



LAS LLUVIAS



*Integrated Solar & Potable Rainwater Infrastructure
Mediterranean Residential Platform*



Executive Summary

Las Lluvias is a Mediterranean residential climate-infrastructure platform integrating photovoltaic generation, potable rainwater harvesting, building-envelope optimisation, and savings-based financing into a single certified residential system for the Mediterranean rural property market.

The platform targets drought-stressed, solar-intensive rural residential geographies across the Western Mediterranean, beginning in Ibiza and the Balearic Islands.

The core insight is that the same photovoltaic surface increasingly installed for residential energy generation also represents an ideal rainwater-catchment geometry. Las Lluvias integrates these functions into a single roof assembly capable of producing both electricity and potable water while materially reducing household utility expenditure.

The business model combines installation economics, recurring servicing revenue, financing origination, methodology licensing, and long-term proprietary performance-data accumulation.

The initial operating focus is high-end residential properties where utility costs are elevated, sustainability certification increasingly influences asset value, and owners possess both the financial capacity and the regulatory incentive to adopt integrated climate-resilience infrastructure.



Structural Market Conditions

The Western Mediterranean rural residential property market is shaped by four converging conditions.

WATER STRESS

Ibiza receives approximately four hundred millimetres of annual rainfall, increasingly delivered in concentrated bursts rather than steady seasonal patterns. The 2022 and 2024 *gota fría* events flooded San Antoni and Santa Eulària in single-day windows. Household water comes from a patchwork of municipal mains (partly desalination-fed), trucked *cisterna* at €200–400 per delivery, and private wells and boreholes increasingly affected by aquifer salinisation. A luxury villa with garden, pool, and seasonal occupancy can spend three to eight thousand euros annually on water alone.

SOLAR ADOPTION

Photovoltaic installation is accelerating across the same property cohort, driven by declining hardware costs, EU climate incentives, and Spanish IDAE NextGen subsidy structures absorbing twenty to thirty-five percent of installation CAPEX. Self-consumption economics are now positive on a stand-alone basis; luxury-villa owners are installing arrays for energy reasons independent of water.

REGULATORY CONVERGENCE

EU Drinking Water Directive 2020/2184, EU Taxonomy alignment requirements, BREEAM and Passivhaus certification frameworks, and Balearic regional water-stress regulation are converging on the same property typology. Institutional buy-side capital and the regenerative-luxury hospitality cohort increasingly require these credentials before allocation to, or partnership with, a Mediterranean property.

ROOF AS DUAL INFRASTRUCTURE

A four-hundred-square-metre roof on this island catches approximately one hundred and sixty thousand litres of rainfall in an average year — materially more water than the household consumes — and almost none of it is currently captured. The photovoltaic surface is, by specification, tilted, glass-fronted, self-cleaning, and continuous — the ideal surface profile for high-quality rainwater catchment. Las Lluvias positions the roof as dual infrastructure: energy-generation surface and potable-water catchment system.



System Architecture

The Las Lluvias system integrates photovoltaic generation, rainwater collection, thermal-envelope optimisation, and potable-water treatment within a single roof assembly.

The photovoltaic array functions simultaneously as energy-generation infrastructure and primary rainwater-catchment surface. Beneath the panels, a continuous food-grade skin in Galvalume standing-seam or food-grade membrane closes the roof to potable specification. A ventilated thermal cavity between the two layers provides both drainage geometry and thermal-buffer performance, reducing summer cooling load and winter heat loss to Passivhaus-grade U-values.

Collected rainwater is directed into an eight-stage treatment chain engineered to EU Drinking Water Directive 2020/2184 standards: first-flush diversion, sediment filtration, activated carbon, UV-C sterilisation, ozone treatment, ultrafiltration, mineralisation, and potable storage.



The system produces reduced household utility dependence, lower operating costs, and enhanced climate resilience. Certification pathways include BREEAM Outstanding eligibility, Passivhaus Premium, and EU Taxonomy alignment.



Above — the harvesting process. Below — solar surface as primary catchment.



Above — Pawson-scale villa. Below — free-standing pavilion typology.



Three scale references · single villa, master-plan, hospitality cohort



Why This Is Bankable

Las Lluvias is designed around measurable household savings rather than speculative sustainability value. This is the structural distinction that converts the platform from an ESG narrative into a financeable infrastructure thesis.

Each installation produces a measurable, deterministic savings stream. Combined with the owner's verified twenty-four-month utility history, AEMET ten-year rainfall data at postcode resolution, PVGIS solar-yield modelling, and post-installation telemetry, the platform generates a **Bankable Savings Profile** — a single certified annual savings figure with defined confidence interval per installation. A partner bank treats the Bankable Savings Profile as a credit input in the same way a mortgage underwriter treats verified salary.

THE BANKABLE SAVINGS PROFILE PIPELINE



Verified inputs to underwritten loan product · six-stage methodology pipeline

THE TWO-PHASE LOAN PRODUCT

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| <p>PHASE ONE · MONTHS 1–24</p> <p>Interest-only bridge. Customer pays interest only while utility savings ramp through commissioning and certification. The IDAE subsidy disburses inside this window and reduces principal. The customer is net cash-positive from system commissioning.</p> | <p>PHASE TWO · MONTHS 25–144</p> <p>Savings-funded amortisation. Principal-and-interest payments commence, sized below eighty percent of certified annual savings. The customer's combined utility-plus-loan outflow remains below their pre-installation utility outflow throughout. After loan retirement, the full savings stream returns to the household.</p> |
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THE CAPITAL-LIGHT ORIGINATOR MODEL

Las Lluvias does not lend off its own balance sheet. A partner bank funds the loan against the Bankable Savings Profile. Las Lluvias acts as originator, methodology licensor, performance guarantor, and ongoing servicer.



Revenue Model

The platform operates across three integrated revenue layers. Each layer matures at a different stage of company development and is associated with a different investor profile.

1 · INFRASTRUCTURE REVENUE

Design, engineering, installation, certification, and ongoing servicing fees per property. Project-based, working-capital intensive, scales linearly with installation cadence. Margins of fifteen to twenty-five percent on installed CAPEX in line with high-end specialist contractors.

2 · FINANCING REVENUE

Loan origination fees paid by the partner bank at disbursement; servicing and monitoring fees on systems in the loan book; performance-bond spread on outstanding principal; methodology licensing as the Bankable Savings Profile framework extends to additional bank partners and adjacent geographies. Capital-light, recurring, valued at fintech-origination multiples.

3 · PLATFORM AND DATA REVENUE

Geographic licensing rights to operate under the Las Lluvias methodology in regions outside the Iberian Peninsula; the proprietary performance-data layer licensed to insurers, reinsurers, and regulators; certification consultancy as a standalone service line. Downstream consumer-brand and hospitality monetisation paths exist as ancillary extensions (see Appendix A and Appendix B) but are not central to the core platform thesis.

The integration of the three layers is the structural design. Tier 1 funds the early-stage business and produces the data; Tier 2 emerges as installation volume scales and the partner-bank network forms; Tier 3 emerges once the proprietary dataset and bank-partnership network become defensible assets in their own right.



Defensibility

The defensibility of Las Lluvias derives from four integrated layers rather than from any single legal or technical protection.

1 · PROPRIETARY SYSTEM METHODOLOGY

The integrated roof assembly, the eight-stage treatment chain calibrated for Mediterranean rainwater chemistry, the variable first-flush diversion calibrated to Mediterranean rainfall intensity, the mode-switching control logic linking water-quality telemetry to system state, and the integrated thermal-envelope geometry — a methodology developed against the specific climatic and regulatory conditions of the Western Mediterranean rural residential cohort.

2 · INSTALLATION-PERFORMANCE DATASET

The proprietary data accumulated across all Las Lluvias installations — measured rainfall at site resolution, measured solar yield, measured customer behaviour pre- and post-installation, measured system performance. The dataset compounds with every installation and progressively tightens the standard deviation of the Bankable Savings Profile, lowering the partner bank's required risk premium and the customer's effective interest rate.

3 · FINANCING AND UNDERWRITING INTEGRATION

The certified Bankable Savings Profile methodology and the partner-bank relationships built around it. Competitors cannot replicate this without either constructing the data infrastructure themselves — a multi-year investment unlikely to be undertaken by a hardware competitor — or licensing it from Las Lluvias.

4 · REGULATORY AND CERTIFICATION INFRASTRUCTURE

Established certification pathways through EU Drinking Water Directive 2020/2184 compliance, BREEAM Outstanding, Passivhaus Premium, and EU Taxonomy alignment. Regulatory standing and relationships with certification bodies form a meaningful operational moat alongside the technical and financial layers.

PATENT PROTECTION

Pursued selectively where meaningful — particularly around the integrated system control logic and the potable-treatment methodology calibrated for Mediterranean conditions. Prior-art pre-search complete (May 2026); narrow EPO method-claim path open. The principal long-term advantage is expected to emerge from the accumulated installation-performance dataset and the integration of that dataset into financing and underwriting methodology.



Founding Architecture

Las Lluvias is founded and architected by **René Heinz** — concept, brand principal, author of the technical and financial design set out here. Twenty years of continuous presence in Balearic luxury residential real estate, formal banking training (Kreissparkasse Düsseldorf 1988–1991), master-equivalent marketing and communication formation, and quadrilingual capability across the customer and partner-bank geographies (German native, English native level, Spanish fluent, French fluent and certified for financial-legal translation).

The role is design and authorship. The operating layer — loan-origination platform, bank-partnership desk, regulatory administration, day-to-day servicing — is being assembled around the founding role by execution specialists whose discipline is operational rather than strategic. The structure is intentional: strategic authorship and operational execution are best served by different minds; the company is stronger when those roles are explicitly separated from the outset.

CURRENT OPERATING ASSEMBLY

CEO / COO seat. Being defined and resourced. Runs the financing platform, bank-partnership relationships, day-to-day company-build. Profile sought: senior commercial banking or fintech-origination background.

Engineering and construction. Partnerships with established Balearic luxury contractors — Testi Construction (Italian, Balearics division, active luxury villa projects at Sa Caleta 472 m² and Villa Foresta Es Cubells 765 m²) and selected Passivhaus-certified Catalan specialists.

Intellectual-property layer. Held externally through the counsel shortlist (Clarke Modet, ABG IP, PONS IP).

Financial-product layer. Scoped through initial conversations with Balearic-anchored private-banking institutions, Spanish green-finance specialists (Triodos, MicroBank), and the German KfW partner-bank channel for DACH-resident owners of Iberian properties.



Phase I Pilot Programme

Initial deployment is structured around a limited pilot cohort of rural residential properties in Ibiza and Santa Eulària. The pilot phase is intended to establish the operational and financial reference case before broader regional scaling.

OBJECTIVES

Validate installation economics against the canonical anchor case (€167,000 combined system cost, €12,000–18,000 annual utility savings, three-to-five-year unfinanced payback at the eight-hundred-square-metre roof scale). Certify savings variance through twelve months of post-installation telemetry, establishing the standard deviation of the Bankable Savings Profile under live operating conditions. Establish the underwriting methodology as the working framework for the first partner-bank conversation. Create the initial performance dataset required for financing standardisation across subsequent installations.

STRUCTURE

Three to five properties in the Ibiza and Santa Eulària territories, selected against the canonical typology (rural residential, eight-hundred-square-metre roof scale or comparable, existing utility-cost baseline verifiable, eligible for IDAE NextGen and regional Balearic subsidies). Twelve-month monitoring cycle from system commissioning through certification and steady-state operation, with quarterly performance reviews. Integrated engineering and certification partners — Testi Construction (Balearics division) for the construction layer and Passivhaus-certified Catalan specialists for thermal-envelope validation. Initial partner-bank dialogue in parallel.

PHASE I OUTPUTS

A validated installation-economics dataset; a certified Bankable Savings Profile methodology; an initial partner-bank term sheet against the methodology; an operating reference case suitable for subsequent investor and partner conversations.



Strategic Development Path

PHASE I

Pilot validation

Phase I pilot cohort in Ibiza and Santa Eulària. Twelve-month monitoring cycle. Methodology certification to ISO/IEC 17025 standard. Initial partner-bank dialogue. Output is the validated installation-economics dataset and the certified Bankable Savings Profile methodology.

PHASE II

Financing integration

Partner-bank term sheet against the Bankable Savings Profile. Methodology registered as the underwriting framework. Originator-and-servicer operating model established. Output is a financeable loan product in market across the Iberian and Balearic territory.

PHASE III

Regional expansion

Balearic expansion, Iberian peninsular extension, hospitality commercial channel activated. Engineering and certification partner network extended. Output is a multi-territory installation pipeline operating under the partner-bank financing structure.

PHASE IV

Licensing & platform

Methodology licensing to non-competing geographies (Sardinia, the Greek Islands, the Côte d'Azur, the Croatian Adriatic). Data-layer monetisation to insurers, reinsurers, and regulators. Output is the platform operating as a regulated-finance origination network.

INITIAL GEOGRAPHIC FOCUS

Ibiza, the wider Balearics, the Costa Brava, the Costa del Sol.

LONGER-TERM GEOGRAPHIC EXTENSION

Sardinia, the Greek Islands, the Côte d'Azur, the Croatian Adriatic — geographies sharing the same combination of climate, construction typology, and regulatory environment, accessible through the master-license framework rather than direct operation.



Appendix A — Bottled Water Brand Extension

The Las Lluvias system produces water that is, by certification, of premium drinking quality. A standalone brand expression — *Las Lluvias*, classified H_2O — exists as a downstream monetisation path. It is positioned in this memorandum as an ancillary brand asset within the platform, a live commercial road rather than the central business identity.



Las Lluvias · H_2O · embossed glass, swing-top, no printed label · one global mark

A single worldwide name. *Las Lluvias* is the mark; H_2O is a subtle, language-independent classifier that distinguishes the water expression from the infrastructure platform without declaring the unglamorous legal denomination on the hero face — the mandatory designation sits in the back-label particulars per EU food-information rule. The classifier also carries the thesis: H_2 as the two harvested elements, rain and sun; O as the water they produce. The bottle is positioned as architectural object rather than commercial beverage — embossed glass, swing-top closure, no printed label, refillable — and the name does not fragment by territory: one global mark, not regional sub-editions.



Appendix B — Hospitality & Retail Channel

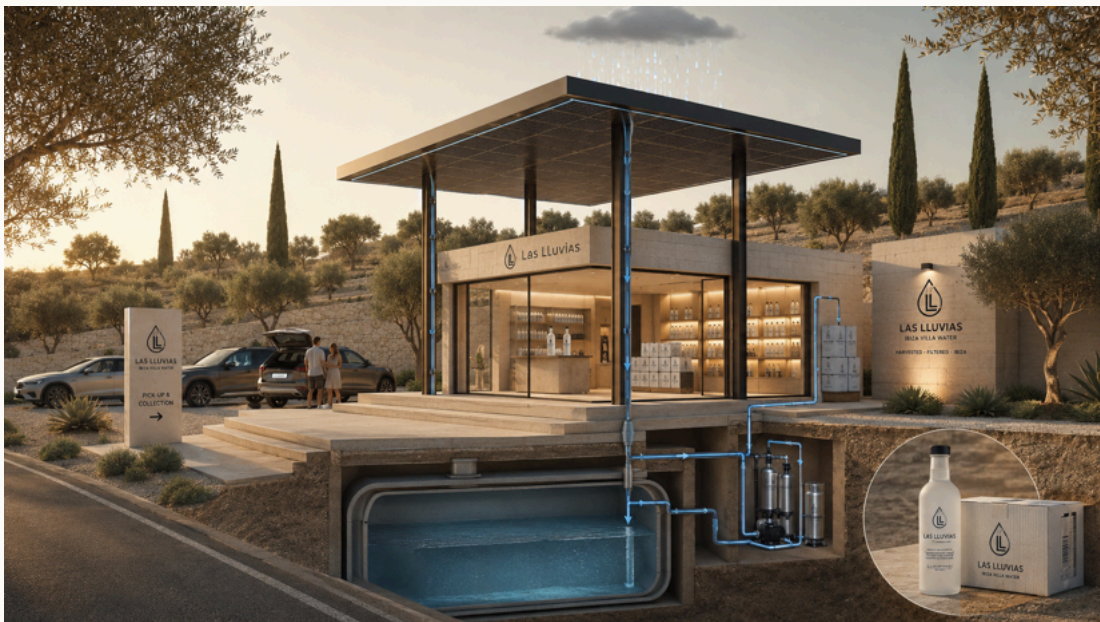
Beyond the residential infrastructure focus, the platform supports two secondary commercial channels that share the same underlying methodology and certification track.

HOSPITALITY CHANNEL

Boutique resorts, eco-luxury hotels, agritourism estates, and regenerative-tourism properties in the Aman / Six Senses / Soneva / Belmond cohort. Per-project revenue €60,000–170,000 versus €32,000–70,000 for residential, with cleaner commissioning timelines because the operator is institutionally motivated by certification and operational savings rather than personal preference.

RETAIL AND BRAND-PRESENCE CONCEPT

A small-format Las Lluvias retail outpost — a single-volume building with the integrated solar-rainwater platform as the roof, demonstrating the technology at retail scale and serving as a distribution point for the bottled-water programme.



The retail concept · the integrated platform demonstrated at small commercial scale