Le CIEDS
Ambition, missions et réalisations

Novembre 2025

CIEDS: the defense and security center at IP Paris

March 30th, 2021: Launch of the CIEDS

Signature of the protocol between IP Paris and the Armed Forces Ministry for the development of defense innovation
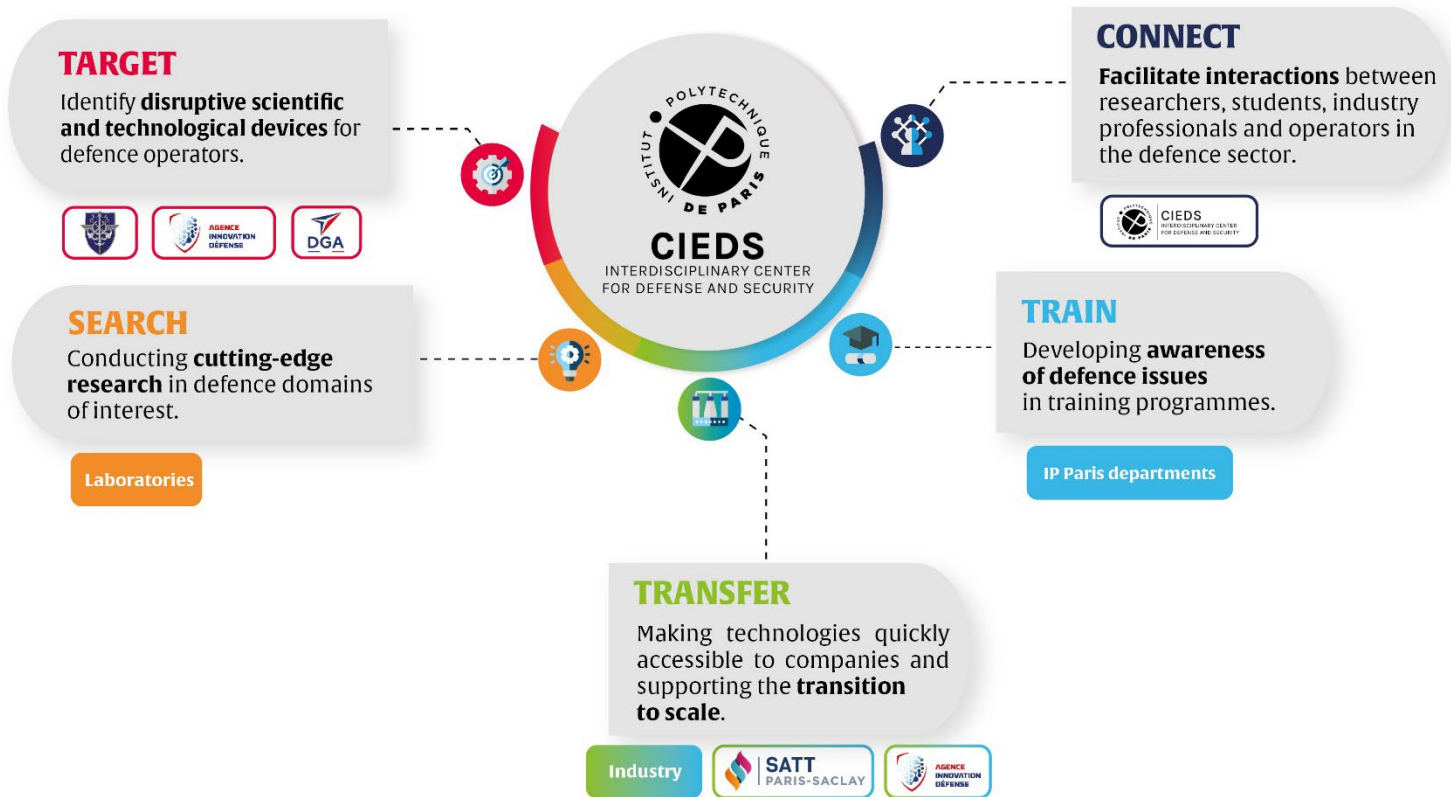

*Promote **research, innovation and training projects** within IP Paris for the benefit of the Armed forces ministry and in connection with defense companies.*

« The goal is to make CIEDS the **reference academic center in France for Defense**, drawing inspiration for example from the Lincoln Lab associated with MIT in the US. »

The 5 missions of CIEDS

TARGET

Identify **disruptive scientific and technological devices** for defence operators.

SEARCH

Conducting **cutting-edge research** in defence domains of interest.

Laboratories

CONNECT

Facilitate interactions between researchers, students, industry professionals and operators in the defence sector.

CIEDS
INTERDISCIPLINARY CENTER
FOR DEFENSE AND SECURITY

TRAIN

Developing **awareness of defence issues** in training programmes.

IP Paris departments

TRANSFER

Making technologies quickly accessible to companies and supporting the **transition to scale**.

Industry   SATT PARIS-SACLAY   AGENCE INNOVATION DÉFENSE

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Key figures (novembre 2025)

Capacities

30 IP Paris laboratories involved in defense and security issues

+150 permanent researchers and research professors
Non-permanent: 57 PhD, 24 postdoctoral researchers and 5 engineers

66 ongoing studies,
including 16 new projects launched in October 2025

Impact

102 publications filed on national plateform (HAL)
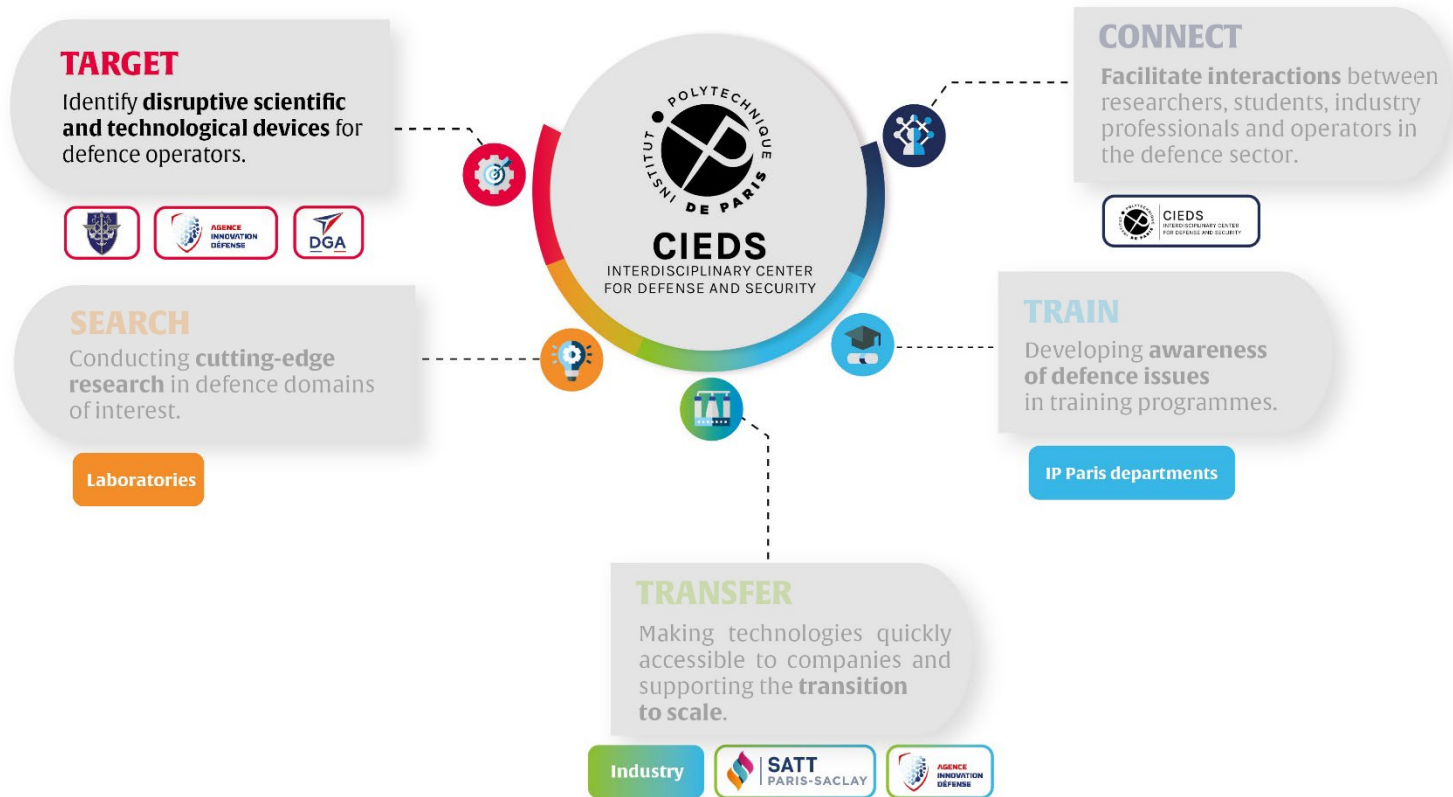
9 patent applications filed

3 start-ups created, with CIEDS and civil funding

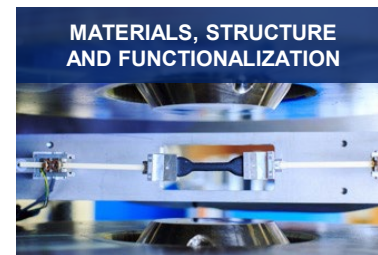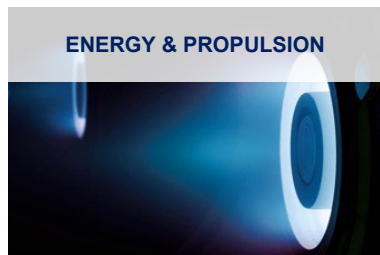**+ 140 students educated** on defense issues for 2023-2024

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Industry

CIEDS scientific axes

CYBERSECURITY & COMMUNICATION SAFETY

DETECTION, PROTECTION AND SOLDIER CARE

ROBOTICS & ARTIFICIAL INTELLIGENCE

ENERGY & PROPULSION

LASER, PHOTONICS AND QUANTUM TECHNOLOGIES

DEFENSE INNOVATION MANAGEMENT

MATERIALS, STRUCTURE AND FUNCTIONALIZATION

MODELING, SIMULATION AND IMAGING

SOVEREIGNTY & DEFENSE STRATEGY

ENVIRONMENT, OBSERVATION AND FORECASTING

Annual call for projects

APPELS À PROJETS CIEDS & CIMO

Clôture : 3 novembre 2025

Mobilisez votre *recherche* au profit de la *Défense* et de la *Sécurité* !

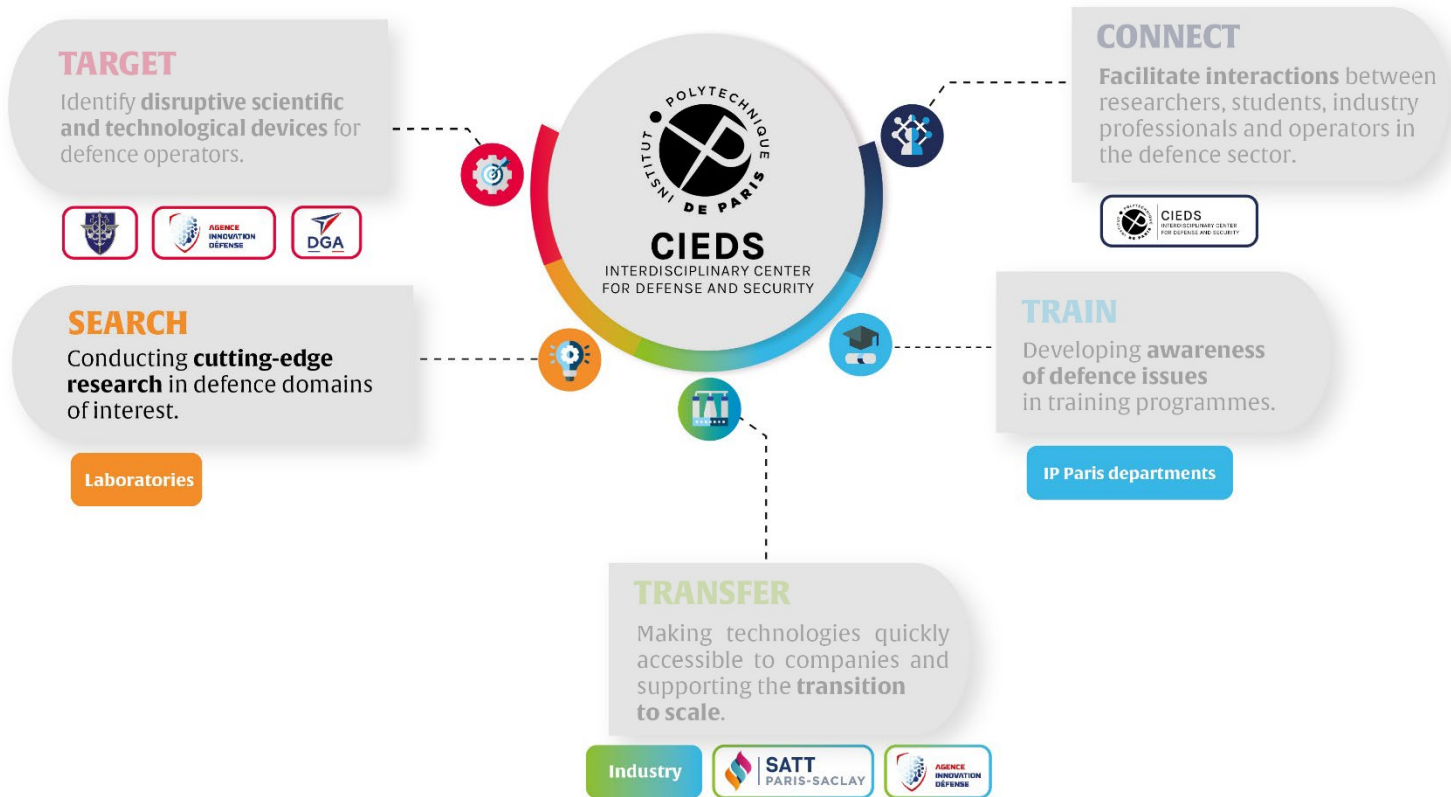| Fundamental research with applications to defense	Projects improving the maturity of technologies towards proof of concept

0 ——— **TRL** ——— **4**

Project profiles

- Relies on IP Paris laboratories
- Matches defense priority-topics identified by AID
- Proof of concept or follow-up funding for successful previous studies
- Grants for 2 to 4 years (PhD, post-doc, engineer)
- Collaborations with industrial partners are allowed (supporting > 50% global cost)

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Laboratories key skills at IP Paris

Applied Mathematics

Cyber | Data

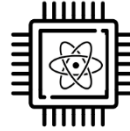**AI**

Robotics

Drones

Additive manufacturing
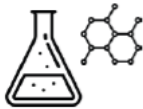
Mechanics Structures and tests

Quantum

Lasers

Plasmas

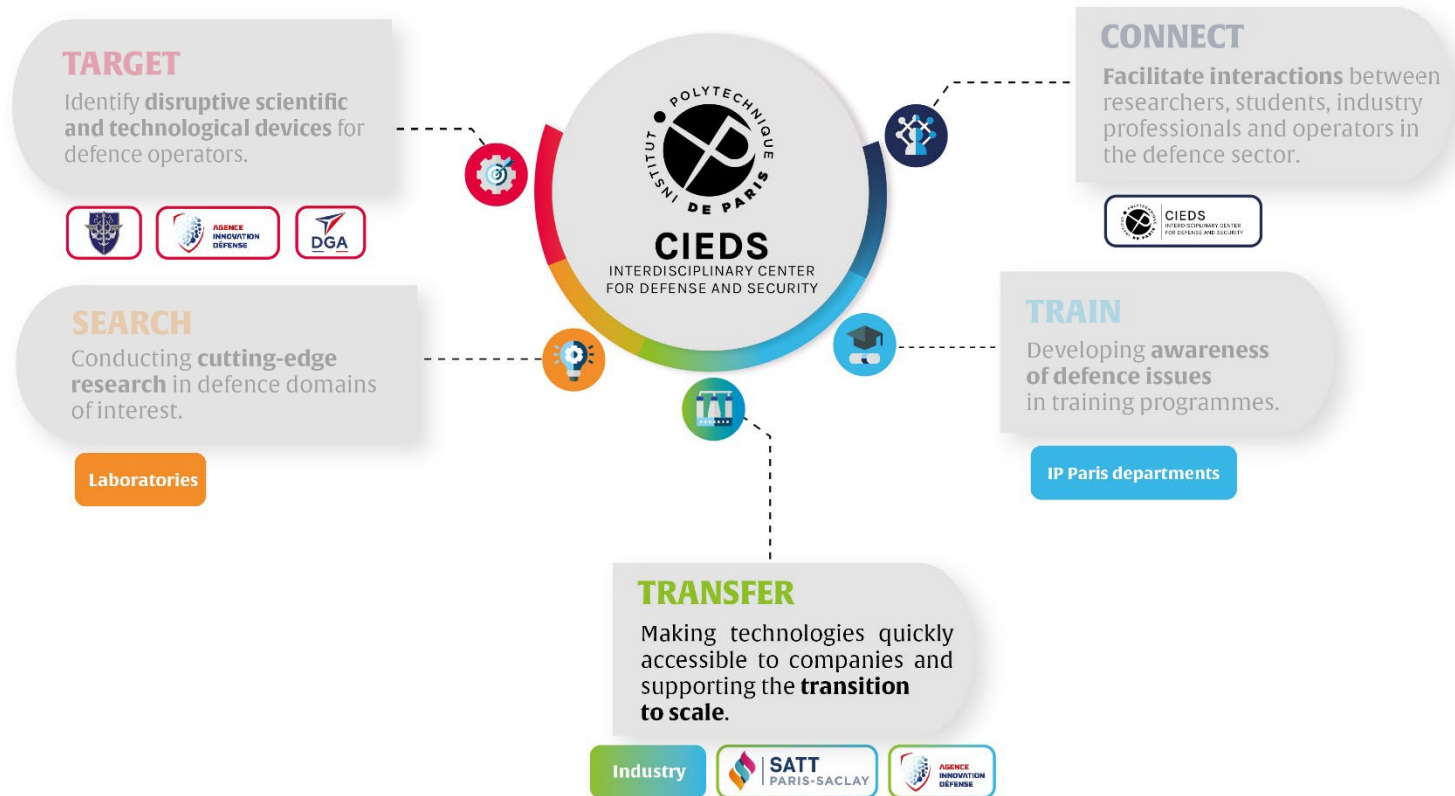**Chemistry & functionalized materials**

Biological risks detection

Management of defense innovation

Sovereignty & defense strategy

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INSTITUT POLYTECHNIQUE DE PARIS

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SATT PARIS-SACLAY

AGENCE INNOVATION DÉFENSE

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Industry · SATT PARIS-SACLAY · AGENCE INNOVATION DÉFENSE

Supporting scaling up

Improve the maturity of projects on several axes

Technologies – Proof of concept and industrial development

Use – Deployment to end users

Market – Transfer of project results to companies

Work in Collaboration with IP Paris Technology Transfer Offices

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Supported by SATT Paris-Saclay

- Intellectual property (patentability studies)
- Technological positioning
- Support for dual innovation (market research)

SATT PARIS-SACLAY
L'innovation en confiance

INSTITUT POLYTECHNIQUE DE PARIS
CIEDS
CENTRE INTERDISCIPLINAIRE D'ÉTUDES POUR LA DÉFENSE ET LA SÉCURITÉ

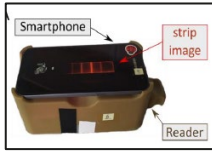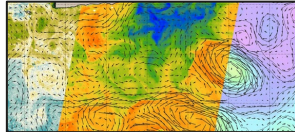# Defense support for dual-use startups in IP Paris ecosystem

Air decontamination by pulsed power plasma reactors
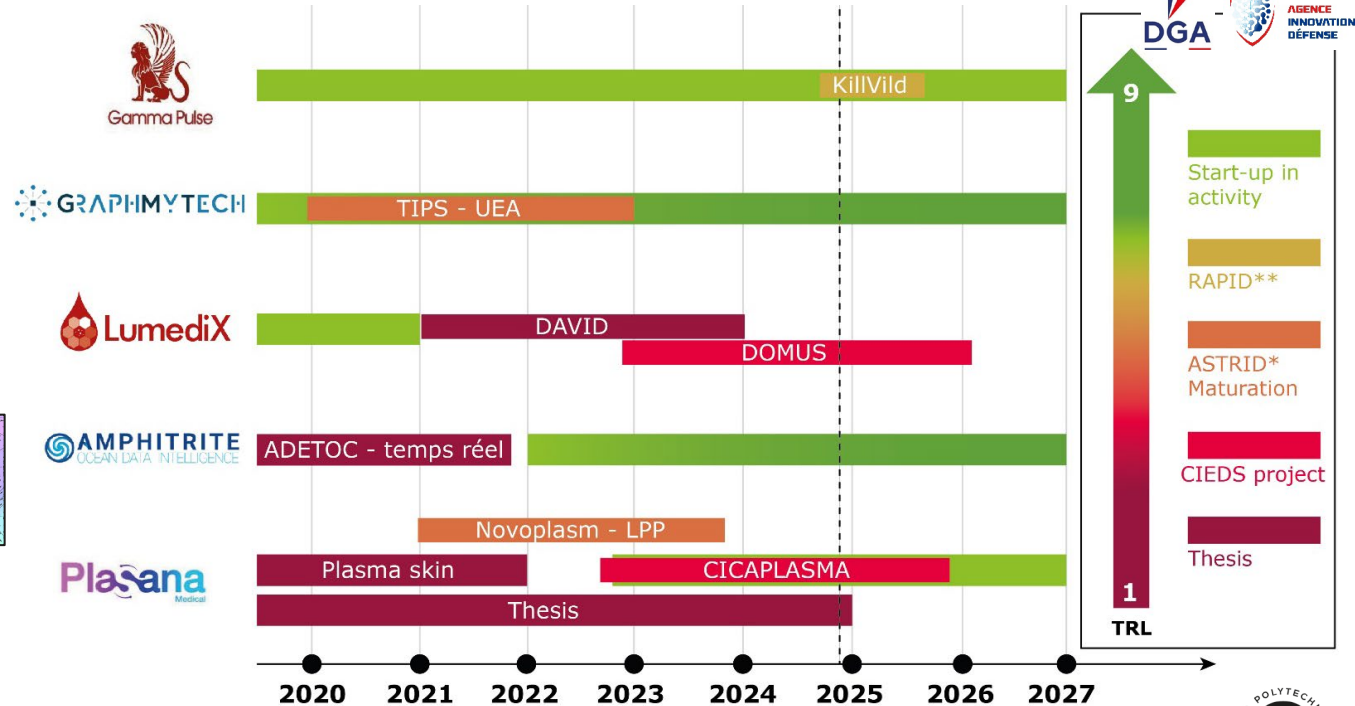
Transforming R&D data into innovation decisions

Portable and Ultra-Sensitive Optical Device for Pathogen Detection

Help marine operators make the best decisions at sea

Cold plasma healing treatment for chronic wounds and severe burns

Gamma Pulse — KillVild

GRAPHMYTECH — TIPS - UEA

LumediX — DAVID / DOMUS

AMPHITRITE OCEAN DATA INTELLIGENCE — ADETOC - temps réel

Plasana Medical — Novoplasm - LPP / Plasma skin / CICAPLASMA / Thesis

2020 2021 2022 2023 2024 2025 2026 2027

DGA — AGENCE INNOVATION DÉFENSE

TRL 9 ... 1

- Start-up in activity
- RAPID**
- ASTRID* Maturation
- CIEDS project
- Thesis

* ASTRID Maturation = Specific support for defence research and innovation work
** RAPID = Dual innovation support scheme

Smartphone / strip image / Reader

POLYTECHNIQUE INSTITUT DE PARIS

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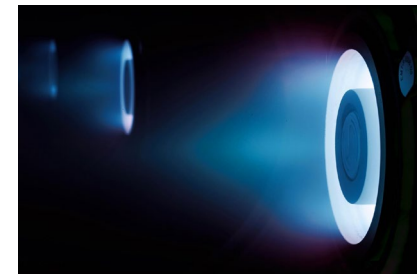
COMHET Joint Laboratory

Research and development on new electric satellite thrusters

Launched
on November 16th, 2023

#Newspace
#Plasmas
#R&D

Collaborative CIEDS project ValidHETion

- Funded by AID in the framework of CIEDS annual calls
- Integrated in the COMHET Joint Laboratory

*Validate **digital engine simulation tools** by comparing them with various **experimental measurements**.*

AGENCE INNOVATION DÉFENSE

LPP

SAFRAN

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Innovation & uses
– Participation to the CoHoMa III Challenge

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Challenging teams by facing them with realistic missions involving drones, robots and command systems

Organization – French Army innovation's office, 3rd edition: May, 2025

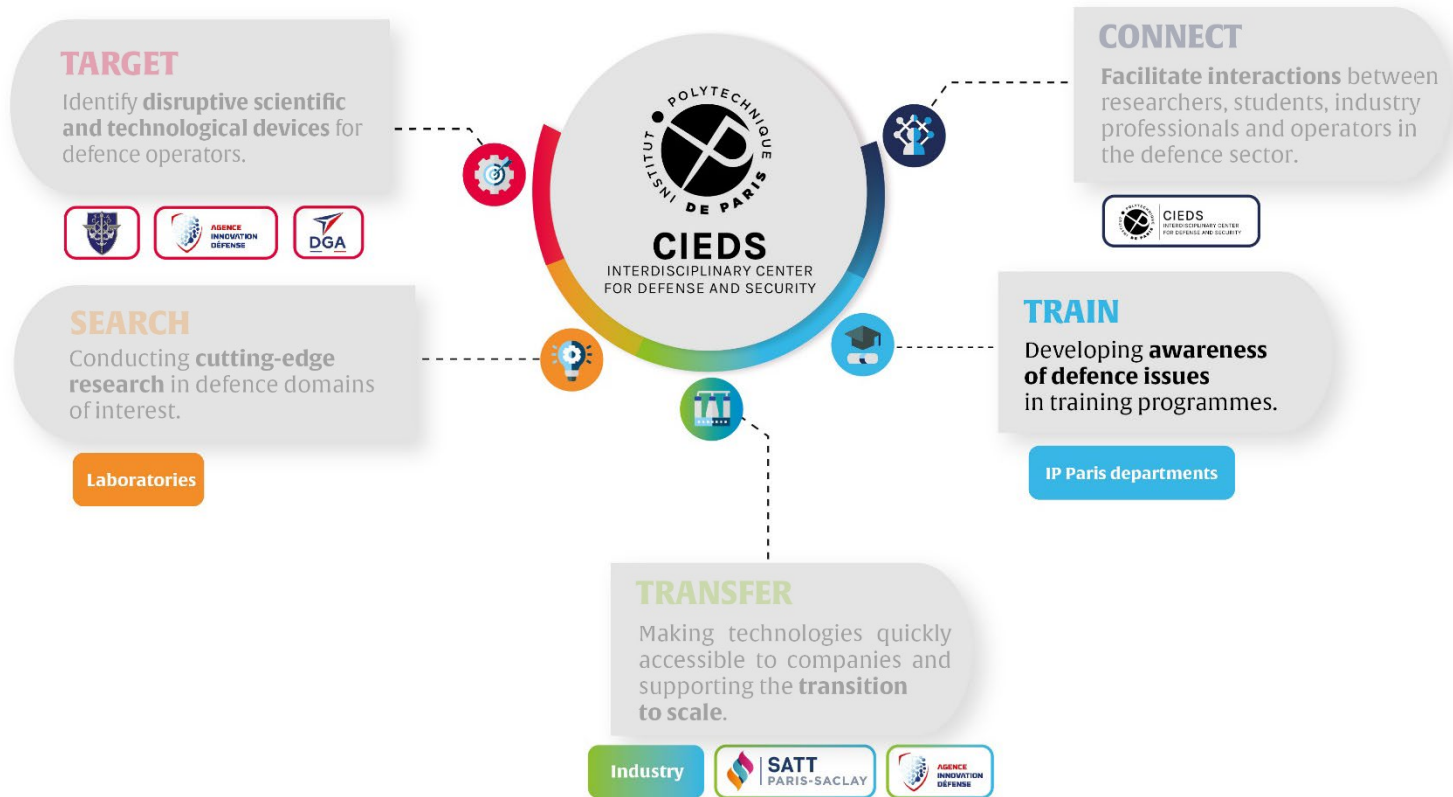*Participation* – Platforms, researchers & students from ENSTA

Technologies – Autonomous navigation algorithms and human/system interaction

A tactical and immersive event

Your mission: ensure possession of an area by destroying, capturing, or driving out any enemy that may occupy it.

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Industry

Training and defense issue awareness

Conferences related to Defense

CYCLE DE CONFÉRENCE "2ID"

CIEDS

Les opérateurs des Forces Spéciales et l'innovation

Pascal BROQUARD
Conseiller Facteur Humain
T.O.P. Intelligence
Emotionnelle Consulting

📅 23 mars 2023

🕐 18h-19h

📍 Amphithéatre Drahi'X novation center
Ecole polytechnique

Help IP Paris students and researchers to have a **better knowledge** of defense issues

Collect **project and internship** proposals for students

Promoting open innovation for the armed forces

World politics training

The scientist, the sovereign, and the soldier: major questions in world politics

World politics in historical perspective: great powers and international relations in the 20th and 21st centuries

Production and broadcast of a **video podcast**

16

Challenge – Engineering - Defense innovation

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Swarm-rescue competition

Student Challenge: Control a swarm of drones for rescue missions!

Rules

- Search & Rescue: Finding and rescuing injured people
- Simplified simulation, but realistic problems
- 10 drones with GPS, camera, communications

2022-2023 edition

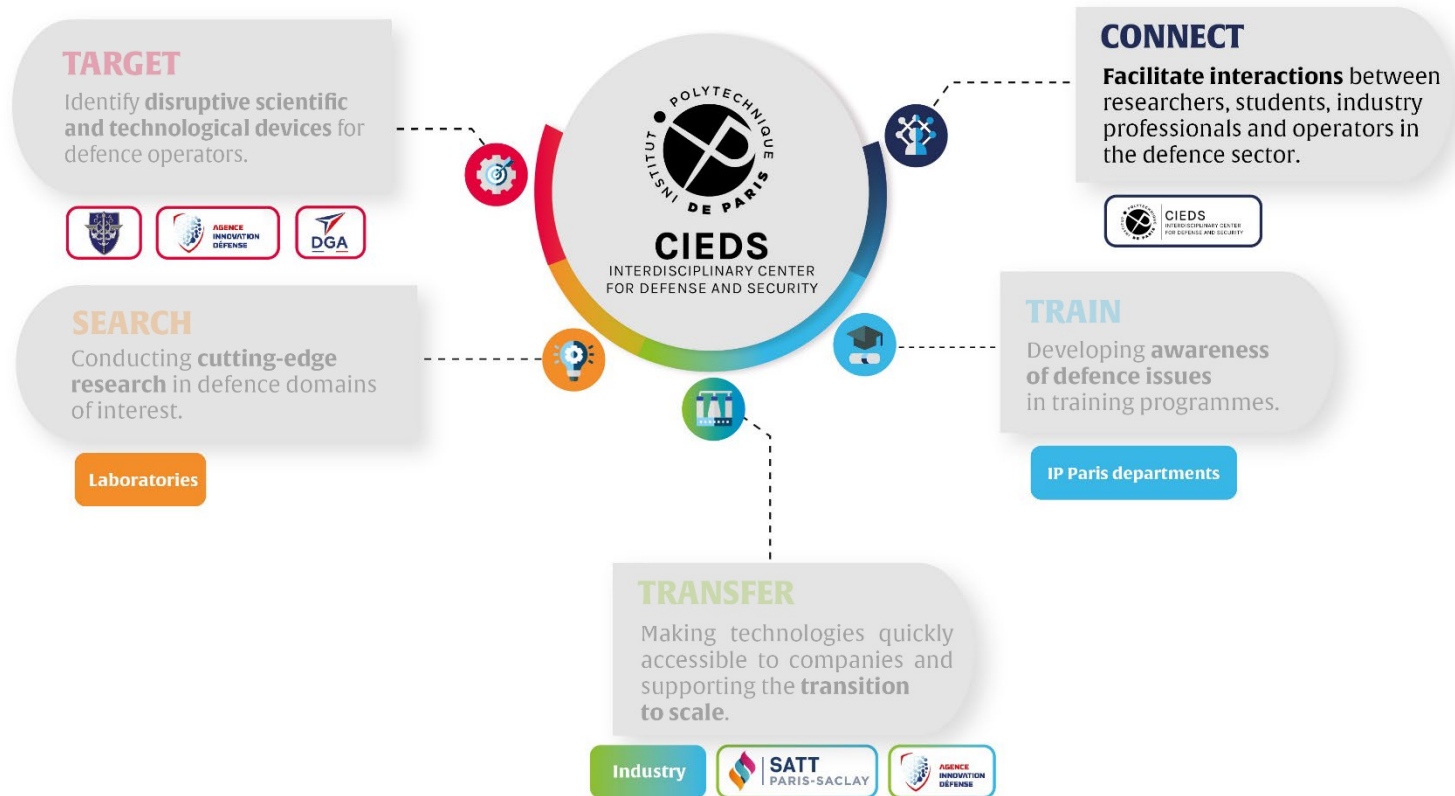**2023-2024 edition**

2024-2025 edition

✓ 6 teams in the final
✓ Winner: SupAero

✓ 10 teams in the final
✓ Winner: ENSTA

✓ **First international expansion**
French and Indian finals!
✓ 10 teams in the final (7 FR + 3 IND)

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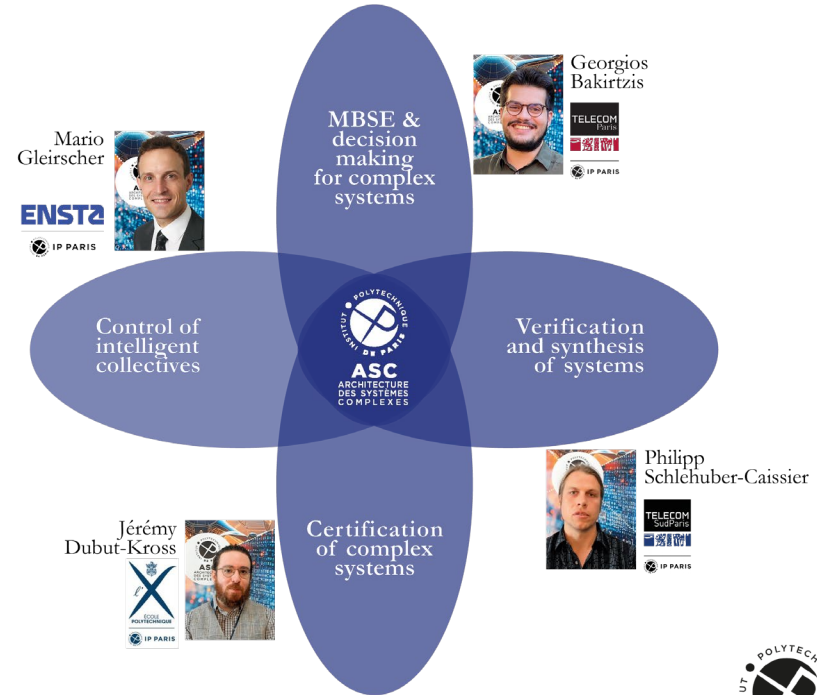**Facilitate interactions** between researchers, students, industry professionals and operators in the defence sector.

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A teaching and research Chair
– Complex Systems Architecture

« The ambitious objective is to follow the education improvements on complex systems architecture and to have a better anticipation of technological breakthroughs that may impact these architectures »

Launched
on June 22th, 2023

OPERATION CIEDS annual workshop

A day for exchanges between **researchers**, **industrials** and **military experts**

Keynote & round-table on priority topics of Armed forces ministry

4 workshops on innovative scientific topics

40 posters & best poster award

20 partner stands including dual startups

2023 – 1st édition

230 participants

2024 – 2nd édition

320 participants

2025 – 3rd édition

430 participants

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Thanks for your attention

CONTACT US!

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CIEDS – Centre Interdisciplinaire d'Études pour la Défense et la Sécurité