

BUILT ENVIRONMENT AND CLIMATE CHALLENGE



LEONARD

# 30 STARTUPS TO WATCH

IN 2025

# 10 THEMES / 30 STARTUPS

## PROMISING INITIATIVES FOR THE BUILT WORLD FACED WITH THE CLIMATE CHALLENGE

### **ROBOTICS** ..... p. 02

Aerd Lab / Batiprint3D / Sodex / Xpanner /  
Les Companions

### **MATERIALS** ..... p. 07

Oxara / FenX

### **DIGITAL TOOLS FOR CONSTRUCTION**..... p. 09

Enlaye / Simillar / TrunkTools

### **SMART GRIDS** ..... p. 12

Qualisteo / Boréales Energy / Jane

### **ELECTRIC CHARGING**..... p. 15

Up&Charge / Evias

### **OPERATIONS AND MAINTENANCE** ..... p. 17

HyLight / Birdsvie / Bluespin / XXII / Akidaia

### **SAFETY AND PREVENTION**..... p. 22

Perception / mashe.

### **SUPPLY CHAIN**..... p. 24

Sillant / Construex / Kaya AI

### **CLIMATE ADAPTATION** ..... p. 27

Albedya / Resilient / Kræken / EMBY

### **WATER CYCLE TECHNOLOGY** ..... p. 31

Kumulus

*Leonard supports startups with programs tailored to their maturity level. The **SEED** program is for early-stage startups, while the **CATALYST** program is for more mature solutions ready to enter the market. This booklet presents a selection from the sourcing efforts of both programs for the year 2025.*



# EDITORIAL



## **KEVIN CARDONA**

Director of Innovative Programs  
at Leonard

VINCI, through its innovation and foresight platform Leonard, has sought to scout new models and technologies that could serve our industries. Analysing the more than 1000 projects and startups candidates for our 2025 programs, evaluated by 350 VINCI experts and professionals, reveals a common theme and tool: AI and the climate. We are convinced that AI will enable unprecedented technological leaps, profoundly transforming parts of the value chain or unlocking productivity gains that have been long dormant. Our choices are also guided by the need to mitigate the causes and adapt to the consequences of climate change. The fundamental transformation we must undertake involves electrifying our lifestyles and decarbonising the built world. This booklet provides a selection from the two start-up programs (Seed and Catalyst), and an overview of what dynamic intelligence and creative ambition can bring to sustainable progress and the energy transition.

# Äerd Lab

CONSTRUCTION

REAL ESTATE

SEED

## > A DESIGNER BRICK 3D-PRINTED FROM CONSTRUCTION WASTE

Äerd Lab develops low-carbon, air-drying clay bricks using 3D printing. Catering to construction companies, architects, real estate developers, hotels, and shops, Äerd Lab offers **sustainable, customisable building materials from the circular economy** that meet regulations and enhance interiors.

**70% less CO<sub>2</sub>**  
compared to  
traditional bricks



***“Beautifying interiors  
with durable,  
high-quality design.”***

ANGELIKA BOCIAN-JAWORSKA  
Founder and CEO



aerdlab.com

## > DEPLOYING EXTERNAL INSULATION ON FAÇADES USING A ROBOT

Improving energy efficiency in buildings is key to reducing greenhouse gas emissions and energy consumption. **Batiprint3D** has developed a robotic solution to industrialise and scale up façade renovation projects, transforming labour-intensive tasks. It ensures cost and schedule control while guaranteeing quality and traceability.

**4 patents  
filed**



[batiprint3d.com](http://batiprint3d.com)

*“Let’s innovate! Let’s transform construction sites for greater productivity, efficiency, and safety.”*

FANNY BUYENS  
CEO



## > MAKING EARTHWORKS CONNECTED AND INTELLIGENT

Sodex equips construction machinery with laser scanners and cameras for continuous, automated site surveying. **Every 10 minutes, the system uploads data to SDX-Cloud to create a 3D digital twin.** The web platform provides automated volume calculations, progress tracking, and precise measurements accessible from anywhere for optimised project management.

**35%**  
efficiency gains



[sodex-innovations.com](https://sodex-innovations.com)

***“We create tomorrow’s surveying technologies and revolutionise how construction data are collected.”***

**RALF PFÖFFERKORN**  
CEO & Co-founder

xpanner.

CONSTRUCTION

CATALYST

## > AUTOMATING CONSTRUCTION MACHINERY FOR LINEAR AND REPETITIVE TASKS

Xpanner offers automation and robotics solutions for construction and solar installations, enabling clients to perform tasks such as trenching, levelling, and stacking more efficiently and cost-effectively. Its technology adapts to existing equipment, regardless of brand, allowing clients to do more with what they already own.

**50%**  
time savings  
on execution



xpanner.com

*“Xpanner leverages robotics to automate construction, freeing workers from dangerous tasks in building projects.”*

HENRI LEE  
CEO & Co-founder





**Les Companions**

Robots for Painters !

ROBOTICS

CONSTRUCTION

CATALYST

## > PACO, A COLLABORATIVE ROBOT FOR INTERIOR PAINTING TASKS

Les Companions has developed PACO, a collaborative robotic assistant for building painters. Using a 3D scan of the space to be painted, the robot handles arduous and repetitive tasks, while the painter focuses on decision-making and fine work. PACO is designed for large surfaces and volumes, for both new construction and renovation projects. Its patented technology bridges the gap between robotics and construction.



***“We aim to transfer industrial methods to the construction sector.”***

ANTOINE RENNUIT  
CEO

Pilot project  
at Portsmouth  
Hospital  
with VINCI  
Construction



[lescompanions.com](https://lescompanions.com)





CONSTRUCTION

SEED

## > A LOW-CARBON BINDER MADE FROM CONSTRUCTION WASTE

Oxara develops, produces, and sells a cement-free additive and binder designed to produce low-CO<sub>2</sub> construction materials. **Its technology enables the reuse of mineral waste from the construction industry**, promoting a circular economy while significantly reducing emissions associated with material production.

**90% CO<sub>2</sub> reduction** compared to traditional cement

***“Making construction more sustainable and housing more affordable.”***

**GNANLI LANDROU**  
CEO & Co-founder



oxara.earth



CONSTRUCTION

SEED

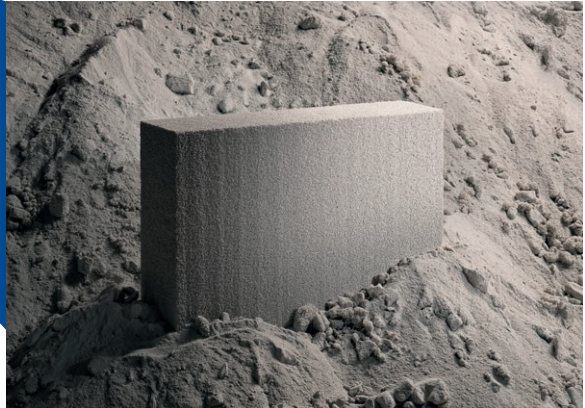
## ➤ TRANSFORMING CONSTRUCTION WASTE INTO INSULATING PANELS CONTAINING 98% AIR

FenX has developed mineral foam technology, made with low energy input, formed by micro-air bubbles. **This maximises performance and durability at a competitive cost.** Their clients, construction material manufacturers, can offer a unique product on the market: made from local waste, non-flammable, highly insulating, 100% recyclable, and with a low carbon footprint.

First factory operational **by the end of 2025**

*“FenX wants to prove that sustainability and competitiveness can coexist in construction materials.”*

ÉTIENNE JOEFFROY  
CEO



fenx.ch



Enlaye

CONSTRUCTION

REAL ESTATE

SEED

## > ONLINE EXPERTISE IN RISKS RELATED TO ANY BUILT-ENVIRONMENT PROJECT

Construction professions are closely tied to risk management. Enlaye helps builders, developers, and property owners better identify, assess, compare, and manage risks at all stages of a project's lifecycle. Its AI-powered platform characterises risks in advance, manages them during execution, and learns from past projects.

**20% margin savings through better risk management**



***“Our mission is to reduce risks, costs, and project durations, enabling all stakeholders in the built environment to build together better.”***

PHILIPPE RIVAL & STAMATI LIAPI  
Co-founders & CTO



enlaye.com



CONSTRUCTION

CATALYST

## > SIMILLAR: DIGITAL 3D TOOLS FOR ALL PUBLIC WORKS PROJECTS

Similar (from Artelia Digital Solutions) is a simulation and scheduling tool initially designed for the road construction sector. **It features a customisable 3D library that enables precise simulations for public works.** By combining the digital technologies of urban stakeholders with those of video gaming, Similar offers an array of interactive solutions that bring new animated dimensions to cities.

Training in  
**1 hour!**

*“Similar was born on-site, with the engineering offices of Eurovia agencies.”*

CYRILLE BRICHANT  
General Director



[doubleville.com/similar](https://doubleville.com/similar)



CONSTRUCTION

REAL ESTATE

CATALYST

# COMMUNICATING NATURALLY WITH CONSTRUCTION DOCUMENTATION

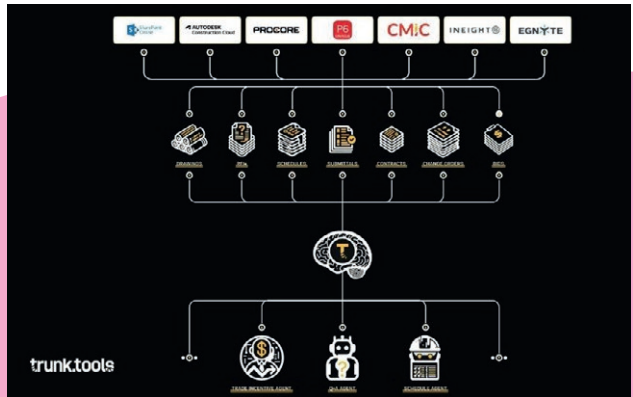
Designed as a trusted AI platform for the built environment, Trunk Tools provides the right data to the right people at the right time, avoiding delays and costly rework that can amount to millions of euros. Trunk Tools streamlines construction data management, automates tedious tasks, and reduces waste.

Up to **20%** less labour



***“Trunk Tools’ AI platform enables construction professionals to focus on their core mission: building!”***

SARAH BUCHNER  
CEO



[trunktools.com](https://trunktools.com)



CONSTRUCTION

ENERGY

CATALYST

# ➤ MEASURING, UNDERSTANDING, AND SAVING ELECTRICITY, GAS, AND WATER ON SITES OR IN INDUSTRY

Qualiteo specialises in optimising energy consumption in buildings. Through its innovative measurement and analysis solutions, it helps clients reduce their energy footprint and costs. **Its approach relies on artificial intelligence and precise monitoring tools for energy transition.**

Deployed in over **45 countries**

*“At Qualiteo, we believe the best energy is the energy you don’t consume.”*

ÉLODIE BONDI  
CEO



[qualiteo.com](http://qualiteo.com)



## ➤ AN INNOVATIVE ENERGY STORAGE SOLUTION USING ICE ACCUMULATION

Cooling needs currently account for more than 20% of total energy consumption. As part of the energy transition, BOREALES Energy, a designer and manufacturer, is committed to democratising thermal (cooling) storage. Acting like a “cold cumulus,” the core innovation – the ATS (Static Thermal Accumulator) – captures electricity during optimal periods to produce cold, which is stored as ice and later released as electricity as needed.

1 ATS module =  
**13 kWh**



[boreales-energy.com](http://boreales-energy.com)

*“We created an electricity production tool based on the complementarity of renewable energy and thermal storage.”*

PATRICK OUVRY  
CEO





ENERGY

SEED

## ➤ CREATING COMMUNITIES FOR PHOTOVOLTAIC ENERGY CONSUMPTION

Jane supports professionals producing their own solar electricity. The goal is to leverage surplus production locally by activating their energy flexibility through collective self-consumption while generating additional revenue. Its offering is based on a SaaS software platform **that simplifies the simulation, implementation, and management of collective self-consumption projects.**

Maximising **100%** of solar surplus production

***“At Jane, our challenge is to simplify the adoption of short energy circuits.”***

SIMON HEURTEBIE  
CEO



jane-energie.fr





Simplify electric car charging

ELECTRIC CHARGING

MOBILITY

ENERGY

SEED

# CHARGING ELECTRIC VEHICLES WITHOUT PLUGGING THEM IN

Inspired by the wireless charging of phones, UP&CHARGE applies this concept to cars, buses, and trucks. This cable-free solution, activated with one click and remotely controlled via a mobile app or vehicle, actively contributes to the electric transition.

Charging up to **3x faster** than a cable



*“From day one, we have worked to simplify electric vehicle charging by sharing our vision of a cable-free world. Time is UP!”*

GIL CHICHÉPORTICHE  
President

[upandcharge.com](http://upandcharge.com)

# EVIAS

MOBILITY

ENERGY

SEED

## > AN ELECTRIC CHARGING INFRASTRUCTURE FOR DECARBONISED MOBILITY

Battery size reduced by **60%**

Evias transforms road transport with dynamic charging technology that turns drive time into charging time. **Its technology allows vehicles to recharge automatically on stretches with rails, without stopping.** By reducing battery size by up to 60% and offering cost-effective infrastructure, Evias aims to help cities and freight operators achieve their carbon reduction goals efficiently.



evias.com



***“Our goal is to enable continuous and sustainable road transport through innovative dynamic charging technology.”***

OLIVIER BESSON  
Co-founder & CEO



HyLight

OPERATIONS AND MAINTENANCE

CONSTRUCTION

ENERGY

SEED

## > IMPROVING INFRASTRUCTURE INSPECTION WITH A LOW-CARBON AIRSHIP DRONE

**20 times**  
more efficient  
than a  
traditional  
drone

Infrastructures in the oil and gas industry leak methane, a potent greenhouse gas; aging power lines deteriorate, and traditional inspections are too costly and imprecise to ensure proper management. HyLight revolutionises infrastructure inspection with the **HyLighter: an automated, emissions-free airship drone** that collects high-quality data on large-scale infrastructures.



[hilight.aero](https://hilight.aero)



***“Climate change compels us to understand our world better while accounting for our impact. It is HyLight’s raison d’être.”***

MARTIN BOCKEN  
Co-founder & CEO



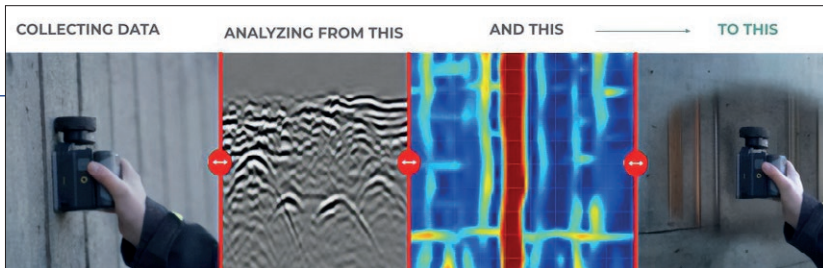
CONSTRUCTION

CATALYST

## > PREDICTIVE MAINTENANCE TO EXTEND INFRASTRUCTURE LIFESPAN

Only  
**2 seconds**  
to generate  
an image from  
radar data

Birdsview has developed technology for assessing the condition of critical infrastructures. **Serving renovation and rehabilitation, it helps extend lifespan, reduce risks and costs, and promotes sustainable infrastructure footprint.** Birdsview leverages AI, radar-transmitted data, and expertise from Norway's oil industry to provide precise, instant analysis of the internal reinforcements of concrete structures.



birdsview.ai



***“Birdsview enables smarter infrastructure decisions through AI-powered tools, extending asset lifespan.”***

OLAV SKOGEN  
CEO



CONSTRUCTION

REAL ESTATE

SEED

## ➤ EXTENDING INFRASTRUCTURE LIFESPAN WITH AI-POWERED INNOVATIVE TECHNOLOGIES

BlueSpine tackles the challenge of aging concrete infrastructures. Designed and manufactured in France, its innovative technologies **prevent, diagnose, and treat steel corrosion**, ensuring user safety and environmental preservation. With 60 years of combined expertise, its mission is to maximise sector performance, productivity, and safety.

**80%** of structures affected by corrosion



*“BlueSpine offers innovative solutions to protect our built heritage.”*

DAVID GARCIA  
CEO



[blue-spine.com](https://blue-spine.com)

XXII

CONSTRUCTION

MOBILITY

CATALYST

## ➤ A VIDEO ANALYTICS SOLUTION FOR REAL-TIME MOBILITY FLOW ANALYSIS USING ARTIFICIAL INTELLIGENCE

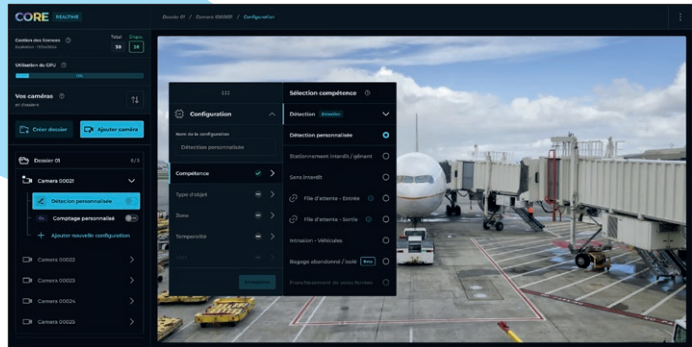
XXII is revolutionising urban mobility with AI-based solutions and computer vision. XXII optimises video flow management, improves safety, and analyses behaviours in real time, making infrastructures more efficient. Its technology supports operators in addressing urban mobility challenges and anticipating the future of transport.



*“I aim to democratise AI-based computer vision, making this technology accessible and beneficial for all.”*

WILLIAM ELGIN  
CEO

Technology deployed  
at over 500 sites



xxiia.com



**AKIDAIA**  
offline identification

OPERATIONS AND MAINTENANCE

CONSTRUCTION

REAL ESTATE

CATALYST

## > EASILY MANAGING SECURE ACCESS CONTROLS FOR ALL TYPES OF PREMISES

Akidaia offers a **non-connected access control system without data storage or network connection**. By decentralising access rights, Akidaia secures tertiary sites and provides solutions for temporary sites, such as construction projects, even isolated, technical spaces, or industrial sites.

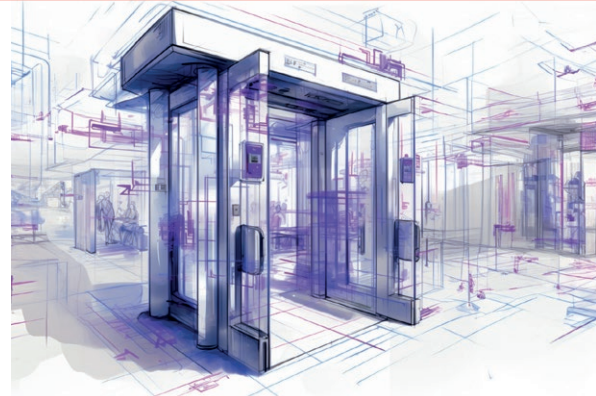
100% *Made in France* technology.

Installation in less  
than **10 minutes**  
on all electrified  
systems



**“Let’s respond to  
growing threats  
with agile, CSR, and  
offline technology.”**

GAËL LELEDANTEC  
CEO



[akidaia.com](https://akidaia.com)

## > SECURING CONSTRUCTION SITES AND PROTECTING WORKERS IN REAL TIME

Perception Manufacturing develops AI-powered vision solutions (via cameras) to secure and optimise operational sites. Collaborating with major industrial groups, these innovative tools reduce risks, improve efficiency, and enhance compliance on complex terrains.

**15** industrial clients including EDF, Renault, and LVMH



*“At Perception, we believe in a future where technology ensures safety and efficiency on every operational site.”*

THOMAS BOURGOÏN  
Co-founder & CEO



Securing worksites with AI

[www.perception-manufacturing.com](http://www.perception-manufacturing.com)



mashe.

CONSTRUCTION

CATALYST

## > COMBATting ILLEGAL LABOUR ON CONSTRUCTION SITES WITH AI

Construction managers spend significant time collecting and verifying contractor documents. mashe. **simplifies site compliance regarding illegal labour and data protection, improving safety and logistics.** The AI tool reads documents, pre-fills fields, stores data in the cloud, authenticates documents, generates reminders, creates lists, ensuring quick and rigorous management of on-site personnel.

**1,200**  
companies  
use the  
platform



***“Optimising time-consuming tasks so construction managers can focus on the most important: building!”***

HUMBERT MONNOT  
Co-founder



mashe.fr



CONSTRUCTION

REAL ESTATE

SEED

## > THE PRICE COMPARISON TOOL FOR CONSTRUCTION PROCUREMENT

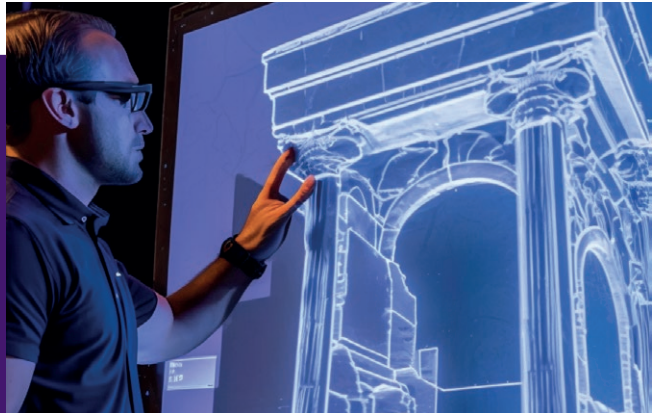
Sillant uses AI to automate the comparison and analysis of quotes and offers, saving time and increasing efficiency. **All pricing data is centralised and shared on a platform within a customised database**, enabling market price understanding. The system also assists in negotiating the best price and creating a real-time price observatory.

Verify, analyse, and compare 10 offers with 450 lines **in 2 minutes**



*“Sillant aims to increase our clients’ margins drastically by cross-analysing prices.”*

MICHAEL DE WIT  
CEO



sillant.com



CONSTRUCTION

REAL ESTATE

CATALYST

## > THE LARGEST B2B MARKETPLACE FOR THE CONSTRUCTION SECTOR IN SOUTH AMERICA

For the \$1.5 billion Latin American construction market, Construex designed and launched a procurement platform for builders. Using data analysis and artificial intelligence, along with deep market knowledge, **it helps save time and money with real-time insights.** It combines the best elements of networks, bilateral marketplaces, AI-driven services, and fintech solutions.

**1 million**  
vendors on  
the platform



***“Construex will become the Mercado Libre of the construction industry.”***

**ROBERTO ARROYO**  
Founder & CEO



[construex.com](https://construex.com)

Kaya AI

CONSTRUCTION

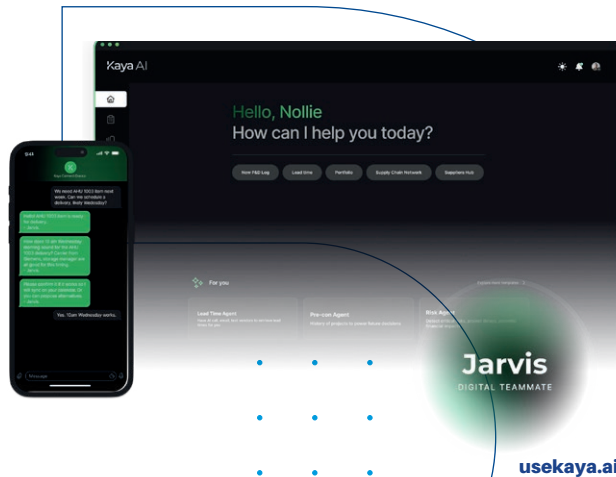
REAL ESTATE

CATALYST

## ➤ PREDICTIVE AND REAL-TIME MANAGEMENT OF THE ENTIRE CONSTRUCTION SUPPLY CHAIN

Kaya AI automates the complex workflows of construction, starting with supply chain challenges. **It saves project owners and managers hundreds of hours per month** by eliminating manual data entry and providing end-to-end supply chain visibility. By improving coordination among stakeholders, Kaya AI reduces delays, mitigates risks, and ensures projects stay on schedule and budget.

Improve construction supply by at least **50%**



*“Fueling the future of construction in harmony with humanity and the planet.”*

OJONIMI BAKO  
CEO





Albedya

REAL ESTATE

SEED

## > DEMOCRATISING CLIMATE PERFORMANCE FOR BUILDINGS FROM DESIGN

Albedya is an online climate study software accessible to all. The goal? **Integrate environmental approaches from the design phase of construction projects** by aggregating essential information and tools to create projects adapted to climate challenges.

Making bioclimatic approaches more accessible



albedya.fr



***“There is a real challenge for real estate actors to become more autonomous on climate issues.”***

AYMERIC BEMER  
CEO

Resilient

CONSTRUCTION

ENERGY

SEED

## ➤ MONETISING THE COST OF INACTION ON CLIMATE IN INDUSTRIAL SITES

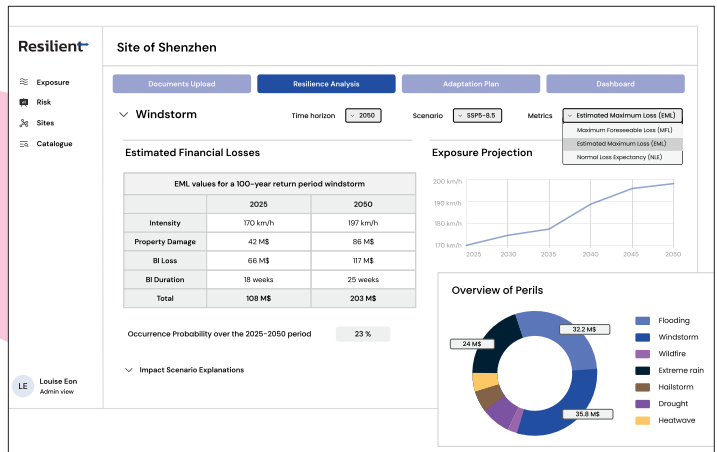
Today, climate risks remain complex to assess as they are only expressed qualitatively. This makes prioritising and economically justifying actions difficult. **Resilient helps industrialists quantify future financial losses caused by climatic hazards on their plants,** enabling them to build their adaptation plans.

More than  
**10** industrial clients



*"We contribute to the climate resilience of our production systems."*

LUCAS LETELLIER  
CEO

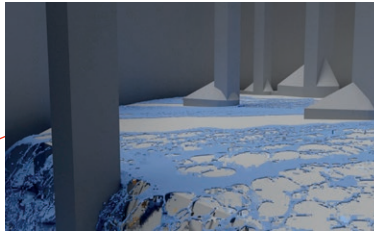
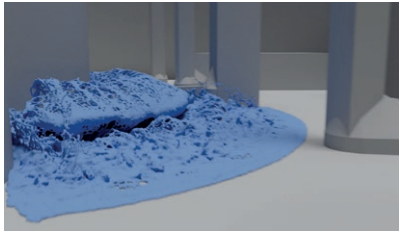


resilient-ia.com



## > ANALYSING VULNERABILITIES TO FLOODING

KRÆKEN is a climate risk analysis platform providing asset managers with detailed data and forecasts on the impact of climate change on their portfolios. Using high-resolution 3D hydraulic models, **KRÆKEN anticipates flood risks across various future scenarios**, allowing users to refine their adaptation strategies.



[kraeken.fr](https://kraeken.fr)

**10 years**  
of R&D to develop  
the technical  
solution



***“Providing tools to asset managers to address the climate challenge.”***

ADRIEN MOMPLOT  
CEO

**EMBY**

ENERGY

SEED

## > ENERGY LEASING: A PROFITABLE APPROACH TO DECARBONISATION FOR REAL ESTATE OWNERS

EMBY is a new-generation energy company accelerating the decarbonisation of the tertiary and commercial real estate sector. It achieves this with AI-driven renewable energy plants and an attractive business model – the energy lease – for property owners.

**8%** internal rate of return



*“We apply a purely real estate vision to the decarbonisation challenge.”*

SÉBASTIEN RENAULT  
CEO



emby.energy





CONSTRUCTION

ENERGY

CATALYST

## > CREATING WATER FROM AMBIENT AIR

Kumulus produces quality potable water from air. With its *Water As A Service* offering, **factories and construction sites can become autonomous in potable water**, avoiding bottled water logistics and pollution. This is especially useful in areas where tap water is poor quality or unavailable.

**90** machines deployed producing 2,700 litres per day



**“Towards water autonomy without needing networks or plastic bottles.”**

IHEB TRIKI  
CEO

[kumuluswater.com](https://kumuluswater.com)



Leonard supports innovative initiatives to shape the future of cities and regions.

VINCI, a global leader in concessions, energy, and construction, is at the forefront of addressing the environmental transition challenges in living environments, infrastructures, and mobility. Its ambition is also to contribute to social progress by acting as a humanistic and socially responsible company.

**It is within this context that VINCI created Leonard** in 2017.

The platform brings together a community of stakeholders – thinkers, decision makers, and entrepreneurs – united by the ambition to develop environmentally friendly innovations. Together, they make concrete and operational contributions to building the cities and infrastructures of tomorrow.

BIENVENUE/WELCOME  
**LEONARD**

CONSTRUISSONS ENSEMBLE  
LE FUTUR DES VILLES  
ET DES INFRASTRUCTURES

INTERNATIONAL DIVISION OF THE  
LEONARD GROUP



**LEONARD**

**LEONARD**

**The laboratory for the future  
of cities and infrastructure**



To receive all the latest news and  
details of our upcoming events,  
sign up to our newsletter.

**#WeAreLeonard**  
**leonard.vinci.com**

together @ **VINCI** 