

Aqua Clear Solutions

The Unique Global Solar-Powered Desalination Solution for Water-Stressed Regions

Introducing the Cyprus Pilot Project – Strategic Investment Opportunity



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“Aqua Clear Solutions develops modular, solar-powered desalination systems designed to produce clean water in water-stressed regions with lower energy dependency and reduced environmental impact.”

This presentation has been prepared for:



Lion Heart Global

Lion Heart Global

Strategic and Financial Partnership

Castle Szidonia, 5th of June, 2026



Assessing The Problem – Water Crisis

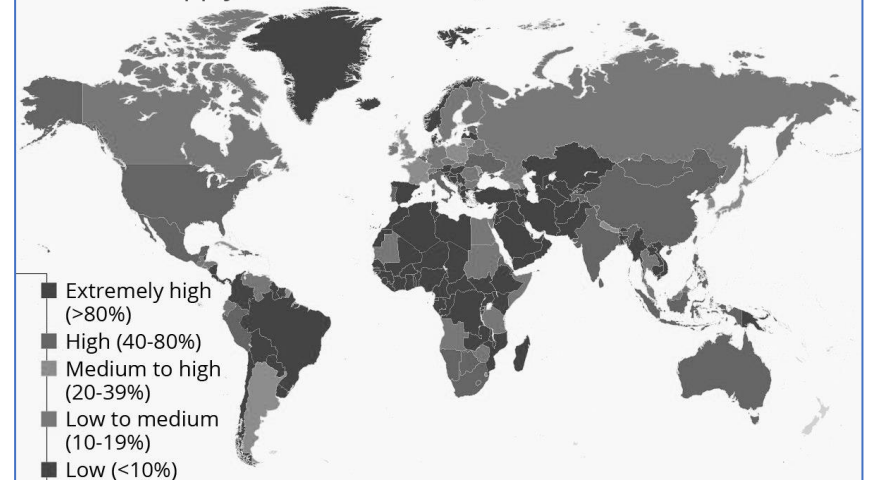


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- **Water scarcity** is a critical issue, with agriculture accounting for roughly 70% of global freshwater consumption.
- **Desalination is highly energy-intensive**, adding further pressure on energy systems.
- **Reverse osmosis** processes also generate brine, which can have harmful environmental impacts if not properly managed.
- **Cyprus is particularly affected**, experiencing the second-highest level of water stress in the EU after Malta, while also receiving exceptionally high annual solar irradiation.

Where Water Stress Will Be Highest by 2040

Projected ratio of water withdrawals to water supply (water stress level) in 2040



Source: World Resources Institute via The Economist Intelligence Unit



statista

An Overview of the ACS Solar Desalination Technology Offering

- **100% Renewable-Powered Desalination**

A desalination system powered entirely by renewables, eliminating fossil fuel use and lowering lifecycle carbon intensity by aligning water production with clean energy supply.

- **Integrated Solar Water Production System**

A unified system combining solar energy capture and water generation, directly converting solar input into potable water while reducing transmission and conversion losses.

- **Zero-Emission Freshwater Production**

A model designed for zero operational emissions, ensuring freshwater output is produced without greenhouse gas emissions during steady-state operation.

- **Modular, Scalable & Off-Grid Ready**

A deployable, scalable architecture that operates independently of centralized utilities, suited for remote and infrastructure-limited regions.

- **Advanced Solar-Thermal Desalination**

A solar-thermal process-driven desalination method optimized for high-efficiency water purification with reduced electrical dependence in high-irradiation environments.

Technical Solution I/II: Project Development



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Built upon one of two existing licenses held by Princess Desirée of Austria (patent holder), ACS has further developed its own proprietary intellectual property. This work extends the original licensed technology through additional engineering, refinements, and system-level innovations, resulting in an independent and enhanced IP portfolio.

- **Image 1: License Document (11.12.25)**

This image shows the formal license agreement dated 11.12.25.

- **Image 2: Contract Signing – Prototype II Collaboration**

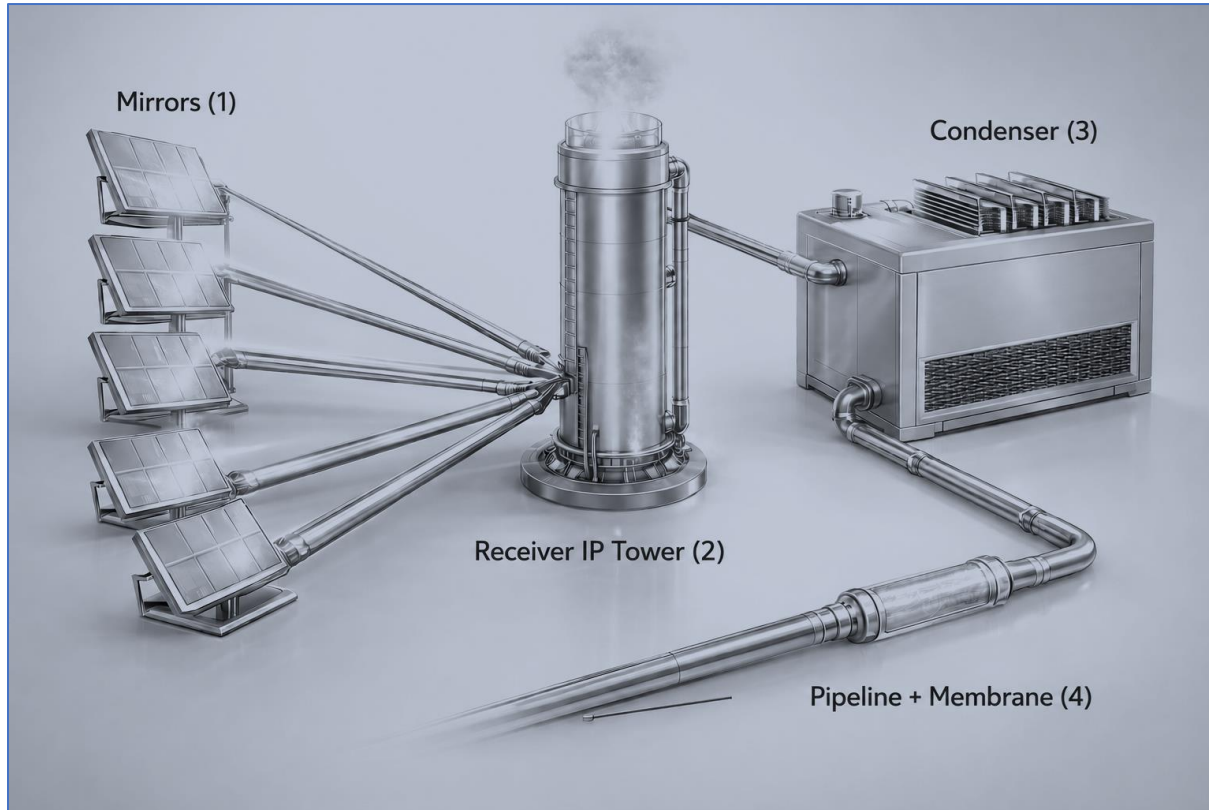
This image formalises the collaboration with the Fraunhofer Institute and ACS. It represents the operational commitment to advancing Prototype II from agreement into active development, aligning technical leadership and financial oversight under the agreed licensing framework.



Technical Solution II/III: Proprietary System Architecture



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ACS Proprietary Patent Development

ACS has developed its own patented technology platform, with two patent applications filed to protect key innovations. These include an advanced microplastic particle extraction solution developed in collaboration with Dr. Valery Ivanov of the Russian Academy of Sciences, expanding the system's water treatment and purification capabilities.

Technical Solution III/III: ACS Process Control & System Architecture



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Process Control and System Architecture According to ACS IP

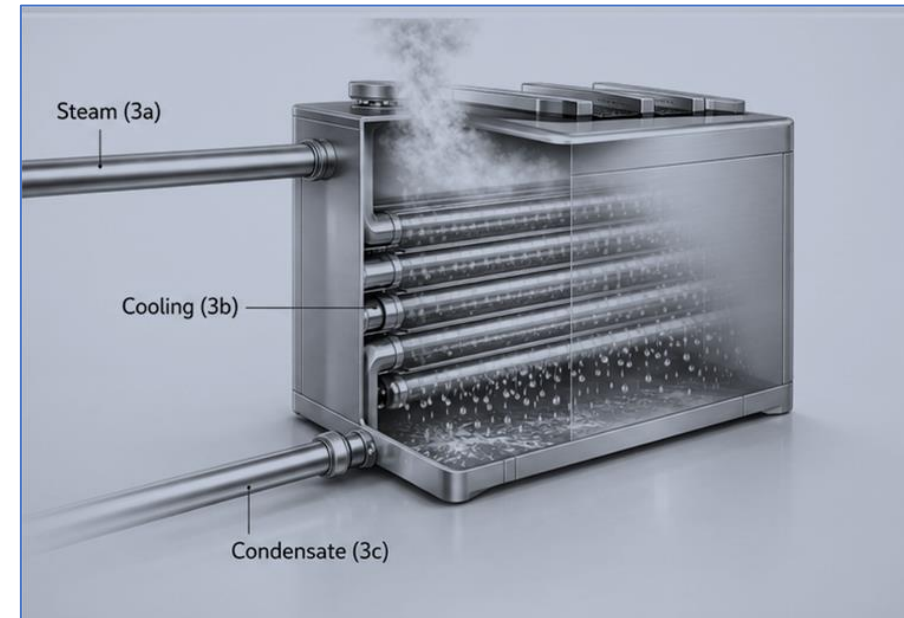
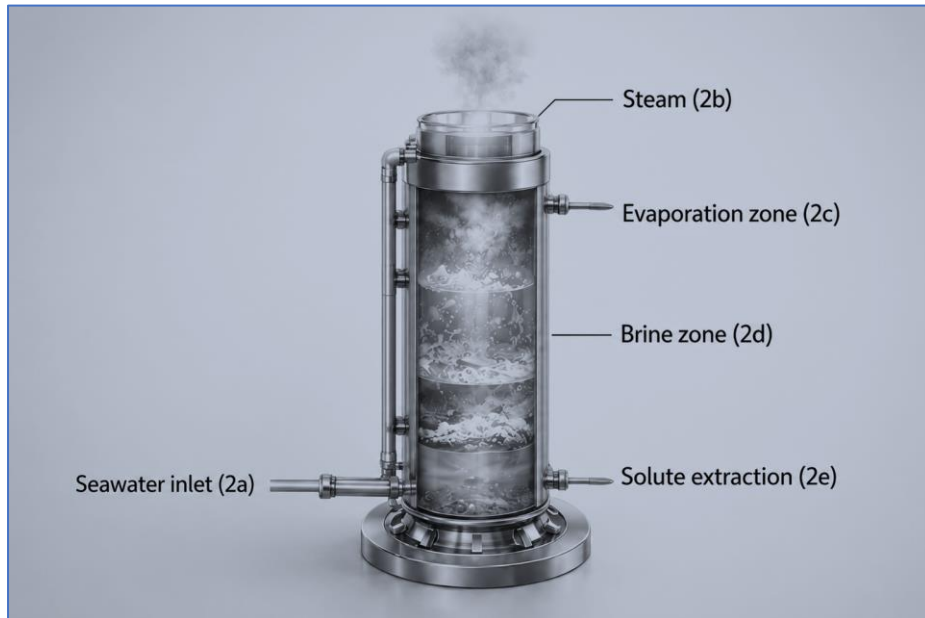
A pipeline transports seawater to the IP Tower (stages 2a to 2e). Using a dual-membrane filtration system (2-1a and 2-1b), microplastic particles and other contaminants are extracted from the water.

The energy required for the evaporation process is supplied entirely by solar power. To maximize energy efficiency, the solar mirrors (1a–1c) are continuously aligned by a computer-controlled tracking system, ensuring the optimal angle of incidence for solar radiation.

Technical Solution III/III: ACS Process Control & System Architecture



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Aqua Clear Solutions has developed a proprietary, fully integrated desalination architecture combining advanced filtration, automated process control, and solar-thermal energy generation.

Seawater is transported to the ACS IP Tower, where a dual-membrane filtration system removes microplastics and other contaminants before treatment. The desalination process is powered entirely by solar energy, with AI-enabled tracking systems continuously optimizing solar mirror alignment to maximize energy capture and operational efficiency.

This integrated design delivers a scalable, low-emission solution for sustainable freshwater production while strengthening ACS's proprietary technology portfolio and competitive advantage.

How the ACS Solution Works I/II



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Key Features Include:

- **Seawater Intake:** Efficient intake infrastructure supplies seawater as the primary feedstock for continuous freshwater production.
- **Microplastic Pre-Treatment:** Proprietary filtration technology removes microplastics and contaminants before the desalination process begins.
- **Solar Concentration:** Precision-tracked solar mirrors concentrate renewable energy to provide high-efficiency thermal input.
- **Thermal Evaporation:** Solar-generated heat drives the evaporation process, separating pure water from dissolved salts and impurities.
- **Fresh Water Output:** High-quality freshwater is produced for municipal, industrial, and agricultural applications.
- **Brine Resource Recovery:** Residual brine is processed to recover valuable minerals and support circular resource utilization.
- **From Desert Zone to Agricultural Use:** Sustainable freshwater production enables irrigation, land regeneration, and agricultural development in water-scarce regions.



How the ACS Solution Works II/II



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Solar Concentration: Heliostat mirrors focus sunlight onto the ACS IP Tower, maximizing solar energy capture and thermal efficiency.

Dual Energy Generation: The system simultaneously produces electricity and thermal energy, optimizing the value of every unit of solar input.

Thermal Distillation: Solar-driven evaporation converts seawater into high-purity freshwater, even from highly saline sources.

Microplastic Removal: Integrated treatment technology captures microplastics and suspended contaminants, enhancing water quality.

Heat Recovery: Advanced heat-exchange systems recycle up to 90% of thermal energy, significantly improving overall efficiency.

Resource Recovery: Concentrated brine is transformed into valuable by-products, including hydrogen, chlorine, soda ash, and industrial salt.

Competitive Advantages of the ACS System - Conventional RO vs. ACS Solar Desalination

Conventional reverse osmosis uses high-pressure membrane filtration with high electrical energy demand, whereas ACS technology combines solar-thermal desalination, advanced filtration, and heat recovery to produce freshwater with lower external energy input and integrated resource recovery.

Conventional Reverse Osmosis	ACS State of the Art Technology
High energy cost	Solar-driven
Brine disposal	Brine monetization by recovery
Limited agriculture use	Agriculture-focused*
Salinization risks	Distilled water
High operating cost	Lower operating cost potential



Info: Designed to supply clean water at municipal and regional scale, with a modular system architecture that also supports decentralized deployment for hotels, resorts, and residential developments.

Large-Scale Market Opportunity



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Targeting a global water market valued at approximately \$700–\$1,000 billion annually, driven by an estimated 4 trillion m³ per year demand for potable water according to OECD research.

Keyfigures Overview of the ACS System:

Current Desalination Market:

- 17,000 plants
- 174 countries
- 107 million m³/day
- USD 10 billion annual investments

Expansion Drivers:

- Population growth
- Desertification
- Agricultural demand
- Renewable hydrogen production

Additional Revenue Streams:	Brine Valorization
	Hydrogen
	Chlorine
	Sodium
	Oxygen

Potential Integration Into The:	Hydrogen economy
	Chemical industry
	Carbon reduction initiatives

The First ACS Production Plant - Cyprus

The first ACS production plant in Cyprus will serve as a flagship deployment site, demonstrating scalable, solar-powered desalination technology in a high-demand, water-stressed Mediterranean environment.

Diversified Revenue Streams Include:

- **Water Sales**
Revenue generated through large-scale supply of desalinated water, including municipal distribution networks, agricultural irrigation, and value-added bottled mineralized water.
- **Technology Licensing**
Monetization of ACS proprietary systems through global licensing agreements enabling third-party deployment across international water-stressed markets.
- **Brine & By-Product Recovery**
Commercial extraction of high-value resources from brine streams, including hydrogen, chlorine, and sodium-based compounds.
- **Future Digital Layer**
A water-linked digital ecosystem built around the Aqua Eureka Coin, enabling future integration of water assets, usage tracking, and potential tokenized infrastructure participation.



System Configuration & Capacity

Initial deployment consists of 10 modular units with scalable expansion capability, designed to address regional water demand in the Paphos area.

Production Output

Expected daily freshwater production of approximately 4.2 million liters, supplied for both municipal distribution and agricultural irrigation use.

Financial Highlights Include:

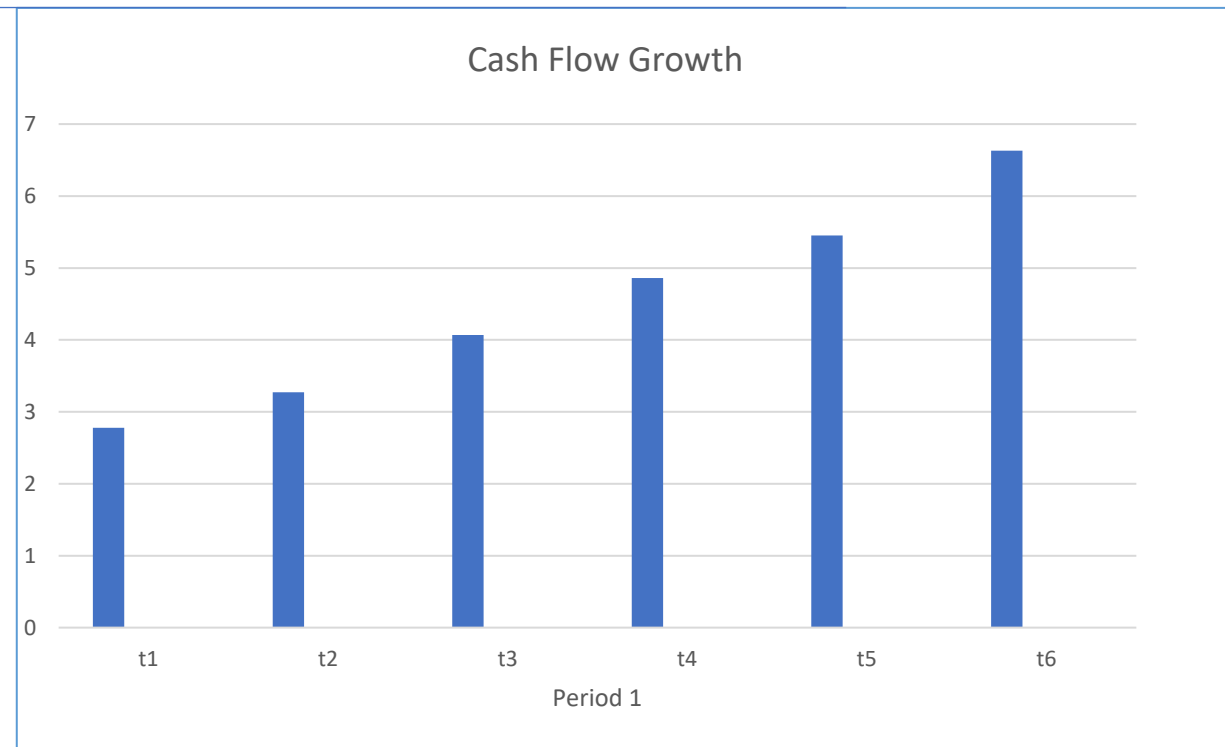


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Economic Outlook – Cyprus Pilot Project

An assessment of the Cyprus pilot project's economic viability, outlining projected returns, cost structure, and long-term value creation potential within the initial deployment phase.

Projected Free Cash Flow Growth (in Mio Euros):



Independent KPI-Based Valuation

A comprehensive, third-party assessment of all key performance indicators (KPIs) has been conducted to determine enterprise value and project viability.

Valuation Framework

The analysis applies the ERA Fair Rating methodology, incorporating a multi-phase financial model for the 10-module Cyprus reference project, including Discounted Cash Flow (DCF) and Weighted Average Cost of Capital (WACC) approaches.

Key Result

The Cyprus reference project (10 modules) yields an NPV of **€43.3 million**, supporting a verified enterprise valuation of approximately **€45 million**.

From Pilot to Scalable Deployment (2026–2032)



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ROADMAP OF SUCCESS

CLEAR STEPS. STRONGER FUTURE.



ONE VISION. CLEAR STEPS. LASTING IMPACT.

Building the future together.

Key Focus Areas:

Commercial Plant Deployment

Establishment of three operational production plants as the first scalable reference infrastructure.

Technology Refinement & R&D

Ongoing research and development to improve efficiency, performance, and system integration.

Market Entry & Validation

Real-world deployment across selected water-stressed regions to validate performance and commercial model.

Scalable Platform Building

Creation of a replicable system architecture designed for rapid expansion beyond initial sites.

Foundation for Global Rollout

Building the operational, technical, and commercial base required for international expansion beyond 2032.

Strategic Investment Case: First-Stage ACS Deployment in Cyprus



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This section outlines the initial 10-module ACS desalination configuration planned for Paphos, Cyprus, including its scalable production capacity of ~4.2 million liters per day and its role as the first commercial reference plant serving municipal and agricultural demand in a water-stressed region.

Why Invest:

- **First-Mover Infrastructure Positioning:** Early entry into a large-scale, real-world deployment provides exposure to a foundational water infrastructure asset class in a high-growth sector.
- **Proven Demand Environment:** The Paphos region presents structurally high and recurring water demand, ensuring strong offtake visibility across municipal and agricultural users.
- **Scalable Modular Expansion Model:** The 10-module configuration is designed for phased scaling, enabling capacity growth aligned with demand and capital deployment efficiency.
- **Multiple Embedded Revenue Streams:** The system supports diversified monetization through water sales, agricultural supply, and future by-product recovery pathways.
- **Technology-Driven Long-Term Upside:** The plant serves as a reference deployment for ACS proprietary desalination technology, creating a platform for international licensing and replication.



Meet the ACS Team - Experienced International Team



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At **Aqua Clear Solutions**, our leadership team brings together decades of executive experience across industry, technology, and investment-driven growth environments. This international footprint provides our investors and partners with access to strategic insight, regulatory awareness, and cross-market execution capability, positioning ACS to deliver scalable, sustainable growth in the global water technology sector.



Prof. Peter Platzer (Austria & Hungary)
Chief Executive Officer



Mag. Gregor Konrad (Austria)
Chief Financial Officer



Guy Van Der Beken (TME CdB - Belgium)
Chief Technology Officer



Nicholas Cobb (TME CdB - United Kingdom)
Chief Operating Officer



Yaniv Habari (LLC - Cyprus)
Chief Legal Officer



Dr. Valery Ivanov
Head of Research & Development

Our Mission.

At Aqua Clear Solutions, our mission is to address global water scarcity through scalable, sustainable, and commercially deployable innovation.

Next Steps & Additional Due Diligence Documentation

Additional Available Materials:

Investment Memorandum (IM) including Business Plan & NPV Analysis

Comprehensive investor documentation outlining the business model, financial projections, and Net Present Value (NPV) analysis, providing a detailed overview of returns, assumptions, and long-term value creation.

ACS Group Company Incorporation Documents

Official legal and corporate formation documents confirming the establishment, structure, and governance of ACS Group as the operating entity behind the technology and deployment strategy.

Eureka Platform History (Since 1954)

Background on the Eureka framework as a globally recognized innovation and IP collaboration platform, supporting cross-border research, technology development, and commercialization of advanced intellectual property assets.

NEXT STEPS: For further discussions, requests, or follow-ups, please contact the Co-Founders of Lion Heart Global, Mr. Sebastian Huth and Mr. Sebastian Mirwald, via email at info@lionheartglobal.io or directly by phone: +49 178 4873700 (SH) or +49 160 94407450 (SM). Based in Augsburg, Germany.



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