



SolarNet

Smart Solar Energy Forecasting for a brighter Future

Mid-Term Presentation
Market Entry Strategies





Problem

The rapid expansion of solar energy is hindered by the **unpredictability of solar output**, which challenges operators in meeting market demands and maintaining grid stability. Current solutions fail to deliver **accurate, cost-effective, short-term predictions**, leading to **revenue loss, inefficiencies, and grid instability**.

1,000 GW

Of global solar capacity in 2022, expected to grow by 60% by 2025 (International Energy Agency).

15–25%

solar forecasting error rate leading to significant revenue losses and economic penalties for operators.

Current Solutions

- 1. Numerical Weather Models:** Effective for long-term forecasts but fail in short-term precision.
- 2. Hardware-Based Solutions:** Expensive and difficult to maintain, accessible only to larger players.
- 3. Manual Adjustments:** Solar plant operators and grid managers often rely on manual processes, leading to inefficiencies and penalties.



Pain Points



High Penalties

for inaccurate solar energy forecasts.



Grid Instability

due to fluctuations in solar energy production.

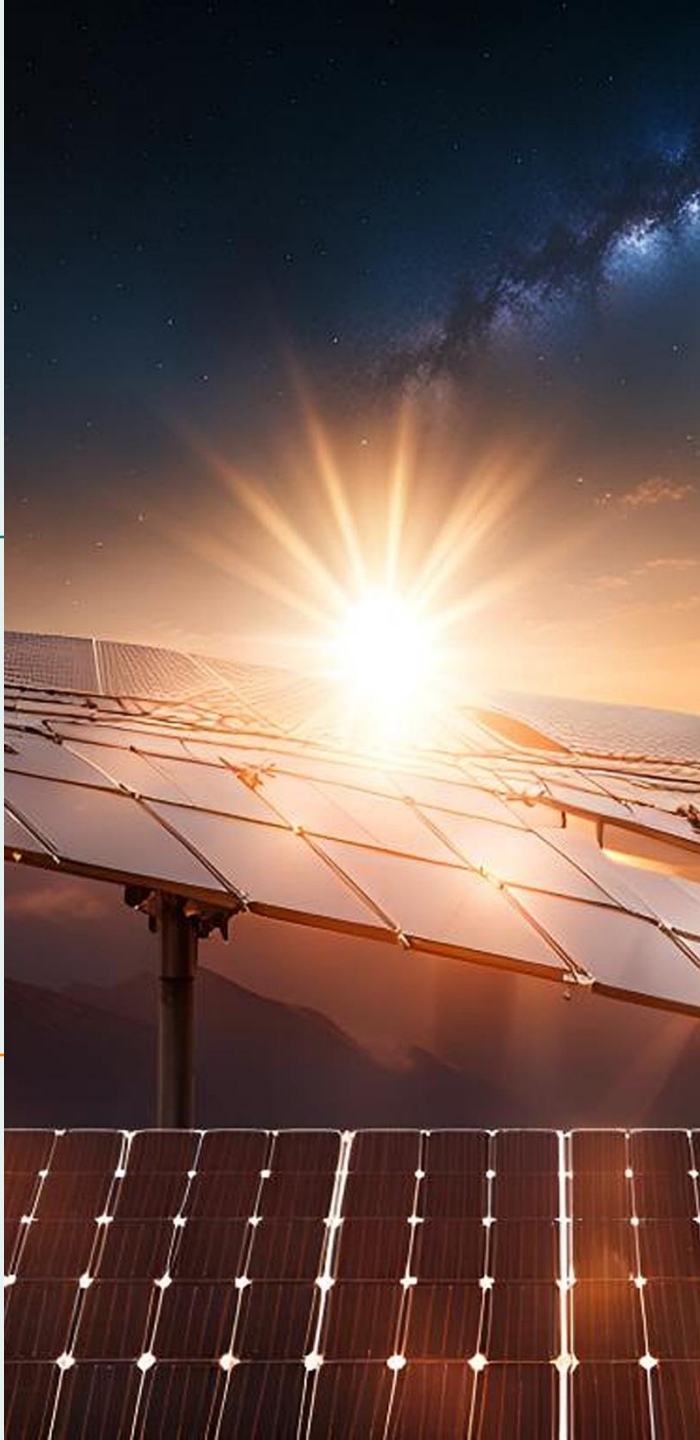


Expensive hardware solutions

that are inaccessible to smaller solar plant operators.

Jobs to Be Done

- Operators need a simple, cost-effective, and accurate forecasting tool that minimizes risk and maximizes operational efficiency.
- Grid operators need reliable real-time data to ensure grid stability.



Solution: SolarNet

SolarNet is an **AI-powered solar forecasting** tool that uses **real-time sky images** to predict **solar energy output** with unmatched **hourly accuracy**. SolarNet fills the critical gap in the market for **cost-effective, highly accurate, and real-time** solar energy forecasts, eliminating the need for complex hardware or long-term weather models.

Vision

Empowering solar operators with precise, real-time forecasting tools to make solar energy as reliable as traditional power sources.

Technology

SolarNet uses AI and sky images to provide hourly solar output forecasts.

Value Chain

Technology Development

AI-Driven Forecasting



AI Processing & Prediction

Image Analysis & Forecast Generation



Customer Application & Integration

Integration with Energy Management Systems



Data Collection

Sky Image Acquisition



Cloud-Based Distribution

Delivery of Predictions



Customer Support & Continuous Improvement

Ongoing Support and AI Refinement



Benefits

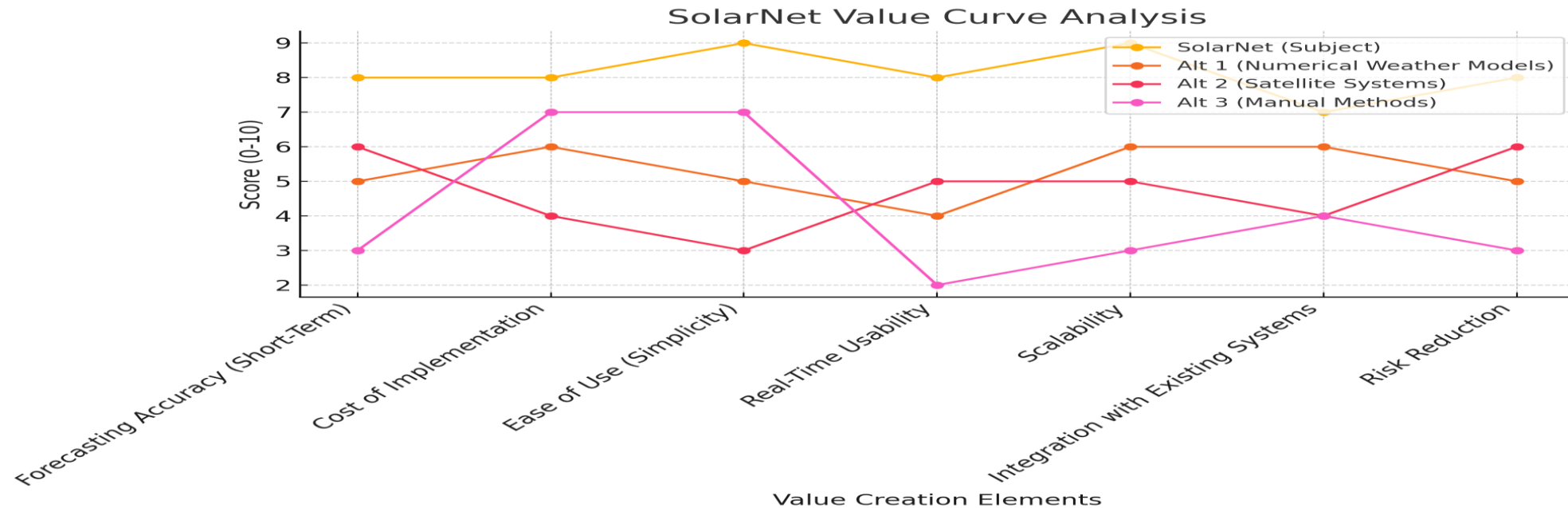
1. **Accuracy:** Short-term solar forecasts outperform traditional models.
2. **Cost-Effectiveness:** Software-only solution with no hardware costs.
3. **Convenience:** Simple, cloud-based platform with easy integration.



Choice & Convenience

Is SolarNet's key differentiator—offering seamless, accurate forecasting without the complexity of hardware-based systems.

Value Curve



SolarNet excels in accuracy, cost, and real-time usability compared to traditional weather models and manual methods in hour ahead predictions.

Ideal Customer Persona & Value Web

Primary Customers

Solar Plant Operators

- **Pain Point:** Inaccurate short-term forecasts, penalties.
- **Value Provided:** Accurate, real-time hourly forecasts, reducing financial penalties.



Additional Customers

Energy Traders

- **Pain Point:** Lack of accurate forecasting for energy trading.
- **Value Provided:** Informed, short-term predictions, maximizing energy trading returns.

Secondary Customers

Grid Operators

- **Pain Point:** Grid stability issues due to inconsistent solar supply.
- **Value Provided:** Real-time forecasting data to balance energy loads and improve grid efficiency.

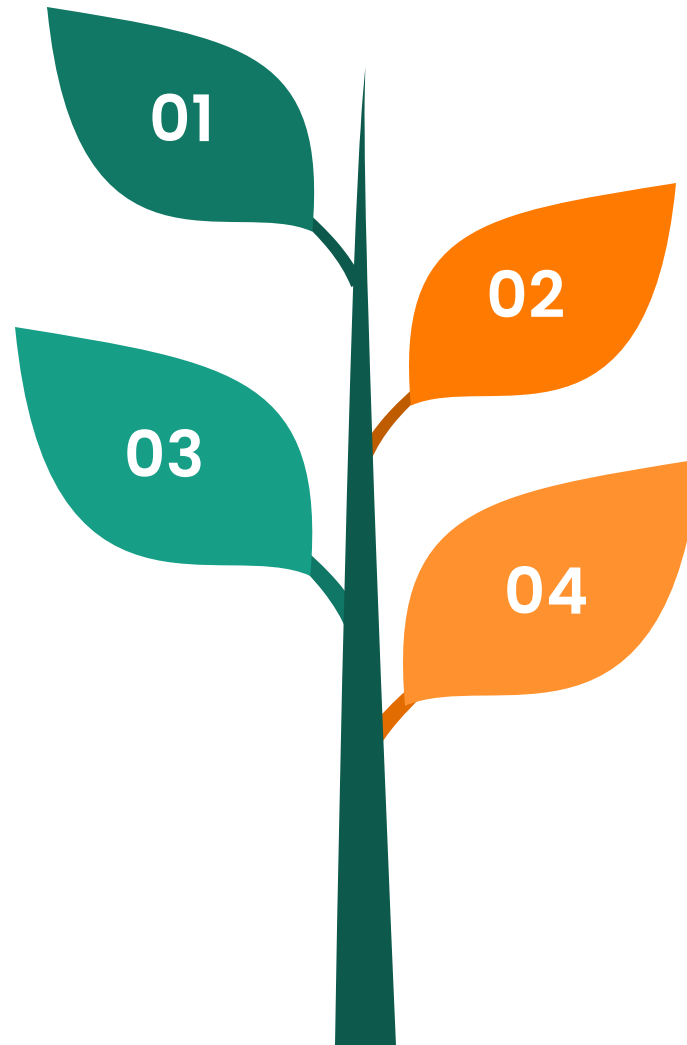
Value Web

Solar Plant Operators →

Use SolarNet for accurate production predictions.

Energy Traders →

Use real-time data for energy market decisions.



Grid Operators →

Leverage SolarNet to maintain grid balance.

Energy Aggregators →

Pool energy from multiple sources with SolarNet's real-time projections.

Opportunity: TAM, SAM, SOM

Total Addressable Market (TAM)

- Valued at \$234 billion in 2022, expected to reach \$436.36 billion by 2032 at a CAGR of 6.8%.
- The global market for Solar energy forecasting is currently valued at approximately **\$2.5 billion** in 2023.

Serviceable Available Market (SAM)

- Focus on utility-scale solar plants and grid operators.
- SAM estimated at 50-60% of the global solar market, targeting regions with high solar adoption like North America, Europe, and Asia-Pacific .

Serviceable Obtainable Market (SOM)

- SolarNet's scalable model targets 15-20% of the SAM over the next 3-5 years.
- Focus on solar-heavy markets, with a strong advantage due to ease of implementation and cost-effectiveness .

Creative Imitation

SolarNet's Market Entry Strategy



Creative Imitation

Improving on existing solutions by offering real-time, hourly forecasts.



Current Alternatives

Traditional weather models and satellite systems fail to provide short-term data.



SolarNet Advantage

Real-time, affordable hourly forecasts using AI-driven sky image analysis.



Final Goal

Capture solar operators and grid managers needing accurate forecasting without high costs or complexities.

Buyer's Utility Map for SolarNet

Customer Productivity	3	2	3	2	3	0
Simplicity	3	3	3	2	2	0
Convenience	3	3	3	2	3	0
Risk Reduction	1	1	3	3	3	0
Fun and Image	1	1	1	1	1	0
Environmental Friendliness	1	1	3	1	2	0
	Purchase	Delivery	Use	Supplements	Maintenance	Disposal
	Stages of Buyer Experience					

SolarNet's Buyer's Utility Map

- **Customer Productivity:** Increases forecasting accuracy, boosting efficiency during purchase and use.
- **Simplicity:** Easy to purchase and use with a cloud-based, no-hardware setup.
- **Convenience:** High convenience across all stages, especially in use and maintenance.
- **Risk Reduction:** Reduces penalties through accurate forecasts in the use phase.
- **Environmental Friendliness:** Optimizes solar energy use with minimal impact.



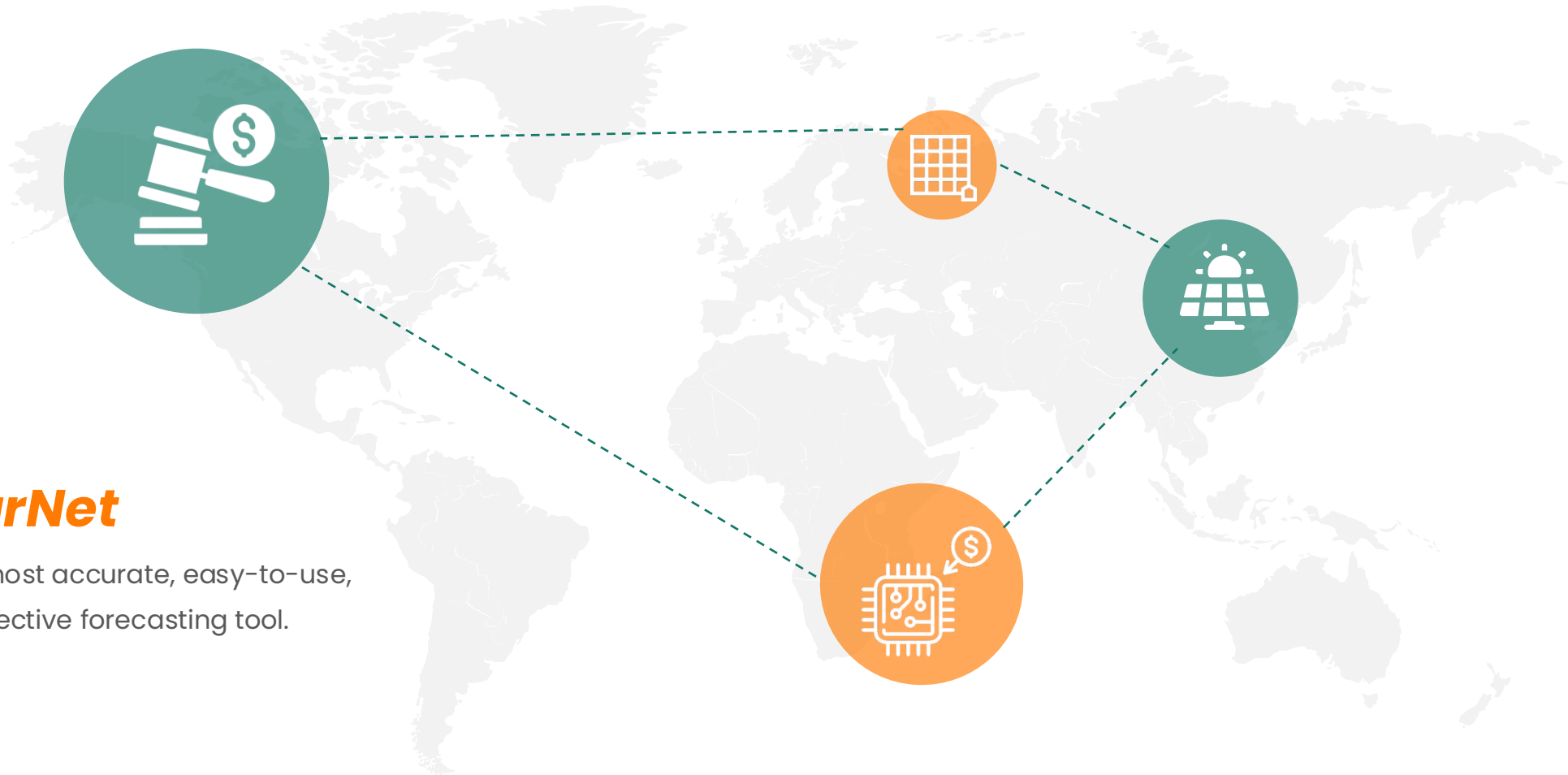
Market Entry Strategy (GTM)

- **Initial Market:** Target large-scale solar plant operators and grid operators in solar-heavy regions like California, Texas, and Europe.
- **Phase 1:** Early adopters in utility-scale solar plants needing real-time forecasting.
- **Phase 2:** Expand to energy traders and aggregators leveraging real-time data.
- **Phase 3:** International markets with government-backed renewable energy initiatives (EU, APAC).

Channels of Distribution

- **Direct Sales:** Focus on larger enterprises with sales teams.
- **Partnerships:** Collaborate with energy software platforms for integration.
- **Digital Marketing:** Target solar energy blogs, trade shows, and forums.

Positioning



SolarNet

As the most accurate, easy-to-use,
cost-effective forecasting tool.

Communication Strategy



Customer Communication

- **Educational Content:** Develop blogs, whitepapers, and webinars on short-term solar forecasting.
- **Community Engagement:** Foster online communities and forums for SolarNet users.
- **Targeted Campaigns:** Email and digital marketing campaigns targeting energy stakeholders.

Channels

- **LinkedIn:** Reach decision-makers in renewable energy.
- **Trade Shows:** Participate in renewable energy expos.
- **Partnership Programs:** Work with solar industry partners for cross-promotion.

Recommendation



Focus on Marketing Partnerships

Any Questions?



Thank You



Team

Ullah Anas, Mohammad Ansar

Das, Falguni

Tumukunde, Ange Raissa

Verma, Sarthak

Eluwole, Olaniyi

