

YLabs

Portugal's First Integrated Education-to-Venture Pipeline

White Paper · December 2025

Transforming how students learn, create, and launch startups — from secondary school to global markets.

Executive Summary

Artificial intelligence is reshaping the global economy faster than educational institutions can adapt. The demand for human-centric skills — creativity, systems thinking, entrepreneurship — is surging, while traditional exam-focused schooling leaves graduates anxious and unprepared. In Portugal, these global pressures are compounded by persistent brain drain and a strategic imperative to build an innovation-driven economy.

YLabs is Portugal's answer: the country's first fully integrated education-to-venture pipeline, connecting secondary school learning with professional startup creation. Built on the proven success of Seixal Criativo — which trains nearly 1,000 students per year and has already generated national award-winning ventures — YLabs operates across three synergistic components:

- Educational Infrastructure — modern, project-based curricula spanning foundational disciplines, human-AI collaboration, and reimaged core subjects.
- Creative Labs — idea-exploration hubs in Seixal and Lisbon where students prototype and validate real technological concepts.
- Venture Studio — a professional acceleration engine converting validated student projects into fundable, scalable startups.

As of December 2025, YLabs holds a pipeline of 22 active projects across health, energy, agri-tech, AR/VR, IoT, and environmental sectors. The 2026 cohort targets 30+ projects, with a minimum of six venture-ready companies entering the Venture Studio. By 2031, the programme is designed to produce 60+ ventures, 20–25 active portfolio companies, and an aggregate portfolio valuation of €1.5–3.0B.

Key Metrics

~1,000	22	6+	3
Students trained per year	Active projects (2025)	Venture-ready targets (2026)	National innovation awards

TRANSFORMING EDUCATION INTO ENTREPRENEURSHIP

Educational Infrastructure

YLabs is grounded in a conviction that education must be rebuilt for an AI-augmented world. The programme replaces passive, exam-centric learning with active, project-based mastery rooted in three strategic goals:

- Democratise Cutting-Edge Education: Make AI, robotics, AR/VR, and systems thinking accessible to all students, preparing them to co-create with intelligent machines.
- Scale Proven Pedagogical Models: Expand the School of Bits & Atoms approach — first developed at Seixal Criativo — to other municipalities, starting with Lisbon in 2026.
- Build 'Education as Infrastructure': Transform schools into innovation labs; establish municipal partnerships; create online curricula and university/employer-recognised certifications.

The Three-Tier Learning Model

Tier	Name	Description
Tier 1	Foundational Disciplines in the Age of AI	Mathematics through differential equations; statistics & data science; computational thinking. Delivered via cheat sheets, software stacks, and AI-tutored problem banks. Framework: Conceptual → Operational → Adversarial.
Tier 2	You First Curriculum (Human-AI Collaboration)	Year-by-year workshops on Surprise & Creativity (multimodal design, storytelling), Conscience & Ethics (CARE protocol), Shared Perspectives (collaborative VR/AR), and Body Intelligence (robotics, maker skills).
Tier 3	Core Subjects Reimagined	Mathematics in the Age of AI · Writing (Orwell → Le Guin → Baldwin) · Sciences through Digital Twins · Arts & Speculative Design. Delivered via project studios, peer-evaluation portfolios, and DAO simulations.

School of Bits & Atoms

The two-month introductory course is the entry point to the YLabs creative pipeline. Modules include game development, 360° photography & video, electronics & robotics, 3D modelling & printing, AR/VR/AI, and physical computing. Delivered to 7th–12th year students in Seixal (and Lisbon from 2026), with specialist tracks for university students (Instituto Superior de Agronomia) and professionals (Confederação dos Agricultores de Portugal).

Seminars, Mentors & Competitions

Three quarterly open seminars and an annual Gala showcase student work to external audiences. Invited speakers have included leaders from Ridley Scott Productions, Epic Games, Meta, Google, the European Space Agency, Max Planck Institute, and leading universities. Many have become part-time project mentors. Students compete nationally and internationally — YLabs targets UNESCO-linked awards, the World Summit Awards, the James Dyson Award, Blue Ocean Student Entrepreneur Competition, and accelerator entry into YCombinator and TechStars.

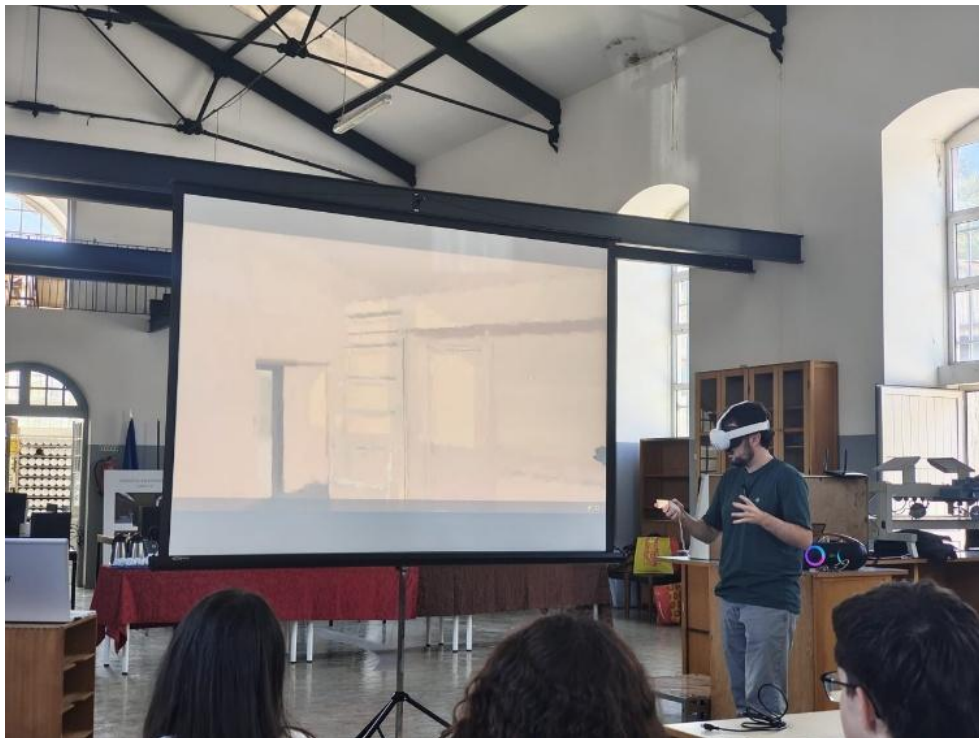
CREATIVE LABS & PROJECT PORTFOLIO

Creative Labs & Project Portfolio

Creative Labs are the idea-exploration and prototyping hubs at the heart of YLabs. Running for three years at Seixal Criativo, and expanding to ISA's Robotics Lab and NOVA's Disobedience Lab, they have generated 22 projects spanning health, wellbeing, agriculture, environment, gaming, and energy.



Seixal Criativo Lab (Seixal Municipality)



ISA Robotics Lab (ISA, U. Lisbon)

1. Ergo Chair

Origin: Seixal Criativo, 2023



A sensor- and actuator-driven ergonomic chair that dynamically adapts posture in real time, preventing musculoskeletal disorders and long-term back pain.

Awards	Finalist, National Youth Entrepreneurship Competition 2025. Competing for James Dyson Award 2026.
Stage	Creative Labs — R&D required: biomechanics, safety, reliability, and certification need deeper work.
Clients (Portugal)	Corporate wellness programs (banks, consulting firms); public sector; hospitals & rehabilitation clinics.
Clients (Global)	Large employers (tech, insurance, call centres); occupational health providers; veterans' rehabilitation.
Strategic Partners	Academic: FMH (Lisbon), UT Austin / Stanford. Industrial: Steelcase, Herman Miller. Insurance: Multicare, Fidelidade; UnitedHealth, Kaiser Permanente.
Business Model	Chair leased (not sold) + analytics subscription + insurance-backed prevention contracts.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€8–15M	€40–70M
Investment	€1.2–1.8M	€3–5M
Valuation	€10–20M	€50–80M

2. KRUKA — Intelligent Vase

Origin: *Seixal Criativo*, 2023



An intelligent indoor plant vase with sensors, actuators, and visual feedback — the entry product for an 'Internet of Nature' ecosystem helping users keep plants alive effortlessly.

Awards	Finalist, National Youth Entrepreneurship Competition 2025. Competing for James Dyson Award 2026.
Stage	Venture-ready. B2C entry object with multi-layer subscription and marketplace potential.
Clients (Portugal)	Offices (corporate ESG), hotels & hospitality groups, real estate developers.
Clients (Global)	Direct-to-consumer (urban millennials); co-working chains; property management firms.
Strategic Partners	Retail: IKEA, Leroy Merlin. Platforms: Amazon, Shopify. Indoor plant brands.
Business Model	Hardware-led entry (DTC smart vase / B2B bulk) + Plant Care AI subscription + ecosystem marketplace (consumables, nutrients, replacement plants, sensors, biodiversity packs).

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€5–10M	€25–40M
Investment	€300–600k	€1–2M
Valuation	€8–15M	€30–50M

3. WiseLamp

Origin: Seixal Criativo, 2023



Combines circadian-aligned light therapy, wake-up routines, and wireless charging into a bedside wellbeing object designed to optimise sleep and morning performance.

Awards	Finalist, National Youth Entrepreneurship Competition 2025. Competing for James Dyson Award 2026.
Stage	Venture-adjacent. Still development work ahead; must be bundled into a wellbeing ecosystem (potential pairing with Safest Space and Sonnosphere).
Clients (Portugal)	Hotels & wellness resorts; elderly care homes; corporate wellbeing programs.
Clients (Global)	Sleep clinics; mental health platforms; employers offering wellness perks.
Strategic Partners	Sleep science: universities, chronobiology labs. Health platforms: Headspace, Calm. Hardware: Asian ODM manufacturers.
Business Model	Hardware at cost (or bundled free) + sleep optimisation subscription + white-label OEM (hotels, elder care, hospitals) + API integrations with mental-health platforms.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€3–6M	€15–25M
Investment	€200–400k	€1–1.5M
Valuation	€5–8M	€20–35M

4. Safest Space

Origin: Seixal Criativo, 2023



A customisable VR environment that helps users manage anxiety, panic attacks, and mental distress through immersive calm and control. Flagship of the YLabs health & wellbeing vertical.

Awards	Finalist, National Youth Entrepreneurship Competition 2025. Competing for TechStars accelerator 2026.
Stage	Venture-ready. Flagship health and wellbeing product anchoring the YLabs wellbeing cluster.
Clients (Portugal)	Public hospitals & SNS pilots; schools and universities; mental health clinics.
Clients (Global)	Healthcare providers; insurance-backed wellness programs; corporate mental health benefits.
Strategic Partners	Clinical: psychologists, psychiatrists, hospitals. Hardware: Meta (Quest), Apple Vision Pro. Insurers: Fidelidade, Allianz; Aetna, Blue Cross.
Business Model	Per-seat licensing for hospitals, clinics, universities (primary) + employer & insurer channel (corporate mental-health plans) + consumer subscription (secondary).

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€10–20M	€80–150M
Investment	€500k–1M	€3–6M
Valuation	€15–30M	€100–200M

5. VoxOn

Origin: Seixal Criativo, 2023



Enables selective noise cancellation — users choose what sounds to eliminate and preserve — combined with adaptive learning and real-time translation. Key niches: neurodiversity and industrial safety.

Awards	Finalist, National Youth Entrepreneurship Competition 2025. Competing for TechStars accelerator 2026.
Stage	Needs vertical focus; must differentiate against Big Tech (including Meta's Sam Audio). Key opportunity in neurodiversity and industrial safety niches.
Clients (Portugal)	Construction workers; neurodivergent users (schools, clinics); open-space offices.
Clients (Global)	Industrial safety; autism support organisations; productivity-focused enterprises.
Strategic Partners	Hardware: headphone manufacturers (B2B licensing). Safety: OSHA-aligned companies. Accessibility: autism advocacy groups.
Business Model	Vertical licensing (construction, neurodiversity, safety) + OEM algorithm licensing + embedded into headsets/PPE + enterprise compliance packages.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€5–10M	€30–60M
Investment	€400–800k	€2–4M
Valuation	€8–15M	€40–70M

6. Guideline — Surprise Generation Engine

Origin: *Seixal Criativo, 2023*



Pivoted into a Surprise Generation Engine implementing Surprise Calculus — the human advantage layer above LLMs and simulations — generating novel, unexpected outputs across design, strategy, and entertainment.

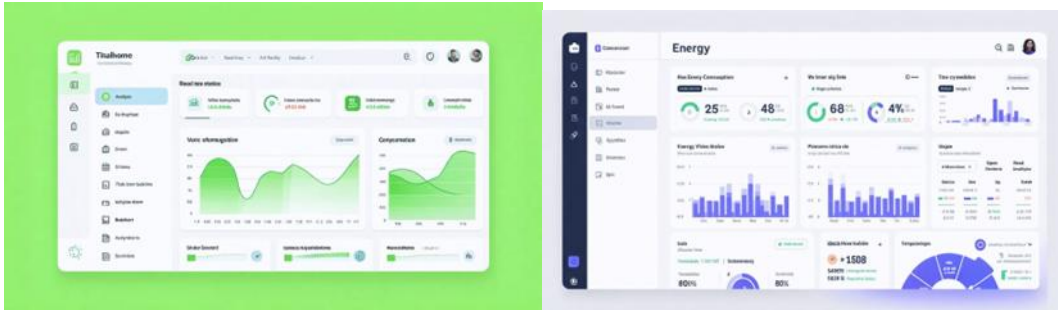
Awards	Finalist & Winner, Creativity Category, National Youth Entrepreneurship Competition 2025. Competing for TechStars and YCombinator.
Stage	Core R&D platform for YDreams Factory rather than standalone startup. High strategic value as embedded IP engine across multiple products.
Clients (Portugal)	Design studios; architecture firms; education & innovation labs.
Clients (Global)	Sports franchises; entertainment studios; strategy & innovation consultancies.
Strategic Partners	Academic: design schools. Tech: NVIDIA Omniverse.
Business Model	Internal IP engine embedded across YDreams / MirrorVerse + high-end B2B licensing + enterprise 'Surprise as a capability' workshops + IP royalties.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€15–30M	€150–300M
Investment	€1–2M	€5–10M
Valuation	€30–60M	€300–600M

7. Designia — Home Energy Marketplace & AI Agent

Origin: Seixal Criativo, 2023



An AI-driven marketplace and agent that configures, finances, and continuously optimises home energy generation (solar/wind), storage, efficiency, and EV charging for homeowners, prosumers, and property managers.

Awards	Finalist, National Youth Entrepreneurship Competition 2025. Competing for TechStars & YCombinator 2026.
Stage	Venture-ready. Flagship climate and energy venture of the 2026 Venture Studio cohort.
Clients (Portugal)	Homeowners; real estate developers; energy cooperatives.
Clients (Global)	Homeowners; EV owners; community solar participants.
Strategic Partners	Energy: EDP, Galp; Tesla Energy, Enphase. Finance: banks, green loans, carbon credit platforms. Real estate: developers & property managers.
Business Model	Intelligence SaaS + Marketplace Orchestration + Financing & Credits (origination fees on green loans, leasing, PPAs) + Spatial & AR Licensing.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€20–40M	€200–400M
Investment	€700k–1.5M	€4–8M
Valuation	€30–60M	€300–500M

8. Decoreactive — Interactive Digital Poster & Advergaming

Origin: Seixal Criativo, 2024



Started as a highly customisable interactive digital poster. Evolving into a web-based advergaming platform using gesture-based interfaces — inspired by Nex Playground — for brands, malls, museums, and events.

Awards	Competing in National Youth Entrepreneurship Competition.
Stage	Not yet ready as standalone startup. Perfect Creativity Lab to Venture Studio transition project. Missing: Gesture SDK abstraction, advergaming templates, analytics & brand dashboards.
Clients (Portugal)	Brands; shopping centres; museums & exhibitions; sports franchises.
Clients (Global)	Brands; shopping centres; museums & exhibitions; sports franchises (global scale).
Strategic Partners	Camera/sensor vendors; WebXR platforms; media agencies; gesture tech (OpenPose-like stacks).
Business Model	Scalable SaaS + campaign fees + agency network effects.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€20–40M	€200–400M
Investment	€700k–1.5M	€4–8M
Valuation	€30–60M	€300–500M

9. I Love Hockey Tables — VR/AR Arcade Sports Game

Origin: Seixal Criativo, 2024



A VR/AR reinvention of classic table hockey with new tables, power-ups, visual effects, and polished UI. Early alpha versions are already available on VR gaming stores.

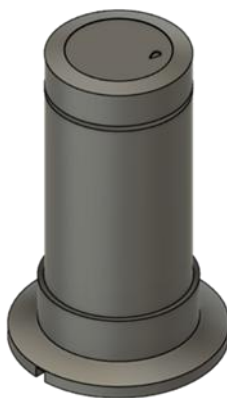
Awards	Competing for Meta and Epic Games grants.
Stage	Venture-ready. Early alpha already in VR gaming stores. Rapid commercialisation path via arcades, sports venues, and future AR glasses.
Clients (Portugal)	VR/AR game stores; VR arcades; sports bars; esports venues; schools & youth centres.
Clients (Global)	VR/AR game stores; VR arcades; sports bars; esports venues; schools & youth centres (global).
Strategic Partners	Meta / Apple Vision ecosystem; AR glasses manufacturers; sports brands.
Business Model	VR/AR game sales + arcade & sports bar licensing + in-game cosmetics & tournaments + sponsorships.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€15–30M	€150–300M
Investment	€500k–1.2M	€3–6M
Valuation	€25–50M	€250–450M

10. ICUPA — UV-Based Water Purification System

Origin: Seixal Criativo, 2024



Evolved from a smart bottle concept into a pure UV-based water purification system, addressing health, sustainability, and emergency use in field and humanitarian contexts.

Awards	Competing for National Youth Entrepreneurship Competition and James Dyson Award 2026.
Stage	Hardware + deep tech. Needs engineering hardening & certification. Venture-studio suitable with hardware support; later spin-out as clean-water startup.
Clients (Portugal)	Outdoor & travel brands; NGOs & humanitarian organisations; military / civil protection.
Clients (Global)	Outdoor & travel brands; NGOs; military; developing-world distributors.
Strategic Partners	UV-C component suppliers; industrial designers; certification labs; NGOs (Water.org, Red Cross).
Business Model	Consumer product sales + sports/military/emergency contracts + licensing to bottle brands + B2B (hospitality, travel).

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€30–60M	€300–600M
Investment	€1–2M	€6–10M
Valuation	€50–100M	€500–900M

11. Moment Recorder — Always-On Memory Buffer Camera

Origin: Seixal Criativo, 2024



A continuous-recording camera that saves only the last 30 seconds when the user presses a button — a 'human memory trigger' for creators, journalists, and safety users.

Awards	Competing for National Youth Entrepreneurship Competition and James Dyson Award 2026.
Stage	Incubate as a YDream experiment. Potential integration with AR glasses and lifelogging platforms.
Clients (Portugal)	Creators & journalists; security & safety users; AR glasses users.
Clients (Global)	Creators & journalists; security & safety users; AR glasses users (global).
Strategic Partners	ESP32 / camera OEMs; cloud storage providers; AR glasses companies.
Business Model	Device sales + cloud subscriptions + memory/journaling services.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€10–20M	€150–300M
Investment	€600k–1.3M	€4–7M
Valuation	€20–40M	€250–500M

12. Sonnosphere — Sleep Improvement via Audio & Embodied Device

Origin: Seixal Criativo, 2024



Tackles insomnia through audio strategies combined with a physical companion device, positioned as a non-medication-heavy alternative for sleep therapy.

Awards	Competing for National Youth Entrepreneurship Competition and James Dyson Award 2026.
Stage	Needs clinical validation. Venture-studio viable with medical partners. To be incubated as a sibling company to Safest Space, sharing clinical validation and go-to-market channels.
Clients (Portugal)	Sleep clinics; elder care facilities; employers (burnout prevention); consumers.
Clients (Global)	Sleep clinics; elder care; employers; consumers (global).
Strategic Partners	Hospitals & universities; insurance companies; audio therapy experts.
Business Model	Clinical B2B (sleep clinics, elder care, insurance-covered therapy, employer burnout programs) + consumer subscription (device + content) + licensing to hospitals & insurers.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€25–50M	€300–600M
Investment	€1–2M	€6–10M
Valuation	€40–80M	€500–900M

13. ATOM — Modular Professional Mobile Computer

Origin: Seixal Criativo, 2025



A rugged smartphone/portable computer with hardware and software add-ons optimised for skilled trades (electricians, plumbers, mechanics). Add-ons include thermal cameras, multimeters, RFID/NFC readers, depth sensors, and certified safety accessories.

Awards	Competing for National Youth Entrepreneurship Competition and James Dyson Award 2026.
Stage	Ready for Venture Studio integration. Challenge is now industrial design, supply chain, certification, and go-to-market — not ideation.
Clients (Portugal)	Utilities; facility-management firms; telecom installers; EV-charging operators.
Clients (Global)	Skilled trades; utilities; enterprises (global).
Strategic Partners	Bosch, Fluke, Schneider Electric, Hilti, CAT, Apple Enterprise (MDM), Google ARCore.
Business Model	Hardware (65% Portugal / 55% global) + SaaS workflow software (35% / 45%).

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€25–45M	€280–520M
Investment	€1.2–2.0M	€6–9M
Valuation	€40–70M	€450–750M

14. Horizon — Modular Reality Console Tablet

Origin: Seixal Criativo, 2025



A multi-purpose tablet whose identity transforms via magnetically attached modules: audio/speakers, game controllers, keyboards, depth sensors, and cameras. With sensors and props, Horizon becomes a Reality Console for batting, shooting, driving, gesture-based gaming, education, and simulation.

Awards	Competing for National Youth Entrepreneurship Competition and James Dyson Award 2026.
Stage	Venture Studio. Platform product feeding multiple YDreams Factory developments. Not a standalone startup initially.
Clients (Portugal)	Schools; museums; sports academies; family entertainment venues.
Clients (Global)	Education; gaming; sports; consumer & institutional (global).
Strategic Partners	Unity; Epic; Nokia; Logitech; LEGO Education; Major Sports Leagues (US, Europe, Asia).
Business Model	Hardware (50% / 40% global) + Content & SaaS (50% / 60% global). Platform royalties + content licensing + institutional deployments.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€35–60M	€220–420M
Investment	€1.0–1.8M	€5–9M
Valuation	€55–95M	€350–650M

15. MIAMUG — Emotion-Aware Smart Mug

Origin: Seixal Criativo, 2025



A mug with Peltier-based thermal regulation (heated and cooled) and visual temperature feedback, controlled by a mobile app, with emotion-aware wellbeing signals.

Awards	Competing for National Youth Entrepreneurship Competition and James Dyson Award 2026.
Stage	Crowded consumer market; differentiation depends on emotional/wellbeing signal layer. Positioned as a niche premium wellbeing brand.
Clients (Portugal)	Wellness brands; corporate gifting platforms.
Clients (Global)	Global niche wellness brand; corporate gifting.
Strategic Partners	IoT ODMs (China / EU).
Business Model	Premium hardware sales + app subscription + corporate gifting bundles.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€2–4M	€10–20M (USD)
Investment	€300–500k	€300–500k
Valuation	€8–15M	€8–15M

16. SeaThrough — AR Animal Perception App

Origin: Seixal Criativo, 2025



A mobile and AR application that lets humans see the world as other animals perceive it. Applies scientifically informed perceptual filters (species-specific colour, acuity, field of view, motion sensitivity) to live camera input. Future versions add hearing filters and AI-assisted animal behaviour interpretation.

Awards	Competing for National Youth Entrepreneurship Competition 2026.
Stage	Concept + validated scientific feasibility. MVP, real-time camera mode, and AR+audio support are next steps.
Clients (Portugal)	Schools (STEM/biology); science museums, aquariums, zoos; environmental education programs; pet owners.
Clients (Global)	Schools; science museums; zoos; aquariums; wildlife media; AR glasses platforms.
Strategic Partners	Universities with sensory ecology labs; bioacoustics groups; museum networks; Apple/Android AR; optics & camera pipeline specialists; AR glasses manufacturers.
Business Model	Education licences + consumer subscriptions + institutional installs + content licensing (wildlife media, streaming, AR experiences).

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€15–30M	€120–250M
Investment	€600k–1.2M	€3–6M
Valuation	€40–80M	€250–450M

17. Plume — AR Visualisation of Vehicle Emissions

Origin: NOVA Disobedience Lab, 2024



Makes car emissions visible in augmented reality, combining computer vision, emission databases, dispersion models, and Unity-based visualisation. A finalist in EPIC Games Education Grants with a US Provisional Patent.

Awards	Finalist, EPIC Games Education Grants. US Provisional Patent.
Stage	Can be developed into a consumer and/or B2B app via the YDreams Factory Venture Studio.
Clients (Portugal)	Cities; transport authorities.
Clients (Global)	Cities; transport authorities; fleet managers; NGOs; environmental agencies.
Strategic Partners	Unity; HERE Maps; environmental agencies; NGOs.
Business Model	City & authority contracts + B2B fleet dashboards + public engagement tools + NGO & education licensing + data-as-a-service + emissions modelling.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€5–10M	€50–80M
Investment	€500k	€5M
Valuation	€20–30M	€150–250M

18. DisoBEEdience — Smart Hives for Urban & Rural Pollination

Origin: NOVA Disobedience Lab, 2024



IoT-enabled beehives monitoring bee health, behaviour, temperature, and threats (including *Vespa asiatica*), enabling data-driven pollination management for municipalities and agricultural operators.

Awards	Finalist, NOVA SST Entrepreneurship Competition.
Stage	Still needs biological research and hardware development at the Creative Labs stage.
Clients (Portugal)	Municipalities; Agriculture Ministry.
Clients (Global)	Municipalities; NGOs; biodiversity funds; agri-businesses (global).
Strategic Partners	NGOs; biodiversity funds; agricultural institutes.
Business Model	Municipal subscriptions + NGO & foundation grants + carbon/biodiversity credit enablement + hardware leasing.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€1–3M	€10–20M
Investment	€250k	€2.5M
Valuation	€15M	€25M

19. ANTAIA — Farmers Intelligence Platform

Origin: ISA, U. Lisbon, 2025



Converts mandatory farm compliance data (fertilisers, pesticides, operations, phenology) into a living intelligence platform enabling collective bioregional insight, reverse-reporting automation, sustainability benchmarking, and access to green finance, carbon, and biodiversity mechanisms.

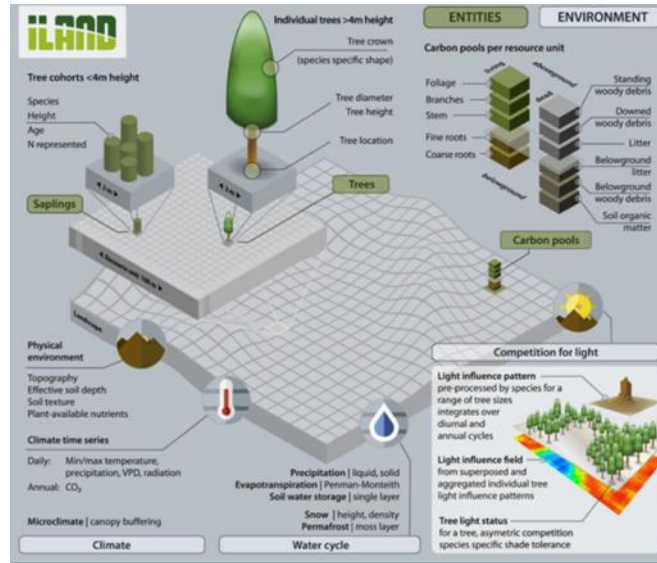
Awards	Early MVP definition stage. Navigator and Sogrape have expressed interest.
Stage	Late concept, early MVP definition. Needs product scoping, first pilots, UX simplification for elderly farmers, and API integration with DGADR/CAP systems.
Clients (Portugal)	Agricultural cooperatives (rice, olive, wine, citrus); large farms (500+ ha); regional agricultural agencies.
Clients (Global)	Agricultural cooperatives; large farms; CAP intermediaries; EU & LatAm markets.
Strategic Partners	Ministries of Agriculture / CAP authorities; cooperatives; carbon/biodiversity credit platforms; satellite & climate-data providers; financial institutions (green finance).
Business Model	SaaS per farm/per hectare + cooperative & regional licences + transaction fees on carbon and biodiversity credits + data-driven advisory services.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€15–25M	€120–200M
Investment	€1.5–2.5M	€6–10M
Valuation	€50–80M	€300–450M

20. 3D4ESTS — Affordable Forest 3D Mapping & Digital Twinning

Origin: ISA, U. Lisbon, 2025



Uses photogrammetry + AI (replacing expensive LiDAR) to generate interactive 3D forest models enabling inventory, carbon estimation, ecosystem simulation, and forest digital twins. Strong technical prototype already demonstrated. Navigator and Sogrape are interested in pilots.

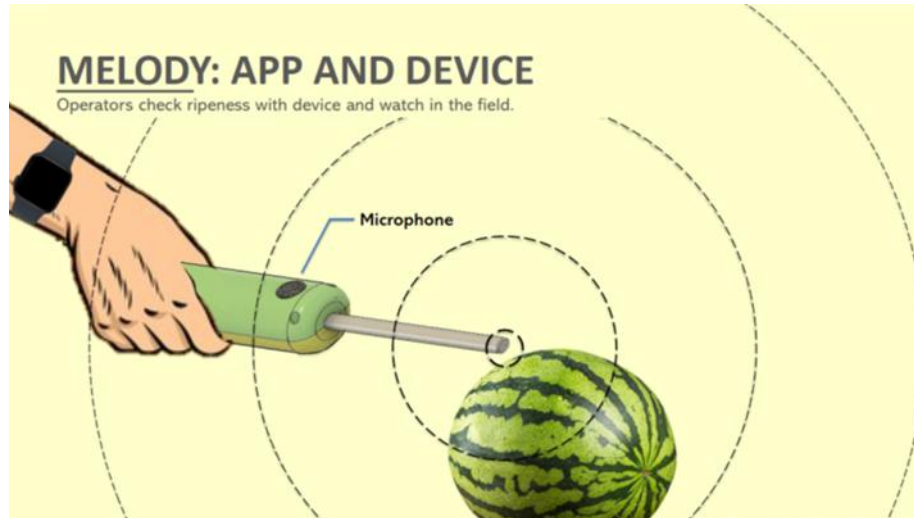
Awards	Strong technical prototype with demo platform.
Stage	Needs productisation, scalable pipelines, and commercial pilots.
Clients (Portugal)	Forest owners & managers; pulp & paper companies; carbon project developers; public forestry agencies.
Clients (Global)	Forest owners; carbon project developers; public forestry agencies; global carbon markets.
Strategic Partners	Carbon registries & MRV platforms; drone & camera manufacturers; insurance companies; environmental consultants.
Business Model	Mapping-as-a-Service (€/ha) + SaaS subscriptions for monitoring + digital-twin licensing + carbon MRV services.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€12–20M	€180–300M
Investment	€2–3M	€7–12M
Valuation	€60–100M	€350–500M

21. Melody — Acoustic Ripeness Detection for Watermelons

Origin: ISA, U. Lisbon, 2025



Combines a portable acoustic probe and mobile app to assess internal watermelon ripeness in the field. Codifies expert 'sound-based' knowledge into a scalable device, reducing harvest losses and improving quality consistency. Future expansion planned for melons, pumpkins, and avocados.

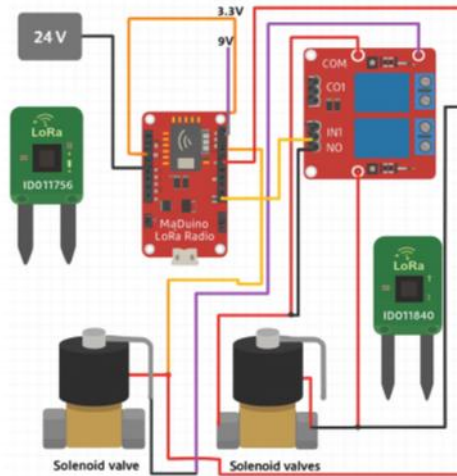
Awards	Functional prototype with clear use case.
Stage	Needs hardware industrialisation, calibration datasets, and pilots with producers.
Clients (Portugal)	Large watermelon producers; agri-export companies; cooperatives with quality-based pricing.
Clients (Global)	Large watermelon producers; agri-export companies; retailers demanding consistency (global).
Strategic Partners	Ag-equipment manufacturers; packing & logistics companies; agricultural research institutes; large fruit buyers / retailers.
Business Model	Device sales (€300–600/unit) + annual software/analytics subscription + enterprise dashboards + future expansion to other fruits.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€10–18M	€150–250M
Investment	€1–2M	€5–8M
Valuation	€40–70M	€250–400M

22. SIRS — Smart Irrigation System for Water-Scarce Regions

Origin: ISA, U. Lisbon, 2025



A sensor-driven, LoRa-based smart irrigation system designed for drought-prone regions. Dynamically adapts irrigation to soil moisture and phenological stages, reducing water use while maintaining yield. Field-validated DIY prototype already tested.

Awards	Field-validated prototype.
Stage	Needs product redesign, enclosure engineering, cloud dashboard, and certification.
Clients (Portugal)	Citrus & orchard farmers; water-scarce regions (Algarve, Spain, Italy); irrigation districts.
Clients (Global)	Citrus & orchard farmers; water authorities; irrigation OEMs (Mediterranean & global).
Strategic Partners	Irrigation equipment manufacturers; water authorities & agencies; smart-ag IoT platforms; solar & energy-autonomy providers.
Business Model	Hardware kits (per sector/ha) + SaaS monitoring & alerts + data services for water authorities + licensing to irrigation OEMs.

Financial Upside

Metric	Portugal	Global
5-yr Revenue	€8–15M	€120–180M
Investment	€1–1.8M	€4–7M
Valuation	€30–55M	€220–350M

VENTURE STUDIO & CAPITAL STRATEGY

Venture Studio & Capital Strategy

2026 marks the first full year of professional venture creation within YLabs. After three years of Creative Labs activity and the development of 22 projects, YLabs moves decisively from experimentation to selective, capital-efficient venture building. The Venture Studio will deliberately constrain intake in 2026 to prioritise quality and establish the operational, financial, and governance standards that will guide activity through 2031.

2026 Core Venture Studio Cohort

#	Project	Stage	Description
1	Safest Space	Venture-ready	Immersive XR mental-health platform (hospitals, insurers, universities)
2	Designia	Venture-ready	AI home-energy marketplace & agent; flagship climate venture
3	ANTAIA	Early MVP	Farmers intelligence platform; green finance & carbon access
4	3D4ESTS	Strong prototype	Forest 3D mapping & digital twin via photogrammetry + AI
5	ATOM	VS-ready	Modular professional mobile computer for skilled field workers
6	KRUKA	Venture-ready	Intelligent plant vase; Internet of Nature entry product

Platform-Aligned & Paired Ventures

- Horizon: Modular Reality Console tablet — platform product feeding multiple ventures; not yet a standalone startup.
- Sonnosphere: Paired with Safest Space; sharing clinical validation, partners, and go-to-market.
- I Love Hockey Tables (optional): Early traction; rapid commercialisation path via VR stores and arcades.

Venture Studio Throughput 2026–2031

Year	2026	2027	2028	2029	2030	2031
Venture-Ready Projects / yr	6	8	10	12	14	16

2026 Funding Requirements

Budget Item	Amount
Core Venture Studio team	€400k
Shared infrastructure, labs, cloud, legal, IP	€300k
Operations, partnerships, travel, events	€150k
Subtotal — Operations	€850k
6 core ventures @ ~€150k each	€900k
Horizon platform development	€250k
Paired / optional ventures	€200k
Subtotal — Project Capital	€1.35M
TOTAL 2026	€2.2M

Projected Capital Needs 2026–2031

Period	Annual Capital
2026	€2.2M
2027	€3.0M
2028	€4.0M
2029	€5.0M
2030–2031	€6.0–7.0M / yr
Cumulative 2026–2031	~€27–30M

Portfolio Fund I

Parameter	Detail
Target Size	€50–60M
First Close	€25–30M
Horizon	10 years
Focus	Exclusive investment in YLabs Venture Studio companies
Role	First institutional investor; anchor shareholder (15–25%); steward of shared platforms and IP

Strategic Outcome by 2031

60+	20–25	€1.5–3.0B
Ventures created or excubated	Active portfolio companies	Aggregate portfolio valuation

APPENDIX IV — YLABS TEAM & ADVISORS

YLabs Team & Advisors

Leadership

YLabs is led by António Câmara, Edmundo Nobre, and Haydn Rigby, who bring more than 60 combined years of experience building talent, products, and companies. They have developed projects for 50+ Fortune 500 companies, sold products in over 40 countries, and listed four companies on international stock markets. Their academic connections span MIT, Cornell, and UT Austin.

Core Operational Team

- Tiago Carita — Hardware Lead
- Rui Genovevo — Software Lead
- Filipe Coelho — Project Management
- Francisco Ribeiro — Design

Industry Advisors

- Tony Fernandes — International product designer; former lead designer at Lotus, Netscape, and Apple.
- Ken Pimentel — Formerly Autodesk and Epic Games.
- Fábio Seidl — Global Creative Director, X (formerly Twitter).
- Jani Kuusito — CEO, Warming Surfaces.

Project Development Support

- Duarte Araújo (FMH) — Sports applications
- Ana Pinheiro Privette (University of Illinois) — Nature applications
- César Barbosa (TUGA Innovations) — Mobility
- Alexandre Rainha de Campos (Hospital Santa Maria) — Medical surgery
- Ross Plummer & John Filipe — Marketing & communications for student projects

Global Reach & Networks

YLabs affiliated students benefit from Portugal's exchange programmes with MIT, CMU, and UT Austin's entrepreneurial programmes. They also gain access to YDreams Factory's operations in New York City, Austin, and London — where they meet peers, clients, partners, and investors. Business development for YLabs ventures will be led by experienced executives, VCs, and private equity professionals selected with the help of YLabs investors.

A Unique European Initiative

YLabs is not an accelerator, an incubator, nor a conventional educational programme. It is a fully integrated education-to-venture institution — combining foundational education, creativity labs, professional venture building, shared IP platforms, and a dedicated capital strategy.

This model is unique in Portugal and, to our knowledge, without direct equivalent in Europe. No other initiative begins at secondary school level, sustains a multi-year creative pipeline, professionally excubates and spins out ventures, and compounds value through shared platforms and portfolio-level capital stewardship.

2026 is not merely a launch year. It is the foundational year of a new European-scale institution, designed to transform education into entrepreneurship — and entrepreneurship into enduring economic, technological, and societal value.

For further information, project decks, videos, and investor materials, please contact the YLabs team.