



Liberté • Égalité • Fraternité

RÉPUBLIQUE FRANÇAISE

AMBASSADE DE FRANCE EN INDE



Indo-French cooperation : Focus on CNRS

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CNRS

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CNRS was created on 19 October 1939

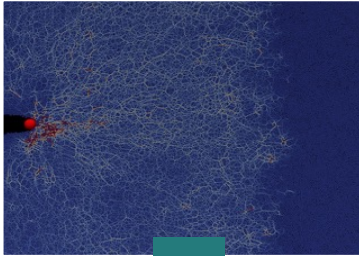
"Il n'est pas de science possible où la pensée n'est pas libre, et la pensée ne peut pas être libre sans que la conscience soit également libre. Chacun de nous peut bien mourir, mais nous voulons que notre idéal vive".

Jean Perrin, 23 septembre 1939, extrait du discours
rédigé par le CNRS pour l'Assemblée nationale

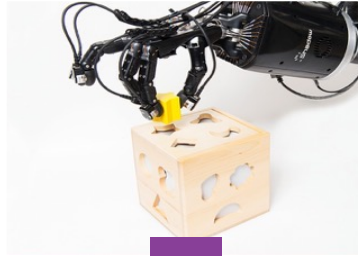
"...the mobilization of French laboratories through CNRS amounted to the creation of a new regiment.."

"CNRS, **la naissance**" c'est aussi une exposition virtuelle :
www.cnrs.fr/paris-michel-ange/CNRSnaissance/

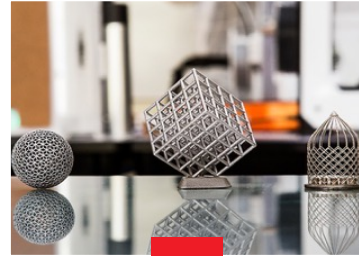
Our 10 scientific DEPARTMENTS (*Instituts*)



**Mathematical Sciences
& their Interactions**



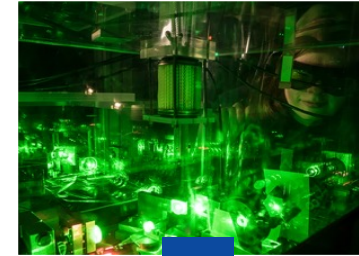
**Information
Sciences &
Technologies**



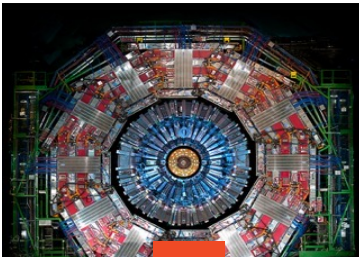
**Engineering
& Systems
Sciences**



Chemistry



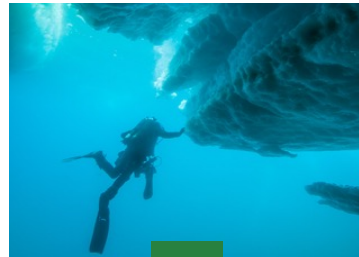
Physics



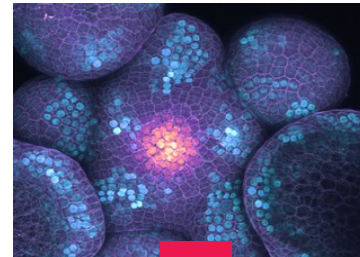
**Nuclear & Particle
Physics**



**Earth Sciences and
Astronomy**



**Ecology
& Environment**



Biological Sciences



**Humanities &
Social Sciences**



CNRS - French National Centre for Scientific Research

- Interdisciplinary public research organisation
- Internationally recognised for the excellence of its scientific research

Research fields :

- Biology
- Chemistry
- Ecology and environment
- Humanities and social sciences
- Engineering and systems
- Mathematics
- Nuclear and particles
- Physics
- Information sciences
- Earth sciences and astronomy

**3.3
billion**
A budget of

33,000
people dedicated
to research

1,144
research
laboratories in
France and
abroad

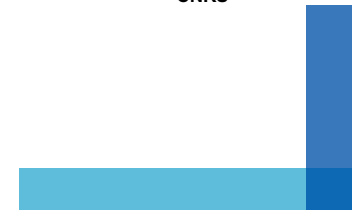
CNRS participation in Horizon 2020 (2014-2020)

- Participation in 1728 H2020 projects (~18% success rate) including 507 MSCA projects (all actions incl.)
- **324 MSCA Individual Fellowships funded** (17,3% success rate)

<https://www.cnrs.fr/en>



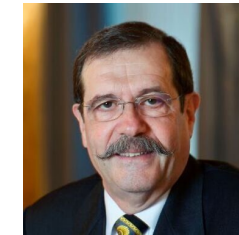
CNRS



CNRS in Numbers

- **Research**
 - Over 55 000 publications per year, 60 % of which with international collaboration
 - 6th in patent filing
 - **Ressources**
 - Budget 2021 : 3,7 Billion €
 - Over 32 000 staff at CNRS
- 12 Fields Medal winners
- 23 Nobel Laureates

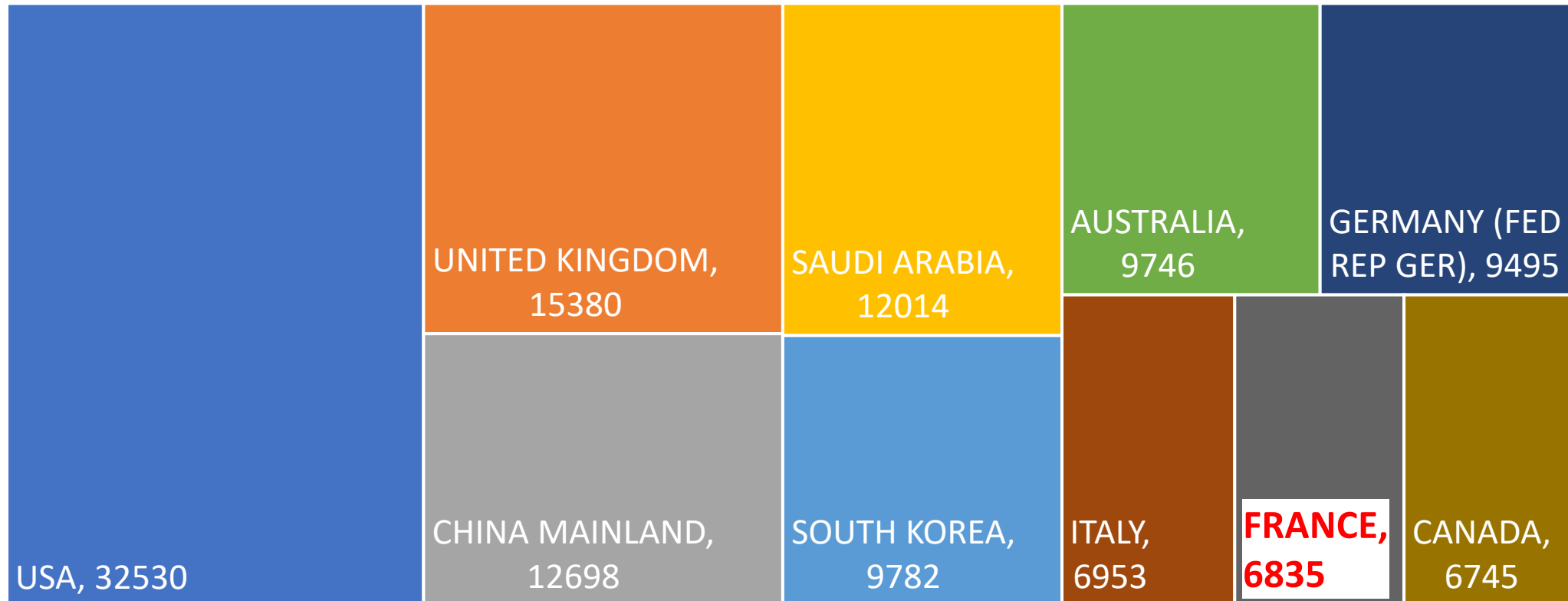
Alain Aspect
Physics 2022



Implantations

- Over 1100 research units
- 80 International Res Labs
- 10 offices all over the world

India's top 10 scientific partner countries in 2019-21 (N= 112,800 international co-publications)



Source : Web of Science, Incites ; traitement CNRS-Derci

CNRS in India

Scientific cooperation agreements

- Council of Scientific and Industrial Research (CSIR)
signed in 1975, renewed in 1990, 1997, 2004 , 2012 and 2019

- Department of Science and Technology (DST)
Ministry of Science & Technology: 2004, 2012 and 2015

- Department of Biotechnology (DBT) (2015)
Centre of Excellence in Marine Biotechnology (Goa)

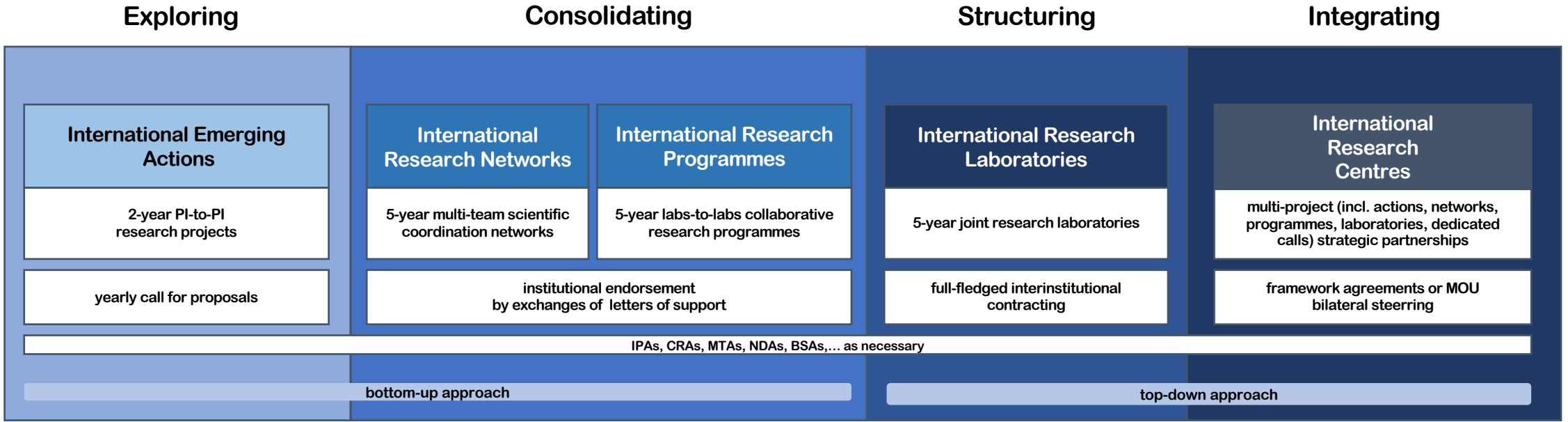
- Indian Institute of Science Education and Research
(2016)

- **National Centre for Biological Sciences (NCBS)**
Signed in 2012 with Institut Curie





Tools of cooperation with CNRS



Instruments for International Collaboration

www.cnrs.fr

International Emerging Actions (PICS)



Urb-India
TELLE Olivier, Géographie-cités, Paris
MUKHOPADHYAY Partha

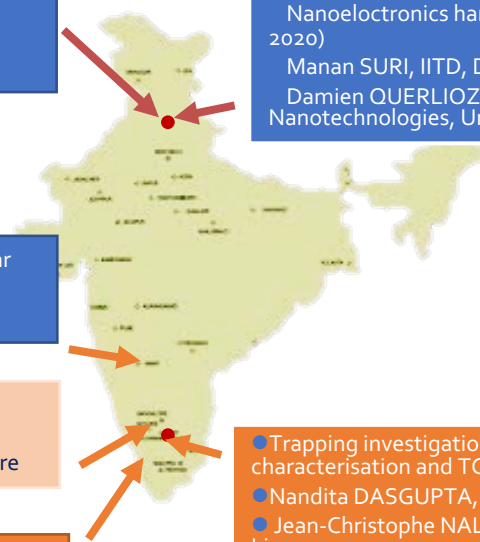
Role of prebiotic processes on the origin of molecular complexity on the early Earth
DERR Julien, Paris; Sudha RAJAMANI, IISER Pune

Microwave remote sensing for water Resources management in berambaDi watershed ZRIBI Mehrez, TOULOUSE Sekhar MUDDU, IISc, Bangalore

Advanced NANocomposites for micro and nanoSensors Applications
ROUXEL Didier, Institut Jean Lamour Nancy
Sabu THOMAS, Mahatma Gandhi University, Kottayam,

Nanoelctronics hardware for unconventional computing(2018-2020)
Manan SURI, IITD, Delhi
Damien QUERLIOZ, Centre de Nanosciences et de Nanotechnologies, Université Paris- Saclay,

● Trapping investigation in GaN-based HEMTS using experimental characterisation and TCAD simulation (2018-2020)
● Nandita DASGUPTA, IITM, Chennai
● Jean-Christophe NALLATAMBY, Université de Limoges, Limoges



International Research Programme



Indo-French Cell for Water Sciences (IFCWS)
IRD/INRAe/CNRS (J Riotte/ L Ruiz)
IISc: B'Iore (Sekhar Muddu)

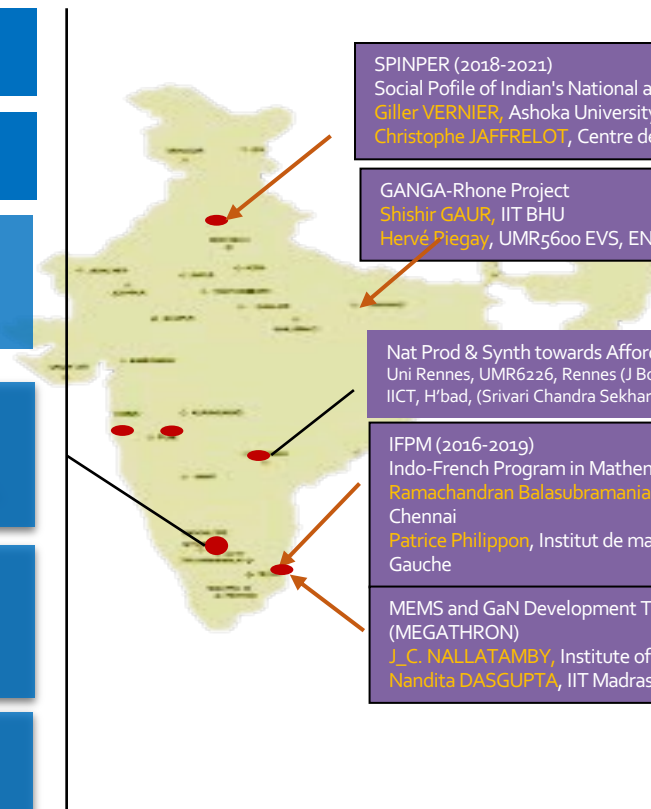
Indo-French Lab of Solid State Chemistry (LAFICS)
ICMCB, UPR9048 (MH Delville, Bordeaux)
IISc – SSCU, B'Iore (Satish Patil/Abhishake Mondal)

Advanced polymer nanocomposites for microactuator and energy harvesting devices (APONAMA)
Inst Jean Lamour Nancy (Didier ROUXEL)
International and Inter University Centre for Nanoscience and Nanotechnology (Sabu THOMAS / Nandu)

NextGen (2022-2027)
Next-Generation (Macro)-Molecular Self-Assembled Systems
Jean-François LUTZ, CNRS UPR22 Institut Charles Sadron, Strasbourg;
S. Ramakrishnan, Dept Inorganic and Physical Chemistry, IISc, Bangalore

CALIM (2022-2027)
Impact and regulation of Calcium signaling in Drosophila immune cells
Angela GIANGRANDE, Institut de génétique et de biologie moléculaire et cellulaire, Strasbourg
Gaiti HASAN, National Centre for Biological Sciences (NCBS), Bangalore

SySTIM (2022-2027)
Impact and regulation of Calcium signaling in Drosophila immune cells
Thomas LECUIT, Institut de Biologie du Développement de Marseille (IBDM)
Jitu MAYOR, National Centre for Biological Sciences (NCBS)



SPINPER (2018-2021)
Social Profile of Indian's National and Provincial Elected (1919-2019)
Giller VERNIER, Ashoka University, Sonapat
Christophe JAFFRELOT, Centre de recherches internationales (CERI), Paris

GANGA-Rhone Project
Shishir GAUR, IIT BHU
Hervé Piegay, UMR5600 EVS, ENS de Lyon

Nat Prod & Synth towards Affordable Health (NPSAH)
Uni Rennes, UMR6226, Rennes (J Boustie)
IICT, H'bad, (Srivari Chandra Sekhar /Raji REDDY)

IFPM (2016-2019)
Indo-French Program in Mathematics
Ramachandran Balasubramanian, Institute of Mathematical Sciences, Chennai
Patrice Philippon, Institut de mathématiques de Jussieu - Paris Rive Gauche

MEMS and GaN Development ThRough Complementary Collaboration (MEGATHRON)
J.C. NALLATAMBY, Institute of Mathematical Sciences, Chennai
Nandita DASGUPTA, IIT Madras



International Research Laboratories (UMI)



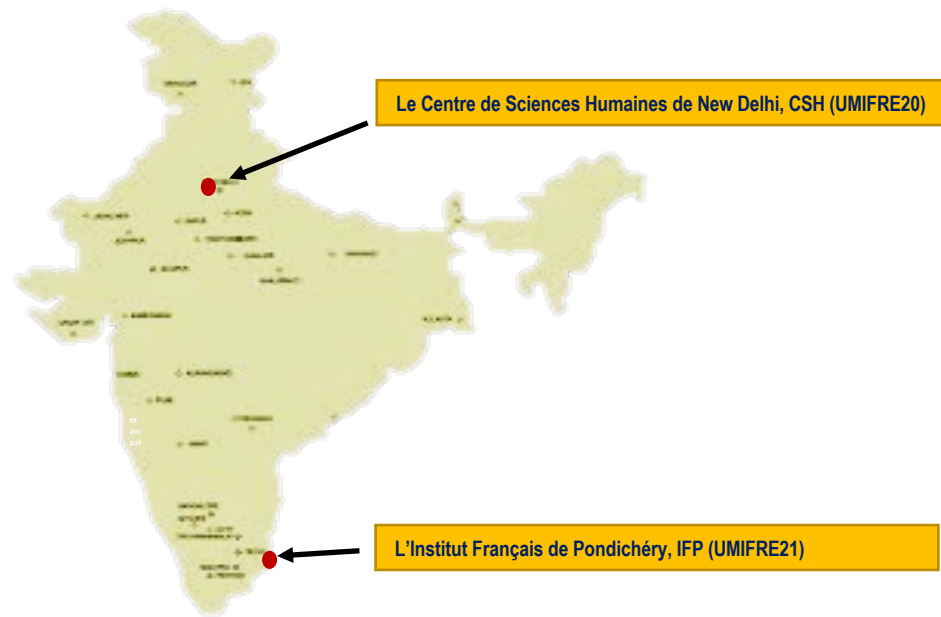
IRL : (Indo-French Centre for Applied Mathematics IFCAM) UMI 3494
Uni Paul Sabatier, Toulouse (JP Raymond)
IISc, Bangalore, (G Rangarajan)

IRL : Indo French Research Lab In Computer Science (RELAX)
UMI 2000
Chennai Mathematical Institute, Siruseri (R. Karandikar)

CNRS | DERCI



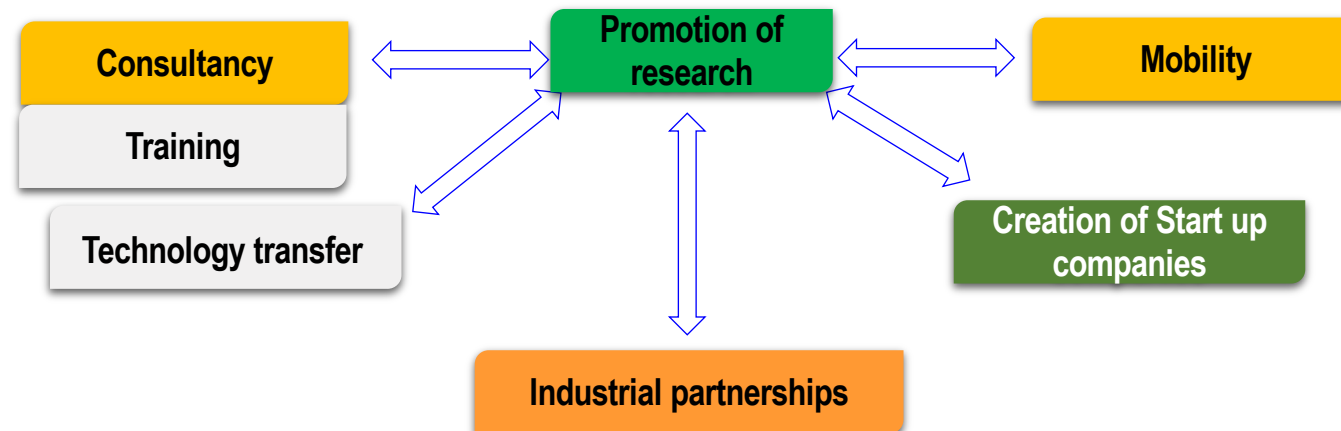
UMI FRE



CNRS and Industrial partnerships

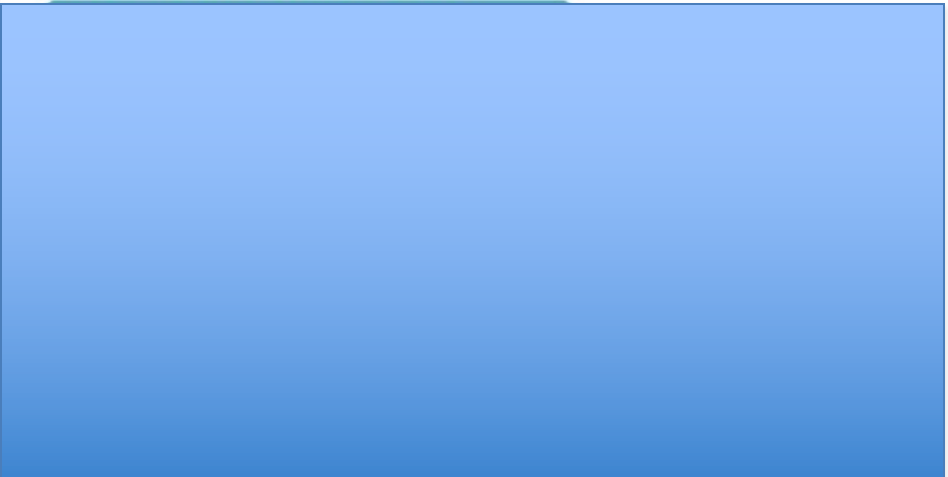
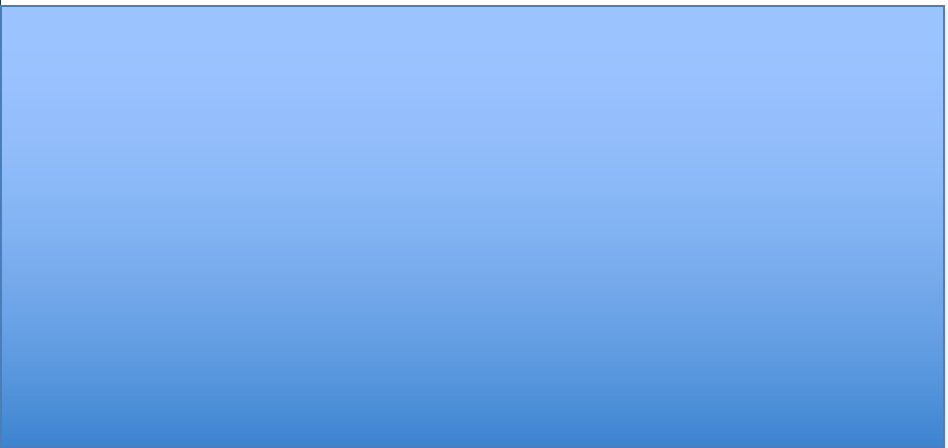
➤ Décret n°82-993, 24 November 1982 : CNRS missions are

- To evaluate and carry out research capable of advancing knowledge and **bringing social, cultural, and economic benefits** to the society
- To contribute to the **application and promotion of research results**.
- To develop scientific information.
- To support research training.
- To participate in the development of the national policy.





CNRS and Solvay 4 mixed laboratories to prepare the future



1997

Complex Assemblies of Soft
Matter (COMPASS) Lab
Bristol, USA

Bristol, Pennsylvania, USA



Confidential

Indo-French Cooperation: Opportunities and Mechanisms



CEFIPRA

EURAXESS



CNRS Bureau