HeatWise Consultancy

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Key questions and our answers

Question	Our Consultancy's Response
1. What problem are we solving?	Urban "heat islands" increase city-center temperatures by 5–7 °C, inflating cooling bills, endangering health, and accelerating infrastructure wear.
2. How big is the problem?	• 10 000+ cities (>100 K inhabitants) worldwide• €200 B+/yr spent on site feasibility and climate-risk studies
3. Who experiences it?	• Municipal planning departments• Architects, engineers & real-estate developers• Operators of hospitals, data centers, solar farms
4. How urgent is it?	• Growing frequency of extreme heat events• EU climate-adaptation mandates by 2027• Rising energy costs demanding proactive siting choices
5. Why solve it now?	• Up to 15 % savings on cooling capital & OPEX• Fewer heat-related health incidents• Stronger ESG credentials and eligibility for green financing

Startup Rewiew

Product: SaaS platform delivering hyper-local urban heat maps, microclimate forecasts, and AI-driven site recommendations
Core Technologies:
Thermal satellite imagery + dense IoT sensors + on-demand drone surveys
Machine learning for anomaly detection & 7–14 day forecasting
3D digital twin with “what-if” scenario engine
Go-to-Market:
Freemium tier (1 km²) → Pay-per-report → Enterprise licenses + consulting
API marketplace for GIS, BIM/Revit, Smart-City integrations
Revenue Streams: Annual SaaS, one-off feasibility reports, premium advisory services

How do we solve the problem?

Data Fusion & Validation
Merge satellite (30–100 m), IoT ground sensors, UAV thermal surveys → 1–5 m resolution
Continuous cross-calibration ensures ±5 m positional accuracy and data quality scoring
Predictive AI & Digital Twin
7–14 day microclimate forecasts and heat-wave early warnings
3D city model with material properties (asphalt vs. vegetation) for “what-if” testing (green roofs, reflective pavements, tree planting)
Automated Design Recommendations
Site-suitability scoring and orientation/material guidance generated by AI
Exportable BIM/Revit plugins and “permit-ready” compliance reports
Monitoring & Alerts
Dashboard with daily/on-demand updates
Custom alerts for emerging hotspots or regulatory thresholds

Competitive advantage

Ultra-Granular, Always-On Data
1–5 m resolution, daily or on-demand refresh via drones & IoT – vs. 30–100 m monthly data in legacy tools
End-to-End Decision Support
From raw heat maps → predictive forecasts → actionable design guidance → compliance documentation
API Ecosystem & Network Effects
Freemium model incentivizes sensor deployment; crowdsourced data continually improves accuracy for all clients
REST APIs enable seamless integration with GIS, CAFM, Smart-City platforms
ESG & Carbon-Credit Integration
Auto-generated CO_2 savings metrics, “Climate-Adaptive Design” certification for green bonds
Tokenization of carbon credits from recommended green infrastructure interventions