

université
PARIS-SACLAY

INSTITUTE
DATAIA
Data Science, Intelligence & Society

The AI Institute
@Paris-Saclay University

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www.dataia.eu

SUMMARY

01.

DATAIA Institute
Missions and key figures

02.

Scientific activities

- Annual and permanent calls
- Scientific animation
- International partnerships

03.



04.



The DATAIA Cluster

Aggregate the multidisciplinary expertise and boost the collective power of the **Paris-Saclay cluster** partners, involved in **research, training and innovation in AI, data science** and their **societal impacts**.

In **2021**, the DATAIA Institute became the **Institute of Artificial Intelligence of Paris-Saclay University**

17 Founding Members



46 Industrial Affiliate Members:
19 large companies and 27 SU/SMEs

6 Associate Members



KEY FIGURES

- **Université Paris-Saclay**: 15th worldwide, 1st in Continental Europe
- **DATAIA**: **58 laboratories**, over **1,200 permanent research staff** and **450 PhD students**, including **170 international**
- **10 AI chairs** out of the 40 AI chairs selected at national level by the ANR
- **18 research projects** (multi-partner) launched since 2018
- More than **6,500 publications between 2018-2022**

**First French
ecosystem in data
science and AI for
society**

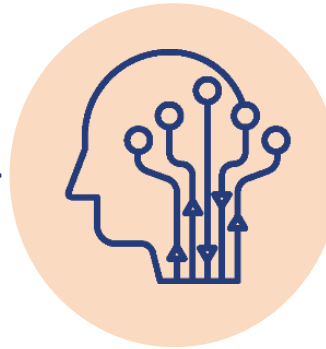
- **1 COFUND** (European PhD program) on Uncertainty & AI (June 2023)

- **1 Training Program** (French funding) **SacAI-School**

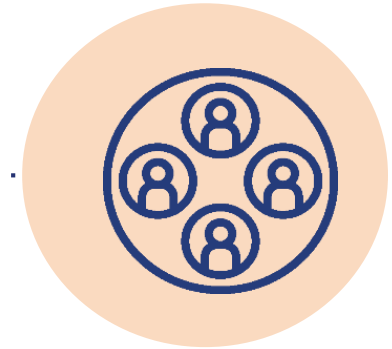
DATAIA-CLUSTER



**FROM DATA TO
KNOWLEDGE AND
DECISION**



LEARNING & AI



**SOCIETAL IMPACTS OF
THE DIGITAL TRANSITION**

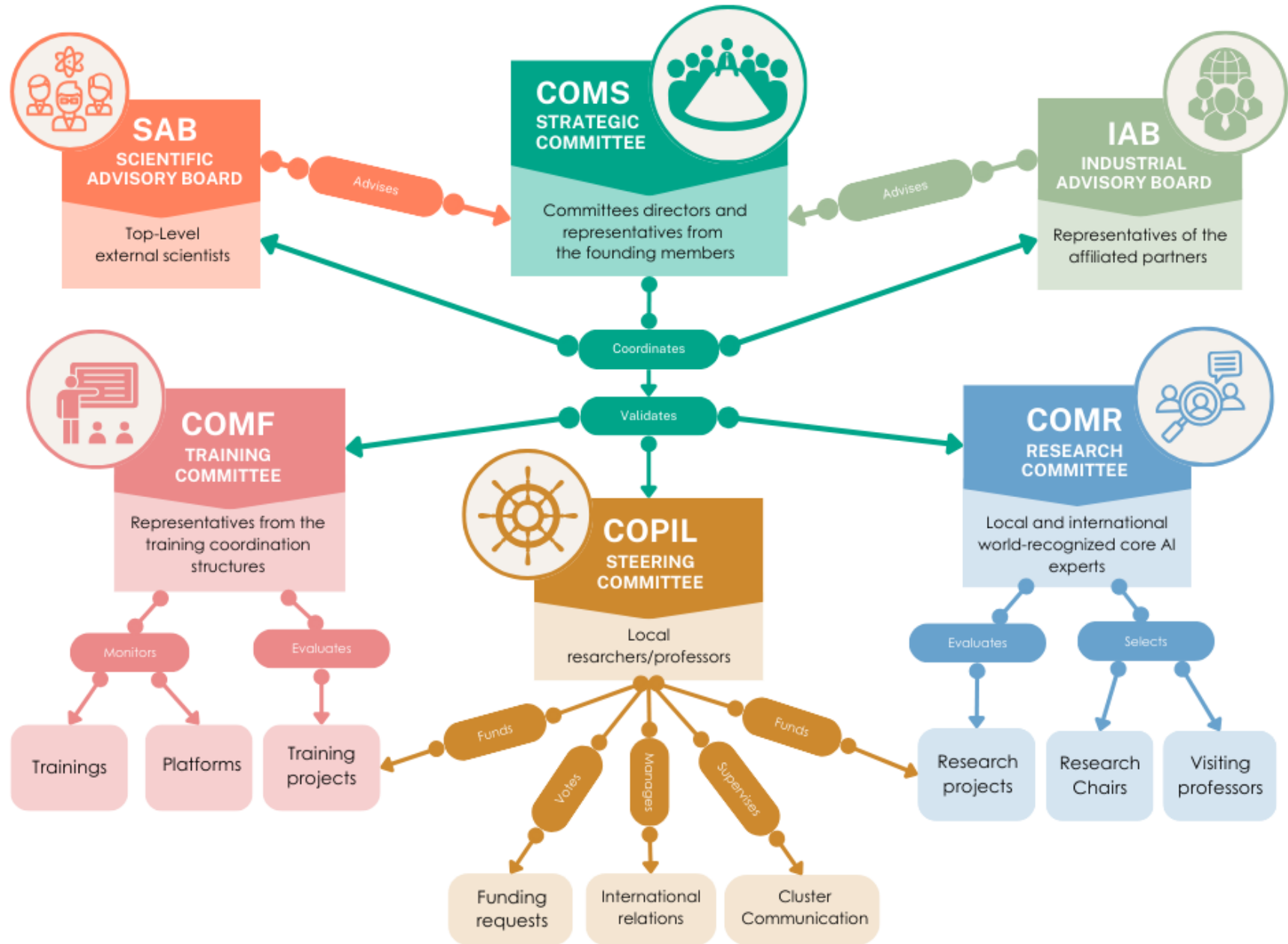
MAIN INTERDISCIPLINARY AXES

- Maths & AI
- Physics & AI
- Medicine & AI

MAIN CORE-AI THEMES

- Learning paradigms: data diversity, data efficiency.
- AI for inverse problems, simulations and invariances.
- Trustworthiness and control of AI systems.

DATAIA CLUSTER GOVERNANCE



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RESEARCH / 18 projects - 6 areas



- 2018**
 - > **PEPER** – **Renewable energy**: production, consumption and storage
 - > **Warm Rules** – **Climate change**: finding gradual causal rules in knowledge graphs
 - > **GDP-ERE** – **Personal protection**: cloud analysis and responsibilities
 - > **Smart Lawyer** – **Analytical**: researching information from court decisions
 - > **MissingBigData** – **Health**: missing data
 - > **StreamOps** – Software platform for IoT data
 - > **Bad Nudge, Bad Robot?** – **Ethics in conversational agents**
 - > **Information Leakage in DL** – **Security**: understanding DL systems
- 2019**
 - > **UltraBioLearn** – **Health**: ML for ultrasound imaging and tomography in immunotherapy
 - > **VADORE** – **Matching**: AI will improve the job market
 - > **HistorIA** – Historical Databases with Data Mining
- 2020**
 - > **ML4CFD** – Machine learning for computational fluid dynamics simulation
 - > **OTELO** (in collaboration with **MSH**) - Multilevel analysis of spoken language
- 2021**
 - > **YPOG** – **The protection of personal data in video games**
 - > **HORAPEST** – Causality for health and environment
 - > **STARS** (in collaboration with **DIGICOSME Labex**) - **Large-scale computational analysis of audio music**
 - > **INTERTOX** (in collaboration with the **MSH**) - **Health**: cancer research
- 2022**
 - > **YARN** – **Health**: processing EEG data collected in clinical practice

SCIENTIFIC ANIMATION, ACHIEVEMENT



▷ **DATAIA Workshops**
Themes with societal impact



▷ **Monthly seminars**

- > DATAIA Seminars
- > Le Séminaire Palaisien
- > Séminaire Critique de l'IA



▷ **Visiting professors (1 year)**

- > Aapo Hyvarinen (Finland)
- > Matthieu Jonckheere (Argentina)
- > Valderio Reisen (Brazil)
- > Ismail Ben Ayed (Canada)



▷ **A central tool in AI and Data Science**

INTERNATIONAL SCIENTIFIC PARTNERSHIPS



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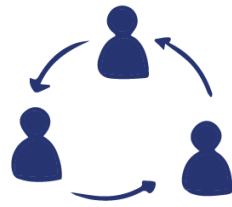
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How to collaborate?



PAI

Programme d'Affiliation Industrielle



Collaborations

Joint actions to support research

Collective: sharing experiences with academic and business experts

Bilateral: facilitating and increasing the development of qualified projects



Recruitment

Easy access to trainees and future data scientists



Training

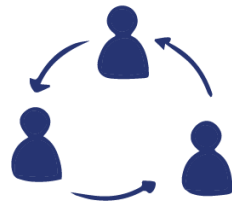
Guide to the Paris-Saclay large catalogue offer



Events

Invitation to seminars, workshops, challenges, hackathons...

+ **Call for projects**
intermediaries to form complementary teams



PAI

Programme d'Affiliation Industrielle

◀ Expertise / Student projects / Internships

- > **Average duration:** 3 days to 6 months
- > **Organization:** quick set-up

◀ Research Engineers / Postdocs / CIFRE PhDs

- > **Average duration:** 6 months to 3 years
- > **Organization:** simple and traditional design

◀ Joint laboratories / Joint teams

- > **Average duration:** 3 years to be renewed
- > **Organization:** ambitious and dedicated

◀ Multi-partner chairs

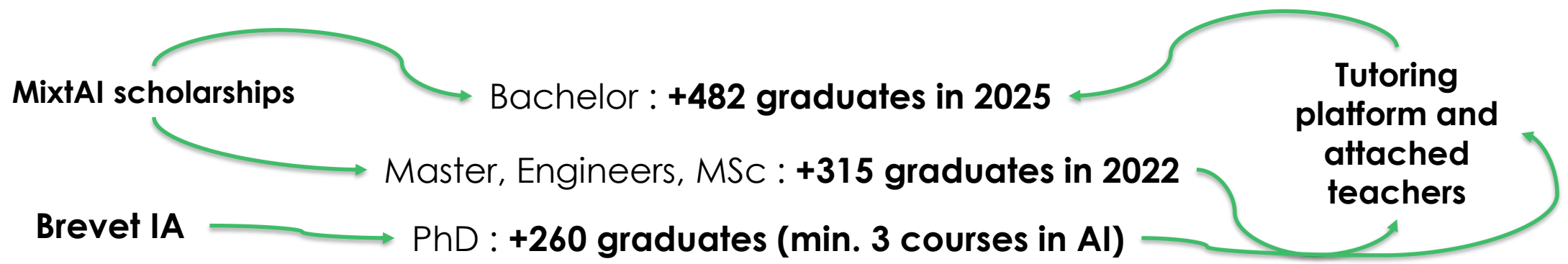
- > **Average duration:** 5 years to be renewed
- > **Organization:** strategic and broader

- Talent sourcing**
- **Develop an ambitious and sustainable** AI school in Saclay
 - **Lay the foundations for the years to come in terms of excellence, resources** (pedagogical, trainers, computing) and attractiveness (students and professionals)
 - **Massify training in AI and data science** to meet societal challenges, while maintaining the excellence of graduates

- Upskilling**
- **Support learners throughout their professional lives** to improve their skills and/or reorient their careers
 - **Develop tools** (e.g. platforms) **and content** at the interface of academic and executive education, universities and Grandes Écoles to meet national training challenges

In 2030:

- 13 200 bachelors (core-AI / AI+X)
- 8 700 masters (core-AI / AI+X)
- 600 PhD +1000 (with AI doctoral training)



Recruitment platform (can be national)
Students <-> Companies

Executive formation

MEET THE TEAM!



université
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