

Company profile

Thericon GmbH aims to develop a new generation of high-end endoscopic visualization instruments for minimally invasive surgeries. The company's patented *real-time multispectral imaging (rMSI)* technology offers significant advantages for patients and surgeons and shows high potential for application-wide usage in endoscopic surgeries. Thericon's first prototypes demonstrated key benefits in proof-of-concept studies using animals and selected cancer patients. Under a sublicensable agreement with Heidelberg University, Thericon has secured the exclusive rights to two key patent families, which protect Thericon's technology platform in key markets. Patents have been granted for the USA, China, and Japan. Certain patents are pending for Europe, China, and Canada.

Thericon aims to become a global leader in the development of endoscopic visualization systems using its novel technology, proprietary know-how and expertise in system integration. Following several years of development and over 3 m € in grants, Thericon was founded in 2019 in Mannheim, Germany, as a spinout from the Fraunhofer Institute and Heidelberg University.

Products and Technology

Thericon will develop a modular endoscopy platform, consisting of a multispectral light source, a control unit, and initially two dual-sensor cameras for 2D and 3D imaging. Rather than acquiring images of individual wavelengths, fluorophores, or contrast separately, Thericon's unique approach to multispectral imaging provides, for the first time, **multi-parametric** images in real time that simultaneously visualize **anatomical, functional and pathological** features of tissue using a single device.

Thericon's products will enable surgeons to conduct real-time detection and removal of pathological tissue in patients who undergo keyhole surgery, for example because of cancer. After collecting the clinical data required for regulatory approval, further clinical studies will show the advantages of the product for a wide range of endoscopic applications, especially in urology, laparoscopy, gynecology, and neurosurgery. Thericon's 3D camera will offer stereoscopic vision and will be particularly suitable for robot-assisted surgeries. A future third product will bring the advantages of rMSI technology to flexible endoscopic instruments. In general, Thericon's products will empower surgeons to localize any pathological tissue and to treat patients more precisely and faster using real-time multi-parametric images. In case of endoscopic surgeries, technological accuracy and superiority translates into better patient outcomes and higher patient throughputs.

Thericon's devices differentiate themselves from existing products and technologies by introducing novel product features and advantages, including unprecedented wealth of diagnostic information during surgery. A single Thericon imaging platform covers all the endoscopic imaging needs of a hospital, eliminating the need for multiple dedicated systems. Thericon's devices address multiple clinical applications and are ready for future AI and multiple contrast agent applications. Considering their **USPs**, Thericon's devices have the potential to become the new gold standard for endoscopic visualization in multiple surgical specialties.

Development

Phase I – Planning phase (2020): Both company founders and managers craft and cross-validate Thericon's operational business plan and investment case for new investors. Closure of finance round A.

Phase II - Development phase (2021 - 2023): Thericon's products will be designed, manufactured, and relevant information will be submitted to Notified Body for CE-certification and to FDA for market approval in the US-market. Closure of finance round B.

Phase III - Market entry phase (2024 – Q2/2026) Thericon's products will be marketed and launched in key European markets. Thericon will conduct post-market clinical studies to demonstrate improved clinical outcomes.

Phase IV - Ramp up phase (from Q3/ 2026): Thericon's products will be certified, marketed, launched, and sold in key markets worldwide. Company will be profitable at the latest from 2027.

Operations

Today Thericon occupies a single site inside University Hospital Mannheim (UMM), which includes its research and development facilities and its general offices. The R&D staff works closely with the surgeons of the university hospital. Thericon's management will coordinate and supervise the clinical trial programs, product manufacturing, and logistics, analyse the results, and manage relationships with regulatory agencies, payers and potential partners. As required, Thericon will engage subcontractors and highly qualified experts, e.g. for product development and certification, market access, sales and marketing, and distribution. Based on the cost-effective, partially already existing, working and business relationships, the management aims to extend its outsourcing strategy by cooperating with well-selected partners in the future.

Management and personnel



Dr. Nikolaos Deliolanis, CEO, is a physicist and inventor with 15 years' R&D experience in biomedical optics, including seven years in a management position. After earning his PhD in Physics from the University of Thessaloniki, Greece, he joined Harvard Medical School as a research fellow working on multispectral fluorescence tomography. In 2008, he obtained the Marie Curie Fellowship and joined the Institute of Biological and Medical Imaging at the Helmholtz Center and Technical University Munich. In 2012, he secured a 2.5 m € grant to build and lead the Biomedical Optics group at the Fraunhofer Institute in Mannheim, Germany. Since 2016, he has led a 3.2 m € publicly funded spin-off project at Heidelberg University to commercialize the real-time multispectral imaging technology.



Dr. Bartek Grychtol, COO, is a biomedical engineer specialized in medical imaging algorithms. He holds an engineering doctorate in medical devices from the University of Strathclyde, Glasgow, UK. In 2011, he secured the prestigious Humboldt Fellowship for postdoctoral research at the German Cancer Research Center (DKFZ) in Heidelberg, Germany. He joined Dr. Deliolanis in 2014, first at Fraunhofer and then at Heidelberg University, where he developed algorithms and software for real-time multispectral image acquisition and processing and led the development of successive prototypes. Dr. Grychtol has also worked as an R&D consultant, including for the medical device startup Swisstom (now SenTec), where his inventions form part of the core technology.



Dr. Steffen Schabel, CCO, has 15 years' track record in sales and marketing managing positions in leading medical companies including Medtronic, Covidien and Stryker. He has ample experience with regulatory requirements, overcoming market barriers, customer interaction and building up sales teams. Throughout his career, he has proven his talents by successfully developing his teams and strongly increasing revenues in his business units. Initially working as a consultant, he has defined the value proposition and the customer journey for Thericon. Following the enthusiastic feedback he received from surgeons he interviewed about Thericon's technology, he joined the team in 2019.

Initially Thericon will employ six FTEs. The management pursues a pronounced outsourcing concept for its activities. The company will continue to deploy highly qualified consultants for e.g. regulatory support, quality management, finance, tax, legal, and IP. Supporting the considerable growth in business, the organization will be strengthened at the executive and senior management level by the appointments, i.e. a CFO and industry experienced executives.

Projected Financials

The accumulated investment in Thericon's business will total in EUR 8 mil in Round A and in EUR 15 mil in Round B. Break-even is expected in 2027 at the latest. The management expects to incur losses in the first years as it continues to invest in product development, external manufacturing, quality control, clinical trials and certification of the *rMSI* products in Europe and US, followed by setting up sales and marketing capabilities and capacities in the German-speaking region.

First revenue will derive from sales within Germany in 2024. Following the product launches of both *rMSI* products in Europe's top markets, Thericon will ramp-up its business quickly, offering at the same time high turnovers and profits from 2027 onwards. Costs include development, headcount, international sales & marketing, outsourced production, clinical trials, and expansion.

The highly attractive endoscopic market combined with numerous product-specific USPs offer a potentially high return for the significant investment needs.

Equity story

First results of clinical proof-of-concept studies indicate superior **target products profiles** (TPP) for the two *rMSI* products. The **unique selling proposition** of Thericon's patented technology and future products will enable the company to capitalize on opportunities in the attractive market of endoscopic visualization systems, especially in the areas with unmet medical needs. Both innovative, *rMSI*-based products are expected to give Thericon a substantial and qualitative competitive edge. This will facilitate an outstanding growth of the company's business within the next 7 - 10 years, generating a gross profit of about 39 m € in 2030. Thericon offers investors two very attractive exit scenarios: either an IPO or a trade sale.

