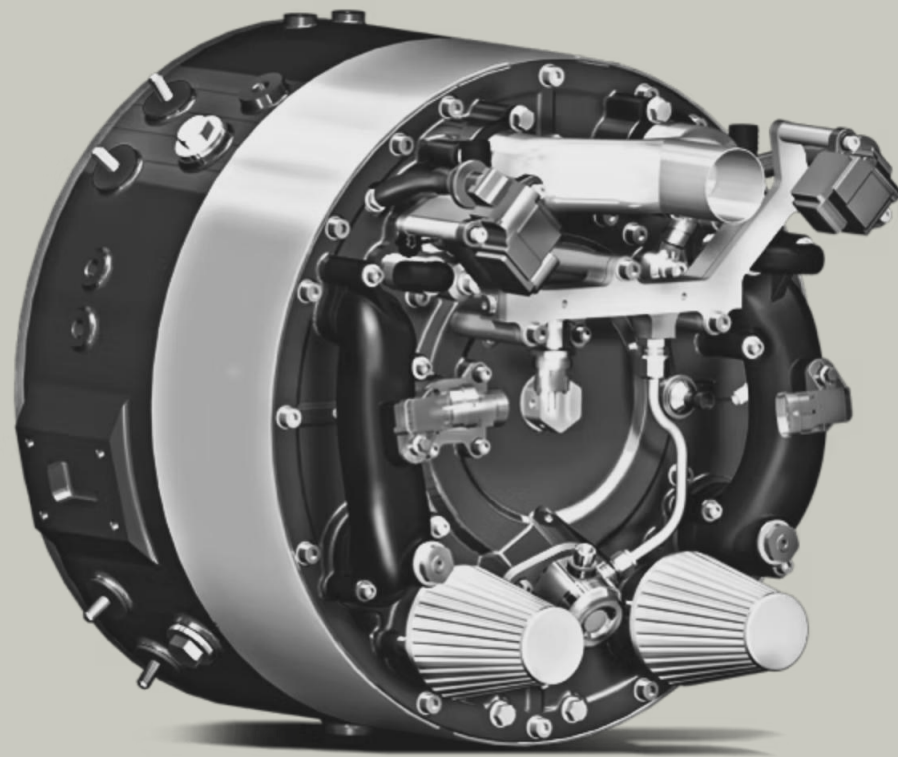




Theta Generator

Advanced Energy

Made in Germany

info@thetamotoren.de • www.thetamotoren.de

Technology Overview



20 KW

100 KG

scalable

750

Displacement
cubic centimeters

460

Diameter
millimeters

400

Height
millimeters

Our proprietary engine design combines exceptional power density with minimal footprint. The compact architecture enables integration into space-constrained applications while maintaining robust performance characteristics.

Leadership Team



Shaul Yaakoby
Founder & Inventor



Ortal-Jasmin Emanuel
Administration & Operations



Dr. Ralf Marquard
Advisory Board Consultant



Dr. Manfred Arnold
Advisory Board Production
Coordinator

Our multidisciplinary leadership combines decades of experience in advanced propulsion systems, manufacturing excellence, and strategic business development. This team brings together innovation, technical precision, and operational expertise.

Engineering Excellence



Generator Design

Specialized mechanical and electrical design expertise for high-efficiency power generation systems



Engineering Support

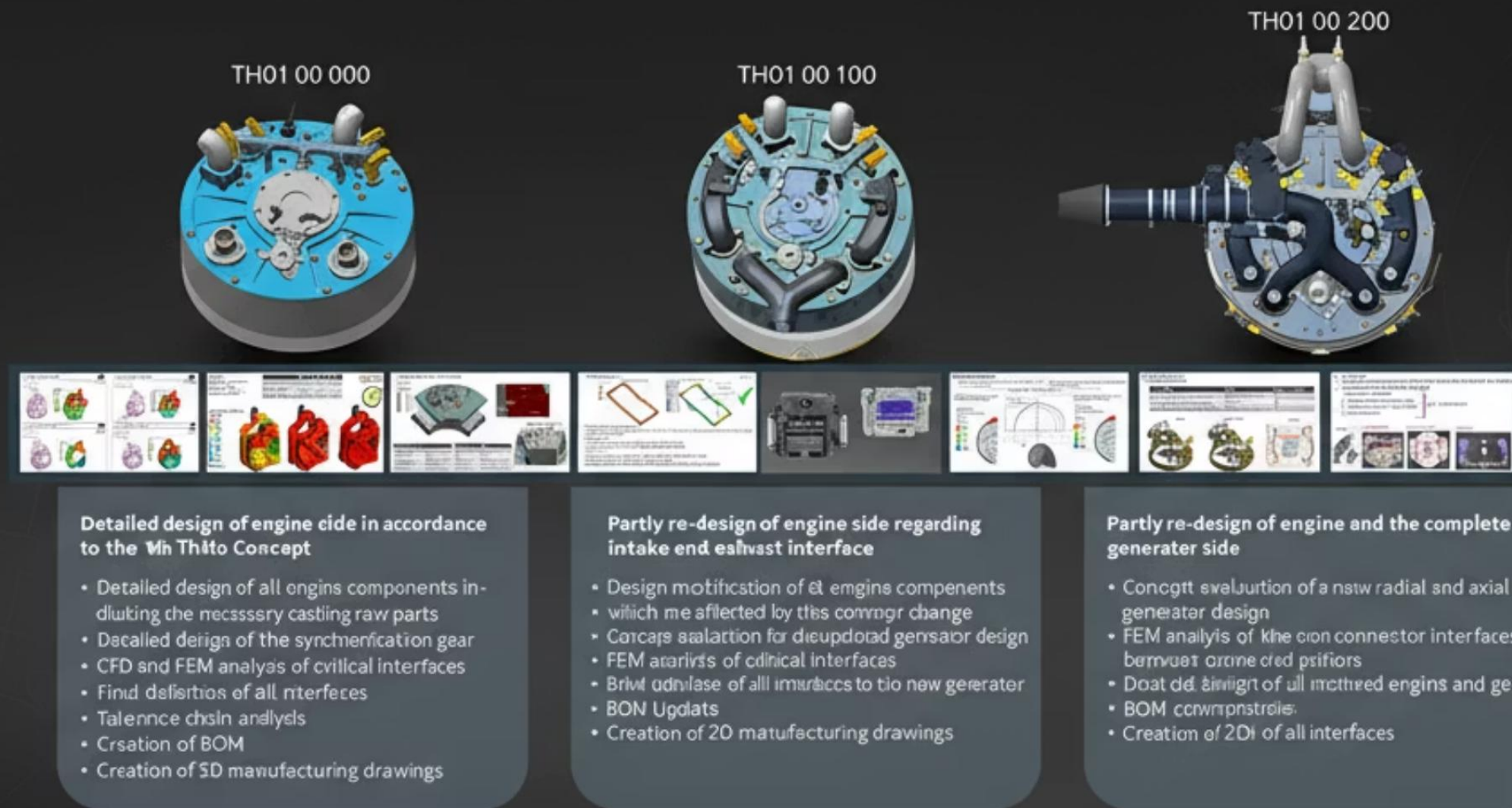
Comprehensive simulation, validation, and optimization throughout the development lifecycle

The logo for VEMAC, featuring the word "VEMAC" in a bold, uppercase, sans-serif font. The letters are white with a subtle blue shadow or outline, set against a white background.

Software & Control

Advanced control algorithms and monitoring systems for optimal performance and reliability

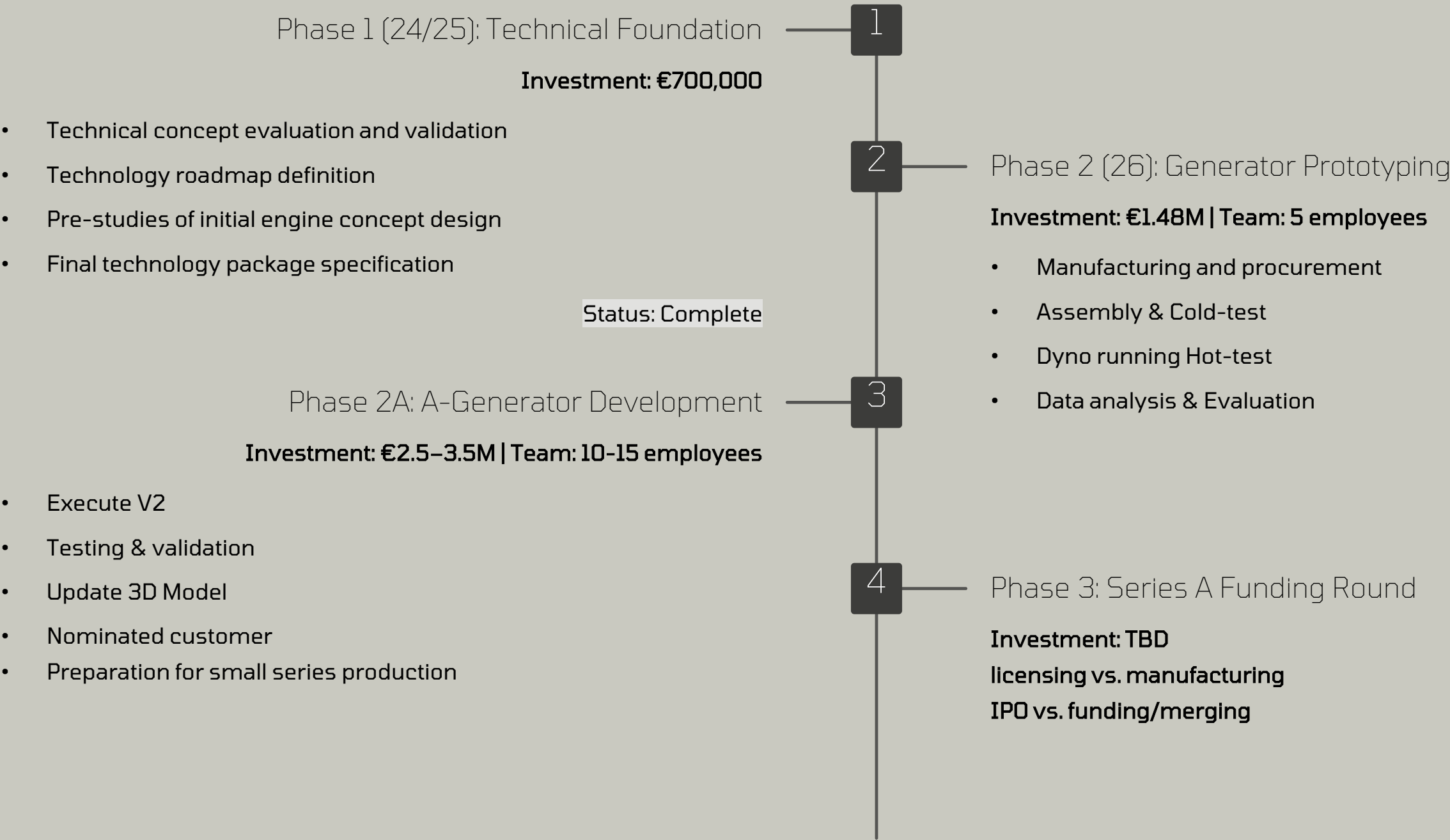
Our integrated engineering approach ensures every component works in perfect harmony, from initial concept through production deployment.



Precision Engineering in Action

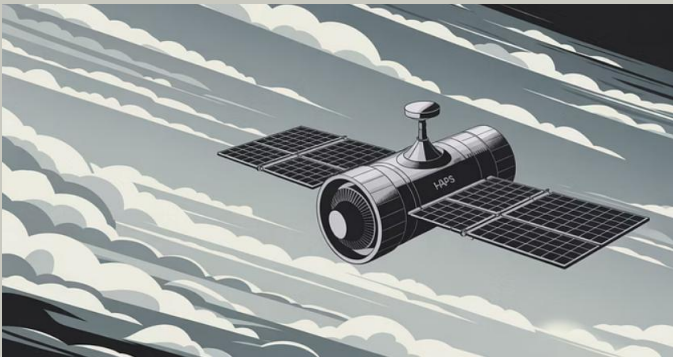
Advanced manufacturing and assembly processes ensure consistent quality and performance. Every Theta Generator undergoes rigorous testing protocols before deployment, guaranteeing reliability in mission-critical applications.

Development Roadmap



Diverse Application Spectrum

The Theta Generator's compact design and exceptional power-to-weight ratio enable deployment across multiple high-value sectors, from automotive range extension to critical infrastructure backup power.



Each application benefits from Theta's unique advantages: reduced weight, lower emissions, exceptional fuel efficiency, and minimal maintenance requirements.

Telecommunication Market Opportunity

Market Statistics

- **Market Volume (2024):** €1.58 billion
 - **Market Volume (2034):** €2.88 billion
 - **Estimated CAGR (2025-2034):** 6.5%
-
-

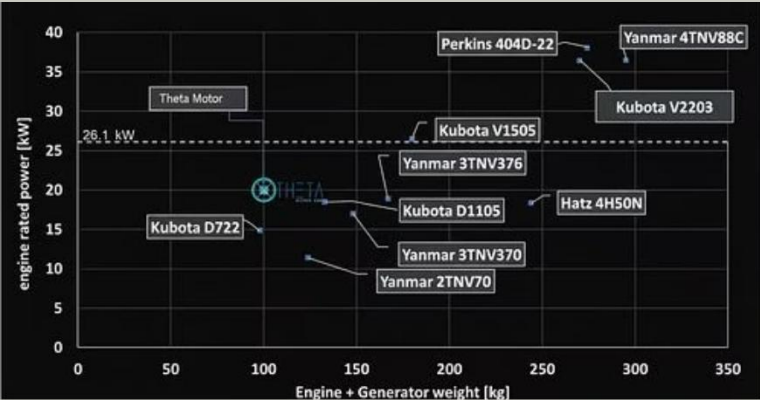
Target Segment

- Diesel/Hydrogen generator segment (2034)
- Up to 25 kVA – 50 kVA rated power
- **Segment CAGR:** >7%



Telecommunication infrastructure demands reliable, efficient backup power. Theta Generator's superior power density and fuel efficiency position it as the ideal replacement for aging diesel systems in this high-growth segment.

Cooling Units: Competitive Advantage



Theta Generator delivers more than **60% weight reduction** while cutting costs in half. This breakthrough enables refrigerated transport operators to increase payload capacity and reduce total cost of ownership simultaneously.

Truck Systems (10kW)

Competitor Average:

- Weight: 134 kg
- Price: €4,000

Trailer Systems (20kW)

Competitor Average:

- Weight: 253 kg
- Price: €5,200

Theta Generator (up to 20kW)

Our Solution:

- Weight: **100 kg**
- Price: **≈50% of competitors**

Combined Heat & Power Market



Competitive Positioning

CHP Systems <10kW

Average System Price: €5,500

Traditional combined heat and power units for residential applications

CHP Systems <20kW

Average System Price: €7,200

Commercial-grade CHP systems for small business deployment

Theta Generator (up to 20kW)

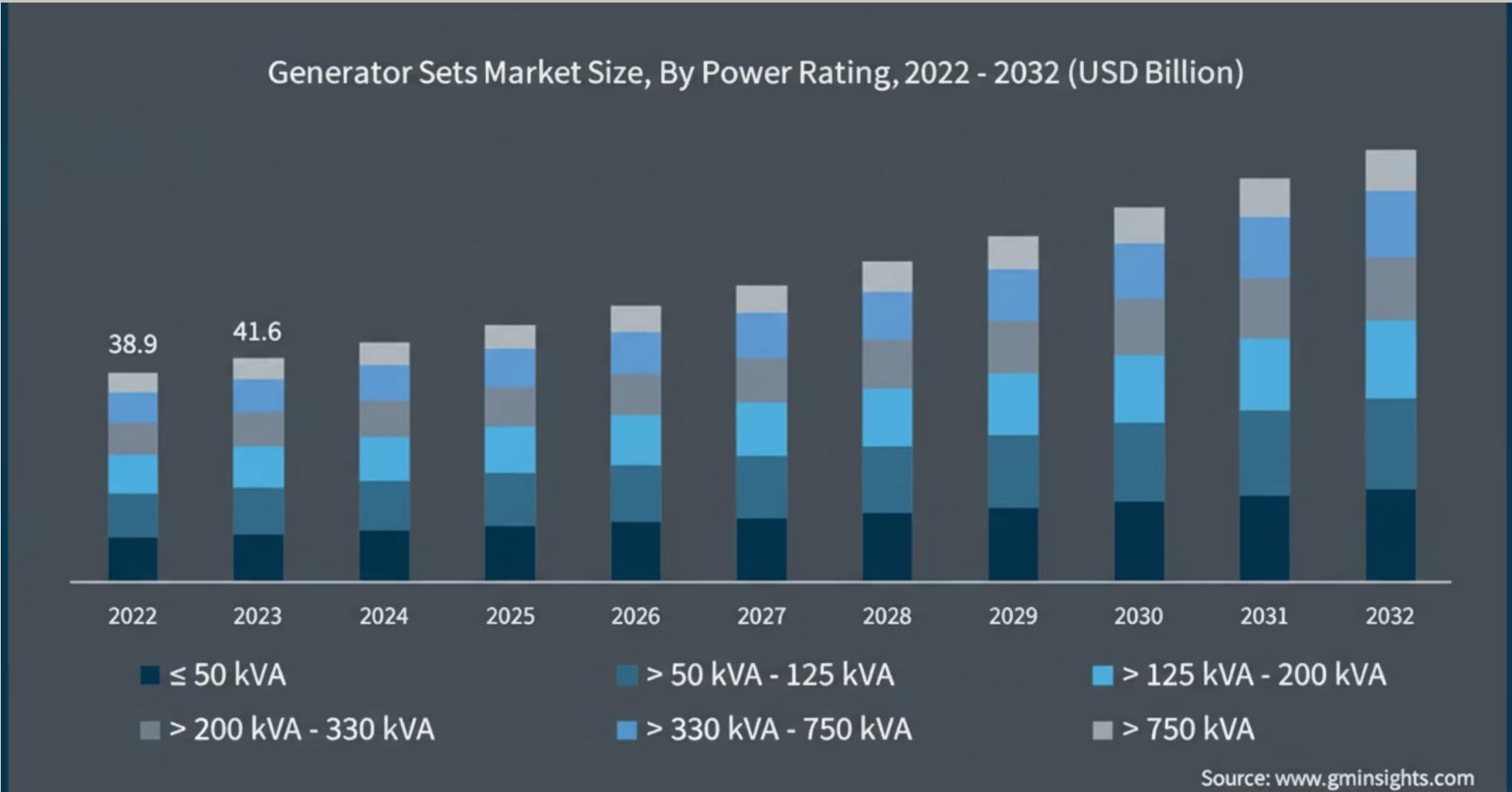
Target Price: ~50% of competitor average

Revolutionary cost structure enabling mass-market CHP adoption

By reducing system costs while maintaining performance, Theta Generator opens CHP technology to price-sensitive market segments previously unable to justify the investment.

Generator-Sets Market Overview

Understanding the global generator-sets market by kVA rating reveals key segments and opportunities, particularly within the sub-50 kVA range.



The chart illustrates the projected growth of the global generator-sets market by kVA rating from 2022 to 2032, measured in USD Billion. The segment of generators with ratings ≤ 50 kVA, prominently displayed in dark blue, shows consistent growth and represents a substantial market opportunity. This category, which includes the sub-20 kVA target for Theta Generator, is a crucial segment for market penetration. Theta Generator is ideally positioned to capitalize on this demand by offering a revolutionary cost structure and enhanced performance, driving market share within this growing segment.

Source: gminsights.com

Pricing Strategy

Commercial Boundary Conditions

Our pricing model reflects both technical innovation and market realities. Even in small-scale production scenarios, Theta Generator maintains exceptional cost competitiveness.



Manufacturing Cost

€2,300 per unit (1,800 + 500)

Small-scale production

Market Price B2B

€5,000–6,000

Competitive positioning with healthy margins

This pricing structure delivers **strong margin potential** while remaining highly competitive against traditional generator solutions. Volume production will further improve cost structure and market positioning.

Financial Overview



Costs Invested to Date

Engineering and Design: €700,000

Comprehensive technical development, prototype validation, and design optimization completed.



Technical Components (Next Phase)

Subtotal: €480,000

- Machine parts: €150,000
- Generator components: €45,000
- Purchased parts: €65,000
- Software & control systems: €65,000
- DAQS & analysis equipment: €60,000
- Hydrogen functional testing: €95,000



Operational Costs (Next Phase)

Total: €1,000,000

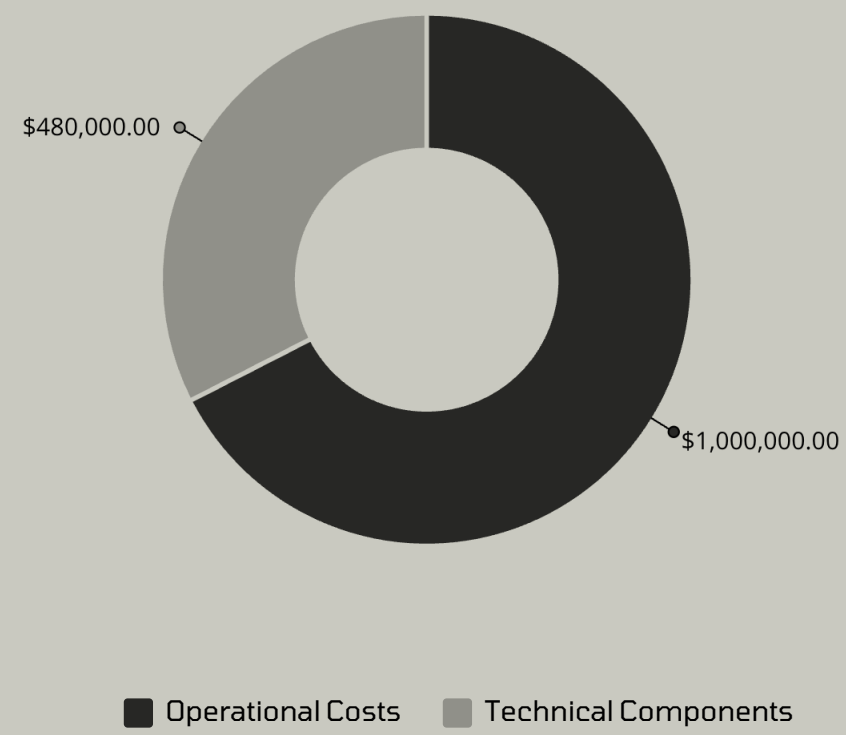
Includes team expansion (Chief Engineer, High-&Low Voltage Engineer, Mechanic, Management), facility operations, logistics coordination, and administrative infrastructure to support accelerated development.



Total Investment Required: €1.48 Million

The funding supports a full year of development, encompassing prototype construction, system integration, and comprehensive functional testing.

Development Investment Breakdown

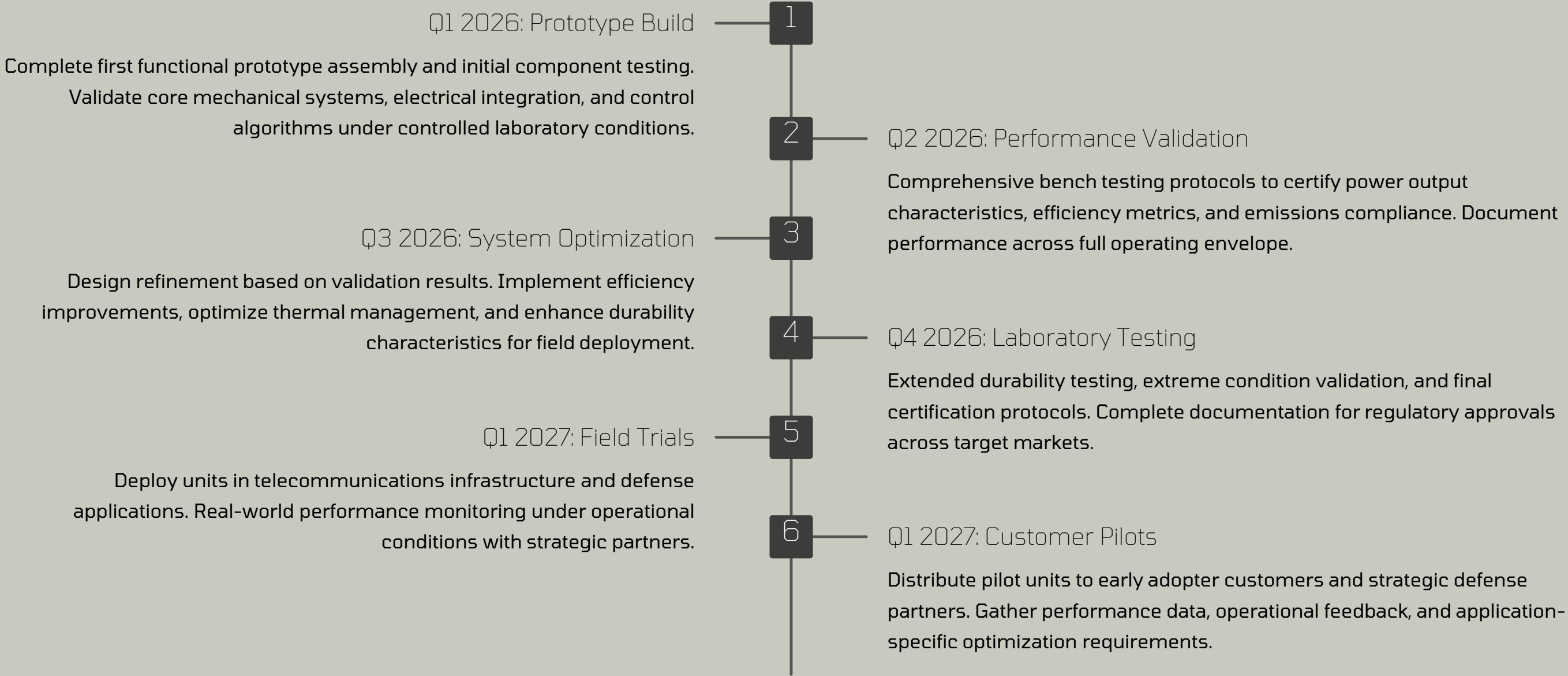


Investment Summary

The allocation reflects our commitment to both technical excellence and operational capabilities. Approximately **68% supports team and infrastructure**, while **32% funds critical technical components and testing**.

Total Next Phase Investment: €1.48M

Strategic Development Timeline



This phased approach ensures thorough technical validation while maintaining aggressive time-to-market objectives for both civilian and defense sectors.

Partnership Opportunity



Join Us in Transforming Power Generation

Theta Generator represents a **paradigm shift** in compact power generation technology. Our proven design, experienced team, and clear market strategy position us for rapid commercialization across multiple high-value sectors.

What We Offer Partners:

- Access to breakthrough technology with substantial IP protection
- Multiple revenue streams across diverse market segments
- Strong competitive moats in cost and performance
- Experienced leadership with manufacturing excellence
- Clear path to profitability with validated market demand

Investment Highlights:

- **€1.48M** completes prototype validation and pilot production
- Addressable markets exceeding **€2.8 billion by 2034**
- Superior margins with **50% cost advantage** over competitors
- Strategic applications in defense and critical infrastructure

Let's discuss how we can work together to bring this revolutionary technology to market.

Contact Us

Learn More