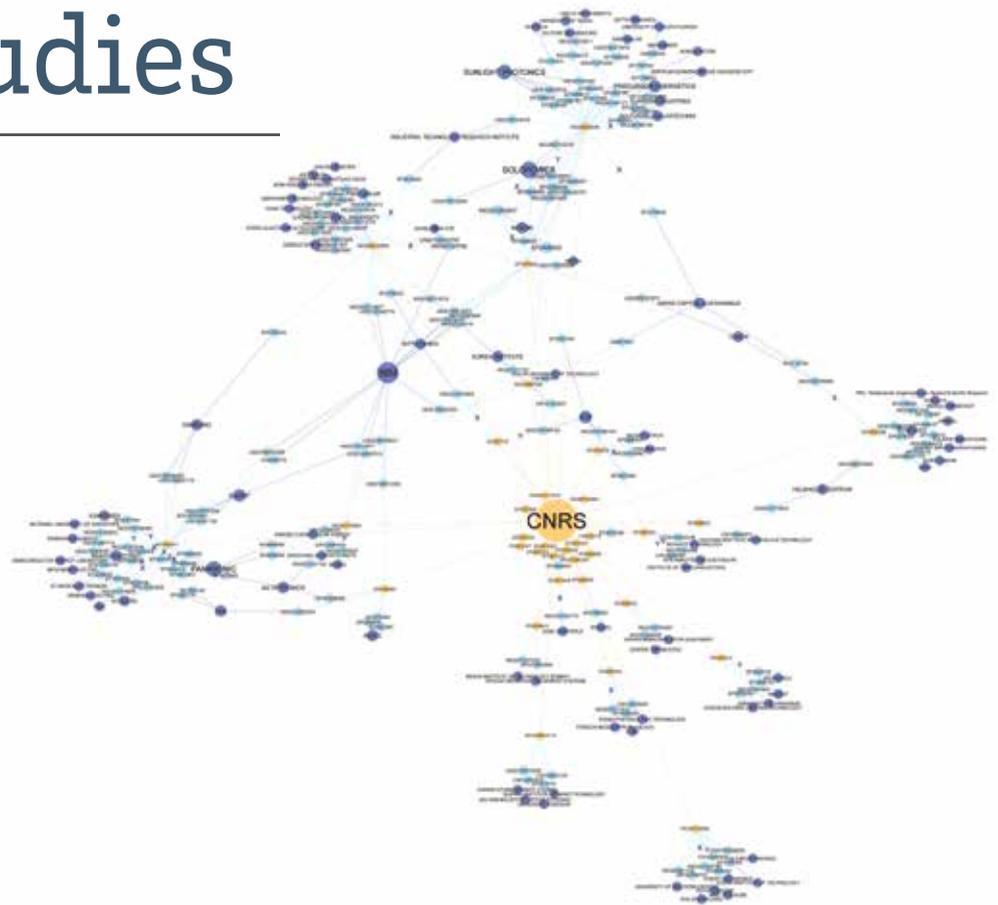
Mechanisms on which VIA Inno's expertise is based

- **Databases:** Orbit, Web of Science, Scopus, Capital IQ, VentureSource
- **Analytical tools:** Intellixir, Gephi

Representations of scientific and technological environments: case studies

"Technological reach of the CNRS in the photovoltaic field"

After analyzing patent citations, we can identify patents and stakeholders relating to the invention path of a given operator. The diagram opposite represents the network of citations concerning patents obtained by the CNRS (French National Center for Scientific Research) in the photovoltaic sector. It shows which industrial groups, such as IBM and Solopower, are conducting similar research activities to the CNRS. This information facilitates the identification of the potential for the commercial development of technological solutions.



N.B. The code G06F relating to the processing of digital data contains 72% of patent families. In all, the "Computer Technology" field, which incorporates it, contains 76% of the families filed.

Source: Orbit (questel), processing by VIA Inno

"Technological segmentation of the University of Bordeaux's positioning in the aeronautical sector"

On the basis of technical codes assigned to each patent, we can map the main areas of technological expertise of an innovative operator.

The representation shown opposite provides an example of this process by mapping the University of Bordeaux's expertise in the aeronautical sector. It reveals that the University innovates in digital data processing systems, particularly by improving solutions that monitor the operation of these systems.

Pioneering partnership procedures: the joint laboratory and the Chair

VIA Inno proposes a wide range of different collaborations: from the simple mapping of innovative environments, to joint participation in research projects, to training sessions lasting several days. VIA Inno has also devised two ambitious participation procedures for its partners: joint laboratories and the Chair of Technological Intelligence.

→ Joint laboratories: ideal environments for experimentation on technological intelligence

VIA Inno is currently involved in **5 joint laboratories: 4 with French industrial groups of international standing and 1 with a regional institutional body.** These partnerships, generally entered into for renewable periods of 3 or 4 years, allow VIA Inno to provide long-term support for the development of operational technological intelligence capacities that are specifically tailored to meet each partner's key strategic challenges.

Each laboratory's activities are generally divided into three areas:

- > 1. Organization of skills transfer between the VIA Inno team and the partner's employees
- > 2. Implementation of the joint production of a diverse scientific and technological mapping operations
- > 3. Development of database exploitation methods adapted to each partner's innovation issues. This development is generally supported by a doctoral candidate on a CIFRE (Industrial Agreements for Research-based Training) thesis contract.

→ The Chair of Technological Intelligence: combined analyses of best technological intelligence practices

As certain issues associated with the deployment of technological intelligence practices concern all types of stakeholders, VIA Inno created a Chair of Technological Intelligence in 2015. **This Chair, supported by the University of Bordeaux Foundation,** asks sponsors to finance research carried out by VIA Inno on the development of a new approach, and to pool their methodological needs in the field of technological intelligence. **Questel**, a global player in the provision of structured patent data and **Intellixir**, a specialist in data-mining tools, are the first two specialist operators to place their trust in VIA Inno.

Our network of partners

VIA Inno's experience confirms that technological intelligence concerns all innovative operators and bodies responsible for supporting innovation. To date, 3 categories of operators have derived particular benefit from these competencies:

Industrial enterprises

- Airbus
- CEVA Santé Animale
- Groupe Avril
- Groupe PSA
- Lectra
- L'Oréal
- Michelin
- Olikrom
- Poietis
- Thales

Research operators

- Bordeaux INP
- CNRS
- ENSAM
- IdEx Bordeaux
- SATT Aquitaine
- University of Bordeaux

Institutional bodies

- Agence de développement et d'innovation
- Alpha Route des Lasers et des hyperfréquences
- French embassy in Singapore
- InnoVin cluster
- Conseil régional de Nouvelle-Aquitaine
- DIRECCTE and DCRI
- Fondation Bordeaux Université
- Institut de recherche pour le développement
- Pôle Aerospace Valley
- Unitec



Although VIA Inno is especially concerned with extending the influence of the Nouvelle-Aquitaine region, it has also developed a broader national network of partners. Since 2015, VIA Inno has been focusing on the international development of its activities by forging partnerships with French embassies and Chambers of Commerce and Industry based abroad.

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viainno.u-bordeaux.fr

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