



ALUMNI

Overview

Acceleration and Synergy programs

AI@

**CEN
TECH**

powered by Thales

An open-innovation platform to build partnerships we can trust

AI@Centech is one of two corporate accelerators of the Thales Group. Its purpose is to co-develop innovative solutions with startups and SMBs* for the five major markets served by the Group: defence and security, digital identity and security, aerospace, space and transportation.

Acceleration

An international program for growth-stage AI-enabled startups looking to promote the use of Artificial Intelligence in critical decision support.

Synergy

A springboard for Canadian MilTech SMBs looking to get their niche applications into the supply chain and into the hands of the people who need them most.

Highlights of 2022

In 2022, AI@Centech's Alumni and Thales continued their collaboration, with some key successes:

- **Thales invested in AI-Redefined (AIR)**, a Season 1 alumnus of the Acceleration program. AIR and Thales are co-developing a product to fit the needs of the Defence and Aerospace sectors.

- **AI@Centech creates value through a new program: Synergy.** Dedicated to Canadian SMBs in the Defence sector, this report features results from the 2022 inaugural cohort.

- **A global licensing deal has been signed with MyDataModels** to integrate its technology into operational projects.

The Acceleration program launched its fourth season welcoming four startups: Zetane Systems, Latent AI, Tacteris and Kili Technology. Stay tuned for the DemoDay in April 2023!

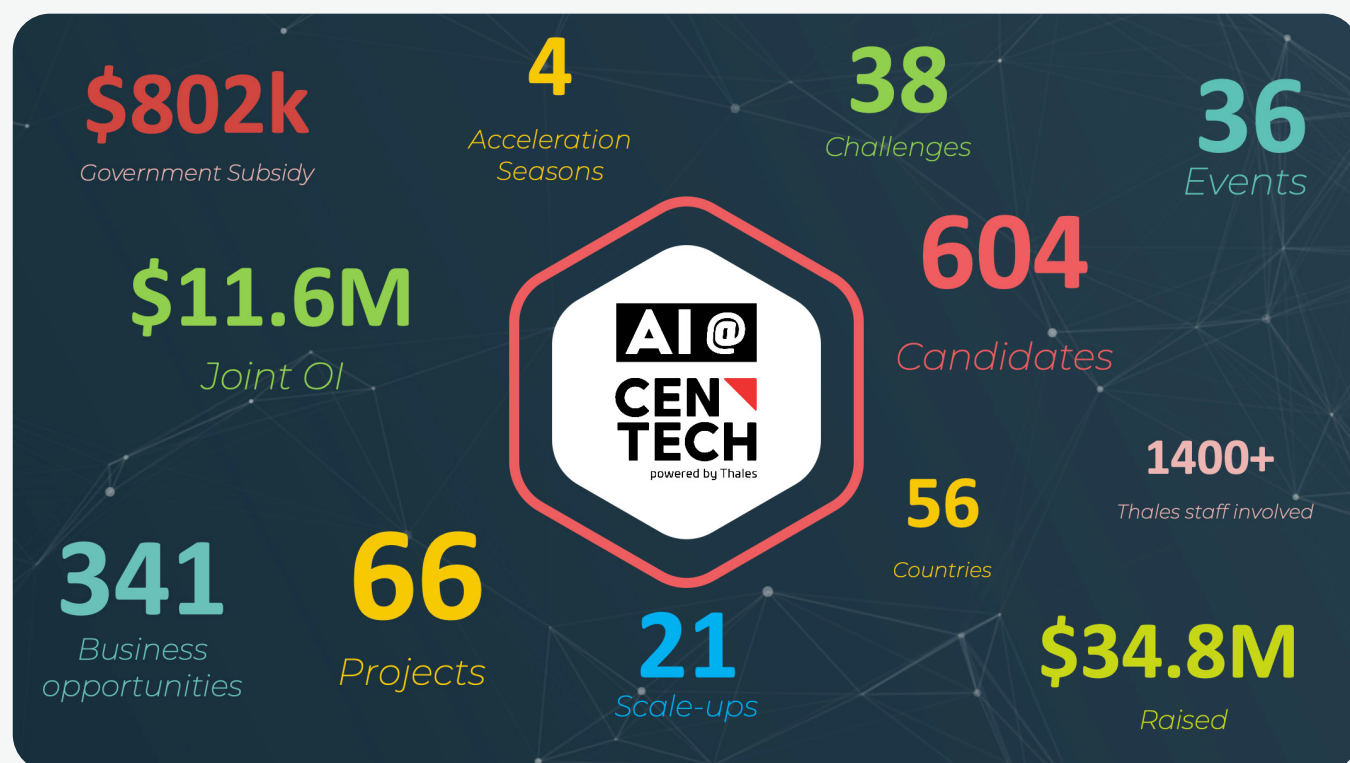
More information on
ai-at-centech.com

*SMB: Small and Medium-sized Business

Acceleration

The six-month Acceleration program is designed for international growth stage AI-enabled startups.

Run by Thales in cooperation with Centech, it aims to accelerate startups by providing them with advice, expertise and access to Thales' technological platforms, allowing them to co-build cutting-edge solutions for the Group's markets while supporting the emergence of the next worldwide Artificial Intelligence (AI) champions.



**ALUMNI
SEASON 1**

AI Redefined (AIR) enables **humans and AI to trust and continually learn from each other**, combining the best abilities of each to enable decision makers to make smarter decisions for a better future.



Projects with Thales

- The relationship with AIR and Thales is ever-growing, with two notable business projects in the making: **a global licensing deal and a common product.**
- AIR, the University of Alberta and Thales are currently finalizing a project in the context of drone swarming. AIR's technology is integrated with Thales' proprietary framework and used across several internal Thales projects.
- **Several projects are on the horizon** with goals that include reducing the gap between simulation and reality in aerospace; increasing trustworthiness in C2-based human-machine teaming systems; improving drone navigation and exploration strategy; and generating better intrusion strategy.

Expansion

- AIR entirely switched from a non-recurring engineering source of revenue to **annual recurring revenue**, which now represents **US\$1.6M** and 75% of the company revenue.
- The team has almost doubled in size, reaching 23 employees. AIR also expanded beyond Canada with a **new office in Paris, France.**
- Further capital investment fueled this expansion. Since 2022, **Thales is among AIR's investors and sits on the company's board.**

Other Projects

- AIR is currently working on a **large renewable energy grid optimization project**, building an AI assistant for solar panels and battery operators within a smart grid to understand local environmental and spot market factors to predict optimal revenue opportunities.
- AIR is also working on AI-powered, simulation-based training with two projects: one for urban mobility training, specifically eVTOL pilots, and another for air traffic controllers.
- Finally, AIR has an active project in AI assistance for welding quality assurance in manufacturing.



AI-first start-up specialized in Deep Reinforcement Learning (DRL) and a pioneer in the field in France and Europe, Delfox is developing Nermind™, the **first decision-making AI platform for training systems**. Nermind™ will be able to interact, intelligently and without human intervention, in a changing environment where a predefined strategy would quickly become obsolete.



Projects with Thales

Delfox continues to work on **various projects with Thales, in the Defence and Space domains**.

- In the Defence domain, Delfox works on 4 projects including the Future Combat Air System to demonstrate the purpose of autonomous agents.
- With Thales Alenia Space, the company works on a project to predict and prevent satellite collisions with an autonomous system suggesting optimized trajectories to satellites.

Expansion

- Delfox's **expertise in autonomous solutions** based on reinforcement learning has been **recognized by several awards**, including an Open Innovation challenge from Airbus MBDA.
- Recently, **Delfox raised 1.25M€ from MBDA & Naval Groupe**, supported by the Nouvelle Aquitaine region.

Other Projects

- Delfox consolidated its value proposition to reach customers such as the French Defence, Airbus, Dassault, and more.
- The startup started its **diversification to the civil market**, proving the robustness of its solution. Delfox started collaborations with corporations such as Framatome, SNCF, Bolloré, KUKA, BOSCH, Continental, etc.



Fieldbox builds, deploys, and manages the digital solutions that underpin its clients' critical industrial operations so they can count on them to run reliably, anywhere in the world, at all times. With a unique combination of expertise in data science, software/IT and industrial engineering, Fieldbox teams ensure that **mission-critical data-powered industrial solutions continue to perform reliably year after year.**



Projects with Thales

Fieldbox continues to explore project opportunities within Thales through the relationships they have established previously, particularly through use cases in the area of **predictive maintenance.**

Expansion

- In 2022, Fieldbox experienced a year of significant change and growth, reaching over 100 employees in three offices worldwide: Bordeaux, Paris and Singapore.
- Thanks to end-to-end services and a technology-enhanced support and delivery infrastructure, Fieldbox is now fully capable of **developing, deploying, operating** and **supporting its customers' AI agents** on a **24/7 basis at scale.**

Other Projects

- Fieldbox addresses companies and subjects that play a critical role in infrastructure, industry and public development and continues its strong growth.
- Along with an established base of recurring clients, Fieldbox has developed **new collaborations with industrial customers**, becoming a critical partner that operates the most mission-critical data solutions of its clients.



ICM Hub provides an Artificially Intelligent (AI) solution to **help airlines to keep up with increasing, frequent customer inquiries before, during and after the flight.** ICM Hub provides automated, first-class and AI-powered customer interaction that helps airlines reduce contact center costs, make crew members more efficient, and boost ancillary revenues.



Projects with Thales

ICM HUB and Thales **completed their digital in-flight assistant**, an AI-powered assistant that can be hosted directly on the aircraft and integrated into Thales Avionics. Passengers will be able to interact with the content (entertainment, flight info, menu, etc.) and the cabin crew throughout their flight, all without connectivity above the clouds.

ICM HUB showcased their Thales integrated product at the AIX in Hamburg for the first time and at the APEX Expo in Long Beach, CA.

Expansion

- In 2022, ICM HUB didn't increase their team size. They are really focused on improving their product and implementing it in their clients' aircraft.

Other Projects

- ICM HUB is working with Lufthansa to power their B2B customer interaction in 25+ of their markets.



Headquarters in New York, US



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**ALUMNI
SEASON 2**

M-Cador helps industrial companies **automate visual inspection tasks** using smart cameras and computer vision solutions. With M-Cador's image analysis engine, operators and experts can save time on tedious tasks, reduce the margin of error, and guarantee ultimate control of their operations.

M-CADOR

Projects with Thales

- With Thales Avionics, M-CADOR works on **advanced deep-learning technology for flight crew support**. The aim is to equip cabins with computer vision to automatize monitoring passengers' activities and send automated notifications to the crew members when a particular event is detected.
- M-CADOR is still collaborating with Thales Alenia Space on an **automatic optical inspection project**, where the objective is to develop an AI to support quality control by giving the operator real-time supervision and correction suggestions.

Expansion

- M-Cador launched **twenty new projects in 2022** in addition to those already underway.
- They recruit co-op students to support the team on all growing deployments and installations.
- M-Cador moved to new offices to benefit from a clean room laboratory, a warehouse and more space.

Other Projects

- In 2022, M-Cador continued its smart camera deployments for the pharmaceutical, railway and logistics industries.
- With SNCF, M-Cador has deployed cameras on the French transport network to allow automatic and remote control of trains.
- With CDiscount, M-Cador has deployed cameras to make autonomous and perpetual inventories to optimize stock management.
- For the pharmaceutical industry, M-Cador continues to deploy solutions-oriented "industry 4.0" for quality control.



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MyDataModels' unique AI technology **automatically generates predictive models based on small data sets**. Models are transparent, embeddable (10 to 15ko), robust and easily deployable on all types of systems and frugal environments. Their predictive analytics platform, called TADA Professional, is accessible to business experts and available on Thales' TrustNest. Their studio, called TADA Data Scientist, is available on-premises.



Projects with Thales

- In 2022, after three years of collaboration with all of Thales' markets, **MyDataModels and Thales signed a Group Agreement** to accelerate and **integrate the technology into operational projects**.
- Within the CIAR project of the IRT Saint-Exupéry and along with Thales Alenia Space, they have developed embedded models in a nano-satellite to deal with shape recognition on frugal images. R&T centers in Palaiseau, Montreal and Singapore are now equipped with TADA Data Scientist.

Expansion

- In 2022, **MyDataModels finalized a 3M€ post-seed fundraising round** with Laurent Dassault, Charles Beigbeder, and Hugues Le Maire to accelerate its go-to-market plan and international expansion.
- Working on a **Series A for Spring 2023**, MyDataModels continues its development in markets such as the 4.0 industry, supply chain, HR, and customer satisfaction, offering a unique ability to develop AI-based decision-making platforms that are accessible to business experts.

Other Projects

- MyDataModels is **part of Con fiance.ai**, an ecosystem of some 30 major groups, SMBs and research laboratories to address the challenges of trusted AI for industrial applications jointly.
- MyDataModels is also part of the **OTPaaS project**, which aims to close the gap between IT and OT, building models at the edge and inferring them to the far edge.
- MyDataModels is trusted by CEVA Logistics, Valéo, Renault, Allianz, SNCF, Schneider Electric, Biogen, Sano-fi, CNRS & Inria, etc.



Paladin AI delivers **AI-powered competency-based training and assessment solutions to the aviation training industry**. The company works with major airlines and flight schools to standardize instruction, increase throughput and ensure data-driven, objectively qualified pilots for the continued assurance of safety in the industry.



Projects with Thales

Paladin AI completed a product validation trial on a Thales flight training device (FTD). The 3-month project included the installation and integration of Paladin AI's product on a Thales product in France for the purpose of evaluating the performance, including AI-powered pilot competency assessments of the product. The project concluded with a full day of evaluation by experienced pilot instructors. The product is robust and with a good potential, and discussions are ongoing for the future of the product.

Expansion

- In early 2023, Paladin AI will **release InstructIQ® 2.0**, made possible through the collaboration with Thales, the other training device manufacturers and with the data and feedback received through the work with airlines and flight schools.
- Paladin AI **secured \$1.5M in bridge funding in 2022** and expects to close a Series A round in 2023 as it scales up its business.
- Paladin AI has added 5 new employees, nearly doubling its workforce in 2022.

Other Projects

- Paladin AI has ongoing projects with major airlines and flight schools in Europe and North America.
- Since the demonstration project with Thales, Paladin AI has successfully integrated its product at airline training centres and flight schools. They have also integrated their product on full-flight simulators and flight training devices from 8 different training device manufacturers.



**ALUMNI
SEASON 3**

AIKO develops **artificial intelligence-based software for the automation of spacecraft operations**. With AIKO's products and services, spacecraft can autonomously program their activities and bypass human input even in response to unexpected events. This reduces the cost of operations, creates new revenue-generating opportunities, and makes the satellite resilient to threats such as system failures, cyber-attacks, or collision risks.



Projects with Thales

- AIKO has been collaborating with Thales for several years, providing advanced data processing capabilities and autonomous decision-making technologies.
- An MoU (Memorandum of Understanding) signed on April 2022 formalized the AIKO-Thales partnership. **Ongoing joint projects span from space missions in the Earth's orbits to those on the lunar surface.**

Expansion

- AIKO is composed of 28 people and is located in Torino, Italy. The company is now expanding internationally, with plans to open offices in France and the USA.
- The company obtained a seed round of financing in 2020 and is **currently raising a Series A**.
- AIKO's long-term roadmap includes **diversification in sectors like aviation or logistics**.

Other Projects

- AIKO is a **leading provider of automation products and services for space industry players**. The company is very active in the European ecosystem. It participates in several projects with space agencies and commercial companies, providing innovative software technologies for ground and flight segments.

The Edge Company uses **computer vision technology** to recognize types of bird species that **pose a risk to aircraft during take-off and landing** and can activate a species-specific distress call to disperse them. They use this same technology to protect the area from incursion by drones.



Projects with Thales

The Edge Company developed a **non-cooperative ground-based obstacle detection called BCMS VENTUR**. In collaboration with Thales, they started bringing it to air, with positive first results. With the emergence of UAM, the ability to avoid potential obstacles becomes critical. The added value of computer vision and artificial intelligence lies precisely in the ability to classify the obstacle and enable the most appropriate avoidance strategy considering the load being transported. That is the purpose of this new AI-based product.

Expansion

- The company is present in Asia and Europe, and will be present in North America in the first quarter of 2023.
- They are **working closely with some Civil Aviation Authorities** and moving forward in other fields, like UAM and the energy sector.
- Related to their heavy R&D activity, The Edge Company **received a research grant** for developing new capacities.

Other Projects

- The Edge Company deployed their system at the airport and for UAM application and energy.
- They also deployed a first system in a wind farm, resulting in a 99% of the true positive rate in this real-life scenario.



SenX is the software editor of Warp 10, an **open-source solution dedicated to Sensors/ IoT Data** (time series and geo time series).

The software includes a time series database and an analytics engine that covers cleansing, synchronization, statistics, pattern detection, anomalies detection, and enables predictive analysis in business environments.



Projects with Thales

SenX and Thales are currently collaborating on two projects :

- Data processing in a theatre of operation, and
- Data processing integrated into electronic warfare.

Expansion

- SenX formally **initiated a new fundraising process** for 2023.
- In 2022, SenX **reached 500 users** of their product, Warp 10.
- The start-up hired four new people, going from 8 to 12 full-time employees.
- Through the acceleration program, SenX increased its sales by 40%.

Other Projects

- SenX has been **selected by EDF** (French electricity provider) **to work on a time series project**. EDF realized that the time series issue should now be addressed regarding policy and choices at the Group level.
- SenX works with Airbus to tackle the high constraints of sensor data processing. One feature of SenX's product, Warp 10, is particularly interesting for aeronautics: the high-density compression of time series histories based on a very innovative component proposed by SenX under the name of HFiles.

Amiral Technologies develops and markets **blind failure prediction software for IIoT-enabled equipment** by predicting equipment failures without historical failure data.



Projects with Thales

After successful trials with multiple businesses in Thales, the collaboration with Amiral Technologies moved to an implementation phase in early 2023. The goal is to **use DiagFit to predict anomalies and failures of some of its radars**, equipping some French Navy warships.

Expansion

- 2022 has been a critical transition year in the execution of Amiral Technologies' growth strategy. Based on the results of products and activities, they **plan to accelerate their development through new financing, new hires and new locations** in the European Union and elsewhere.
- They will **focus on the transport and energy sectors**, where they want to be a global leader within the next three years.

Other Projects

- The company works with large companies and SMBs on projects such as circuit breakers, nuclear energy components, vacuum pumps, petrol pumps, helicopters, aircraft, batteries, etc.
- The **EcoFin Ministry** selected Amiral Technologies on October 22nd within their brand new DeepNum20 program, the group of the **20 most promising DeepTech startups** among 400+ startups.





Synergy

Synergy seeks to engage high-potential Canadian SMBs in developing and commercializing advanced military technologies – and bringing them to market in Canada and around the world.

Synergy is a means for SMBs to bridge the divide from grants and contributions to commercial revenues and a sustainable business model – to cross the chasm.

It's a way to augment IP, accelerate growth, scale up and reach markets at home and abroad.

TerraSense has developed the Multi-modal Input Surveillance and Tracking (MIST) AI-ML software suite to **enhance sensor operations effectiveness at the tactical edge** and **optimize Processing, Exploitation and Dissemination (PED) efforts and resources**. MIST is an Automatic Target Recognition (ATR) software system that detects, recognizes, identifies, locates and fuses multiple sensor data into single targets of interest.



Projects with Thales

- TerraSense completed their first project with Thales to **integrate the MIST** Automatic Target Recognition System **with the forthcoming Thales Combat Digital Platform: Cobalt**.
- Numerous discussions are taking place with Thales Canada and Thales UK over possibly including and integrating the MIST system into other programs and providing data from Thales to feed the MIST AI Automatic Target Recognition system.

Expansion

- In 2022, the TerraSense team grew by over a dozen staff while concurrently spinning out their sister company, CRWN.ai, to deliver AI innovation in the power transmission industry.
- They expanded their collaborations with universities in the Survive Thrive Applied research – West alliance, including the University of British Columbia and the University of Victoria.

Other Projects

- TerraSense has **successfully delivered several R&D contracts** for Defence Research and Development Canada (**DRDC**).
- The company also contracts with Transport Canada to deliver the Arctic MIST system to provide AI support to their maritime Intelligence Surveillance and Reconnaissance (ISR) mandate in Canadian waters and systems.
- TerraSense also embarked on several projects with international clients to deploy MIST on several UAS platforms.

Pegasus Imagery is a team of military veterans, engineers, and aviation specialists **developing the technology that will enable autonomous aviation**. This includes an air-to-air Detect and Avoid sensor (A3S), a group III VTOL RPAS (Eos), and an aircraft operational expanding sensor for moisture and icing detection (MIDAS).



Projects with Thales

- Pegasus is a consortium partner with Thales, CP Rail, with support from the Government of Alberta Wildfire Branch. The Sustainable Development Technology Canada-funded project aims to **reduce GHG emissions during wildfire activities** in Canada **using unmanned systems for aerial data collection**. Thales supports Pegasus with access to its secure platform and in-kind contributions for engineering time.
- Data Collection for Thales' UAS100 AI: Pegasus will be collecting obstacles based on the specifications of the Thales AI scientists to build their AI for autonomous navigation.
- UAS100 operations: Pegasus will be supplying support for operations of the UAS100 in Alma, Quebec, through a CRIAQ-funded project Thales was awarded in 2022.

Expansion

- In 2022, Pegasus Imagery expanded to **a second hangar location to increase rapid prototyping capabilities** as well as advance the data collection for their AI.
- Their team grew from 19 to 25 employees last year.

Other Projects

All other projects are confidential and cannot be published.



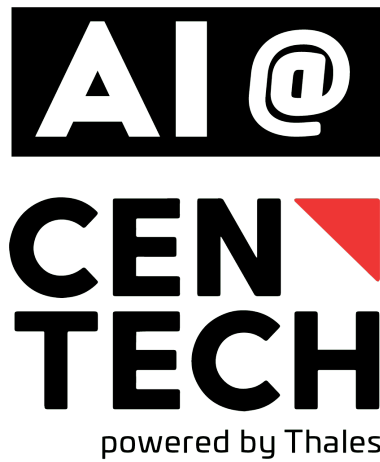
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