

60 years of
innovation

Fotona[®]
choose perfection



While we will continue to adapt, innovate, and re-invent ourselves, one thing remains unchanged: the feeling of belonging to the common Fotona Family.

This year, Fotona proudly celebrates its 60th anniversary. Established around the time of the laser's invention, Fotona stands as one of the most experienced laser companies in the world. Since its inception, our innovations have significantly contributed to the global advancement of laser optoelectronics.

However, what truly sets Fotona apart is not just our extensive experience and accumulated expertise, but our unique corporate culture and history. To understand what Fotona represents today, it is helpful to look back at our journey. This brochure aims to share that story. Throughout its history, Fotona has been recognized as one of the most successful companies in the region. Notably, our first two decades of rapid growth took place during Yugoslavia's unique experiment with socialist self-governance. Fotona's highly educated and somewhat rebellious team embraced this model, ensuring that political interference did not affect our operations. Our employees elected CEOs and made strategic decisions about investments in R&D and manufacturing. This strong sense of ownership and loyalty continues to define Fotona's culture today. Joining Fotona—whether as an employee, business partner, or customer—means becoming part of “our” Fotona Family.

During its early years of rapid development in Yugoslavia, Fotona benefited from the strong support of leading research institutes and universities. It was under the influence of Fotona's commitment to science that Slovenian universities developed excellent laser-oriented undergraduate and graduate programs, and today, Slovenia's research institutions are well-known for excellence in this field.

However, in these early days, given the scarcity of high-tech suppliers, Fotona was forced to adopt a self-reliant approach, developing and manufacturing all critical components in-house. We continue this tradition today, building our own laser modules, system electronics, power supplies, optical delivery systems and software,

for example. This in-house strategy supports our commitment to delivering the highest performance, best-made devices in the world, setting us apart from competitors who rely on external suppliers. It is difficult to be exceptional if one relies, for example, on the same supplier as a competitor.

Not so long ago, Fotona was still manufacturing its own optics and optical fibers, as well as coating dielectric mirrors, diamond-polishing metal mirrors, and laser cutting sheet metal. Although we no longer do all of this, the technological knowhow that is useful for developing new devices remains integral to our operations. We have retained and significantly expanded our advanced turning, milling, and CNC machining facilities. This capability, which is unique within the industry, allows us to design, prototype, and manufacture complex components quickly and efficiently.

Over the past 60 years, Fotona has thrived in various optoelectronic markets, including optical communications, industry, and defense. For the last 20 years, however, Fotona has been laser-focused on one segment only, on medical lasers and more recently also on other energy-based medical devices. Today, Fotona is a global leader in developing and commercializing energy-based devices for the aesthetic dental, gynecological urological and surgical markets. Our family has expanded and grown to include Fotona LLC (US), Fotona Beauty Light (China), Fotona G.m.b.H. (Germany), Fotona France, Fotona Japan, and Iskra Medical.

Fotona's rich history continues to shape and guide our culture and business strategy. While we will continue to adapt, innovate, and re-invent ourselves, one thing remains unchanged: the feeling of belonging to the common Fotona Family. We extend our heartfelt thanks to our friends, co-workers, partners, and customers for being part of the Fotona Family's six-decade-long journey. Here's to many more years of excellence and innovation together.

Fotona team



In 1964, lasers were cutting edge (pun intended) technology. When James Bond's Goldfinger was filmed, scientists still hadn't figured out a practical use for lasers. Giving Goldfinger a laser for his deathtrap gave the scene a science-fiction flavor and made it more exciting for audiences. However, by that time Fotona was already on its path of building a successful enterprise out of laser technology.

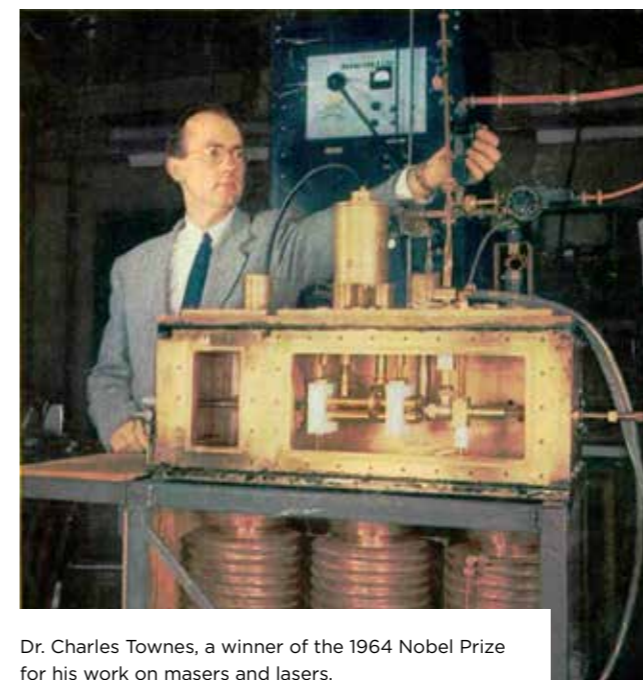
1960s

Every now and then a scientific breakthrough occurs that has a revolutionary impact on everyone's life. One example of this was the invention of the LASER in 1960.

The announcement of the invention created quite a stir in the media, with front-page newspaper discussions about "man's light" outshining the sun. However, few people realized at the time that the laser would prove to be such a useful and lucrative device. Nevertheless, just four years later in 1964, the year when Charles Townes shared the Nobel Prize for his work on masers and lasers, SOZD Iskra, the largest Yugoslavian technology company decided to establish a new business entity with the goal of developing and manufacturing lasers, called the Iskra Laboratory for Technical Optics.

Very quickly after the establishment of what is now known as Fotona, the small young team of very innovative engineers succeeded in developing the company's first product, a He-Ne gas laser that was sold to universities and research institutes throughout Yugoslavia and also exported to other countries, especially to the German market.

It All Started with the Invention of the LASER



Dr. Charles Townes, a winner of the 1964 Nobel Prize for his work on masers and lasers.



The world's first laser was built on May 16, 1960 by Theodore Maiman at Hughes Research Laboratories.



Fotona's first laser: a He-Ne gas laser for research and education.



Dr. Zvonko Krevelj, Fotona's first CEO (1964-1980).



In 2010, Dr. Matjaz Lukac, president of Fotona, met with Dr. Charles Townes when he visited Fotona's booth at the ASLMS meeting in Phoenix, USA.



The modern and well-equipped Laser and Health Academy clinic is a key part of the LA&HA Institute, a state-of-the-art laser research and training facility located within the Laser and Health Academy's global headquarters (next door to Fotona).

In 1979, Fotona moved into its newly built premises in Ljubljana, where the company's main operations continue to be located today. In the 1980's Fotona also added two neighboring buildings to accommodate its rapid growth.



1970's

During the next decade, Fotona recorded significant growth. Having changed its name to TOZD Elektroptika in 1975, Fotona already boasted a workforce of more than 300 employees by the end of the decade.

During most of the 70's, Fotona's operations took place at different locations in Ljubljana. Underscoring the company's focus on science and research, this also included a shared space with the Faculty of Natural Sciences and Technology at the University of Ljubljana. It was in 1979 that Fotona finished construction of its own premises and moved to today's present location in Ljubljana.

Fotona's very innovative and enterprising team, with an average age of employees significantly below 30 years, contributed substantially to the exciting global development of electro-optics. Very early on, Fotona became known for its laser rangefinder technology used for defense. Before the development of today's mobile communications based on micro-waves, Fotona was among the first to explore free-space laser communications. Fotona was also at the forefront of developing holographic technology for generating three-dimensional images. The company was also manufacturing top-of-the-line industrial CO₂ lasers for metal cutting.

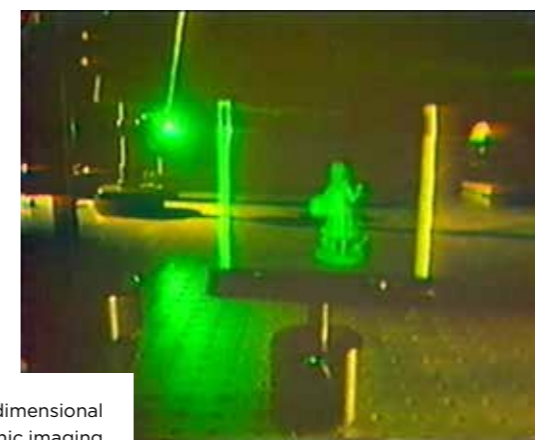
From the Start, Fotona Actively Contributed to the Exciting Global Development of Lasers and Optoelectronics



Fotona's top-performance laser range-finder RLD was able to measure distances of up to 30 km by measuring the time of flight of an Nd:YAG laser pulse reflected from a target.



Fotona's top-of-the-line industrial CO₂ laser for metal cutting



Three-dimensional holographic imaging

The world's first free-space laser communicator



The TopScan industrial thermal camera for monitoring, testing and control

Fotona's turning, milling and CNC machining facility lies at the core of Fotona's in-house manufacturing strategy, setting us apart from competitors who rely on external suppliers. This capability, which is unique within the industry, allows us to design, prototype, and manufacture complex components quickly and efficiently.



Fotona's in-house laser mirror-coating facility



Fotona's well educated and somewhat rebellious team took the Yugoslavian experiment of employee self-governing very seriously, and did not allow socialist politicians to meddle with Fotona's operations. **It was the Fotona employees who elected the CEOs and made strategic decisions on investments in R&D and manufacturing technology. This strong identification with the company has remained until today.**

1980s

Fotona's rapid growth continued, and by the end of the 80's the company's workforce expanded to 580 employees. The company also changed its name to TOZD Center for Electrooptics. This was the era of Yugoslavia's unique experiment with socialist self government, i.e. the company was not incorporated as an LLC but rather as a TOZD (in translation meaning Basic Organization of Associated Labor).

During this decade, Fotona strategically invested into its own in-house manufacturing technology. The company mastered in-house fabrication of optics, diamond polishing and laser mirror coating. An advanced machining facility was established for turning, milling and CNC machining. Further, Fotona developed its own technology for manufacturing glass fibers, intended especially for the rapidly developing

field of optical communications. Fotona demonstrated a first-in-the-world live optical fiber video transmission of TV signals during the '84 Winter Olympics Games in Sarajevo. Fotona also developed infrared thermography technology systems for defense and industrial monitoring, preventative maintenance, and process monitoring.

It was during this period that Fotona made its first small steps into the field of medical lasers. In 1984, Fotona started supplying monomode Nd:YAG laser modules to global manufacturers of ophthalmic laser devices. By the end of the 80's Fotona had already developed its own Nd:YAG laser system for posterior capsulotomy. Another Fotona medical product from that period was a He-Ne laser-based stimulator and acupuncture device.

Fotona's Historical Commitment to In-house R&D and Manufacturing



The 1980's were good years for Fotona. The company expanded and invested significantly into in-house R&D and manufacturing technologies. Matjaz Lukac, starting as R&D engineer in 1980.



One of the R&D teams that in 1983 developed an award-winning laser detection instrument. In front is Zdenko Vižintin, R&D Team Manager at the time.

The in-house turning, milling and CNC machining facility.



The philosophy of developing and making things by ourselves is deeply rooted in Fotona's culture.



In-house manufacturing of glass fibers



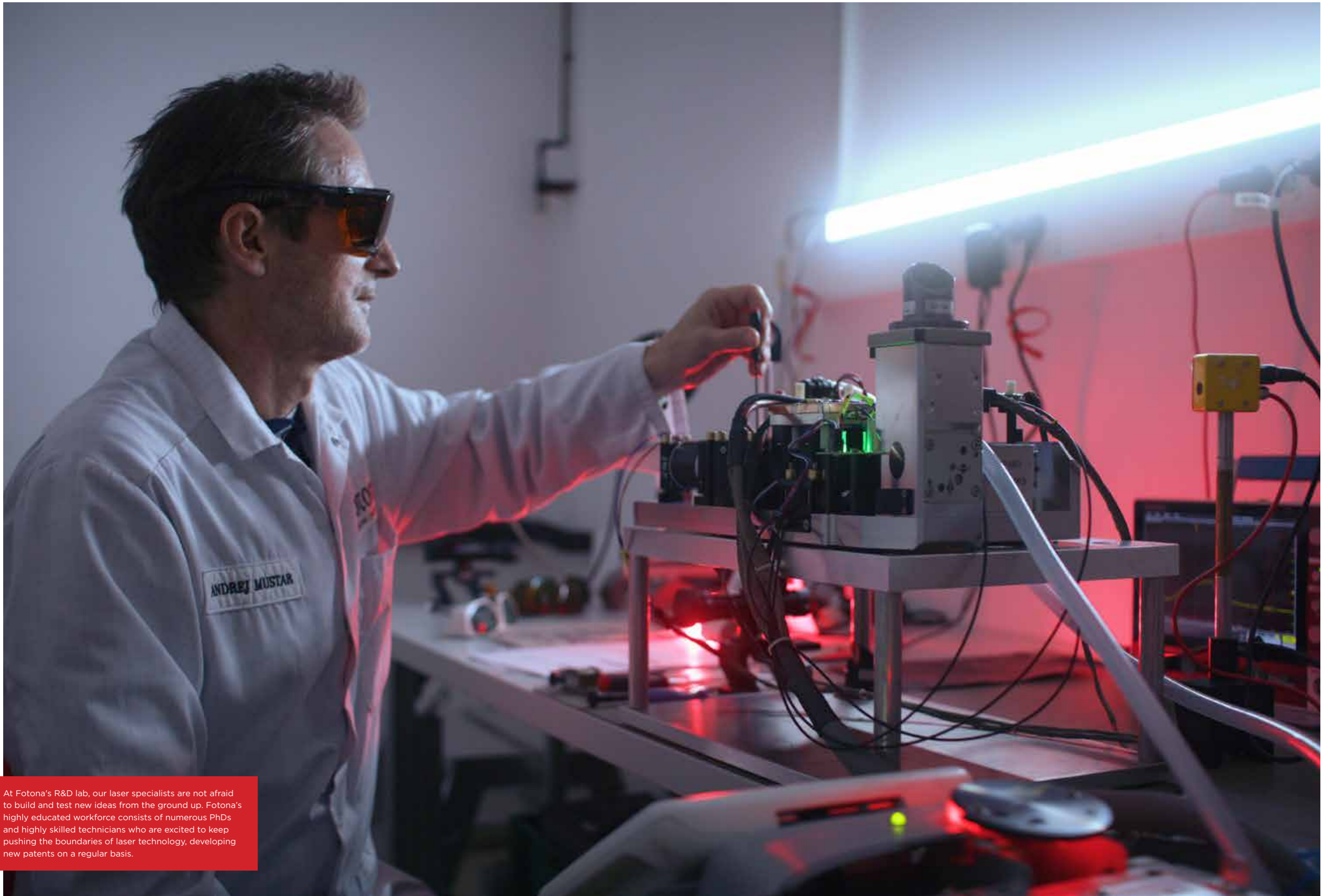
Fotona's thermal imager



Fotona's laser stimulator and acupuncture device, LSA



Fotona's first ophthalmic laser, MOL



At Fotona's R&D lab, our laser specialists are not afraid to build and test new ideas from the ground up. Fotona's highly educated workforce consists of numerous PhDs and highly skilled technicians who are excited to keep pushing the boundaries of laser technology, developing new patents on a regular basis.



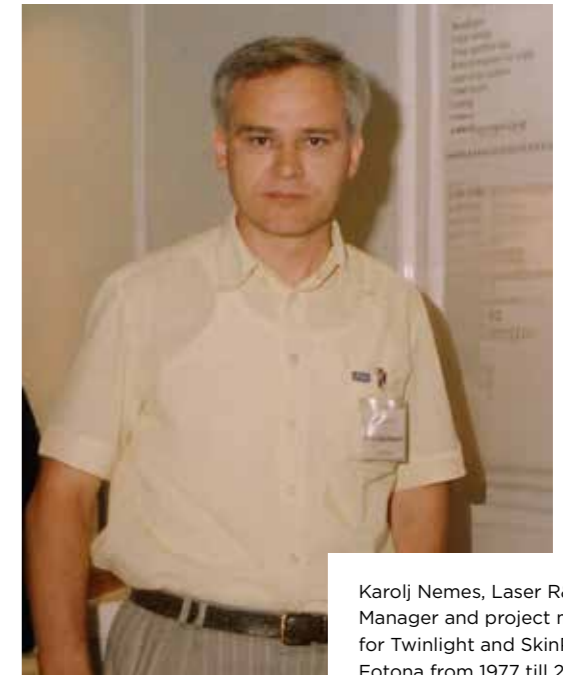
In 1994, Fotona entered the dental laser market with Twinlight, the highest performance dual Er:YAG & Nd:YAG laser system. The same year the company changed its name to Fotona, and the brochures had to be changed overnight.



In 1994, We Became Known as Fotona



Jürgen Schmuker, CEO and founder of Medys G.m.b.H., at the time of Twinlight's Launch.



Karolj Nemes, Laser R&D Manager and project manager for Twinlight and SkinPlus. With Fotona from 1977 till 2022.

1990's

During the 1990's Fotona continued to diversify into industrial and medical as well as optical communications market segments.

In 1994, Fotona successfully stepped into the forefront of laser dentistry by introducing the highest performance dual Nd:YAG & Er:YAG laser system, in partnership with Jürgen Schmuker of Medys, G.m.b.H. In 1996, Fotona also entered the aesthetic laser segment with its Skinlight line of Er:YAG, Nd:YAG and KTP laser systems.

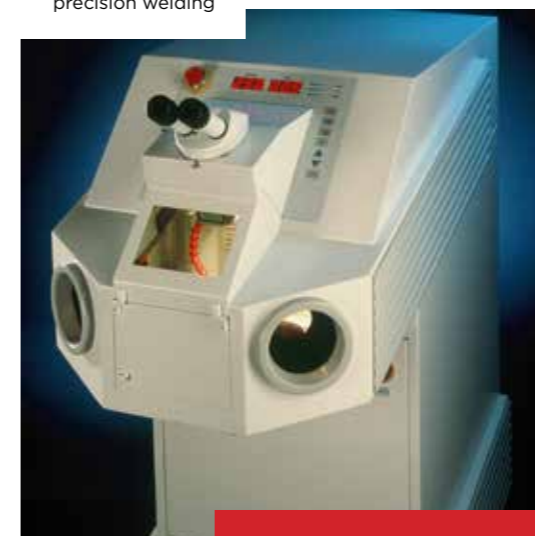
Additionally, Fotona developed the WL40 Nd:YAG laser welding system and the YAG 22 line of Nd:YAG laser systems for industrial engraving, marking and resistor trimming.

Nevertheless, the 90s were a challenging period for Fotona since these years were marked by a series of separate but related ethnic conflicts that resulted in severe economic damage to the region. Slovenia declared independence from Yugoslavia in 1991 and transitioned from socialist self-management to a capitalist market economy within the context of increasing EU integration. Consequently, Fotona was reorganized into a predominantly state-owned joint stock company and separated from Iskra, consequently changing its name from Iskra Elektrotika to Fotona, d.d.

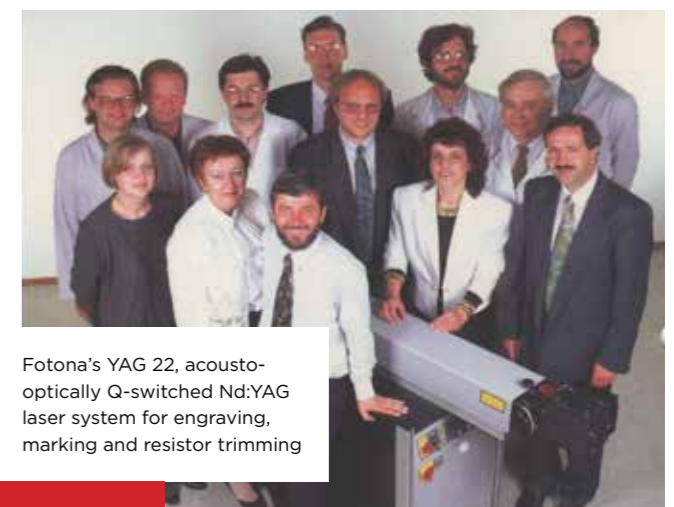
Fotona Skinlight Plus, the first aesthetic Er:YAG plus KTP laser system in the world



Fotona's WL 40, high-energy Nd:YAG laser system for precision welding



Fotona's defense system with thermal camera and eye-safe 1.54 μm glass laser



Fotona's YAG 22, acousto-optically Q-switched Nd:YAG laser system for engraving, marking and resistor trimming

After nearly 30 years, both of these industrial lasers are still in use worldwide, and are still being used in Fotona's production.



A line-up of Fotona's laser systems awaiting final inspection and shipment. Each system undergoes rigorous quality control checks to ensure all subsystems function correctly and to verify the accuracy and precision of the laser output.



In 2004, Fotona made a bold decision to strategically focus on making only medical lasers.

2000s

In the beginning of the 2000's, Fotona was a diversified company operating approximately equally in the market segments of optical communications, industrial lasers, medical lasers and defense. Such a large diversification proved to be difficult to maintain from within the relatively small Slovenian market, especially after all the turmoil caused by Yugoslavia's disintegration.

For the above reasons, Fotona decided in 2004 to make a strategic move and to focus exclusively on the medical segment. This was a rather bold decision considering that at the time, the company's medical sales amounted to only about 6 million EUR. After only a few years, all activities in other segments were discontinued, and Fotona transformed itself into a strictly medical device manufacturer.

Based on internal SWOT analysis, Fotona determined that the company should further build upon its long-term R&D experience and know-how, as well as its extensive in-house manufacturing capabilities. Fotona positioned itself as a company dedicated to developing, manufacturing and providing to the medical community the "Highest performance, best made laser systems in the world". At the time, Fotona also intentionally limited itself to only making lasers, and only lasers which were difficult to make, in order to stand behind its slogan with superior products and stand apart from other manufacturers.

Fotona also committed itself to building upon and continuing to deserve the historical loyalty and identification of its workers with the company, one of Fotona's unique characteristics, having its roots in the company's self-governing past.

The Highest Performance, Best Made Laser Systems in the World

Strategic Focus on Medical Lasers



The Fotona Family slogan is intended not only to symbolize the unique historical loyalty and identification of employees with the company, but also to help Fotona stand apart by extending this feeling of belongingness to its wider family of business partners and customers.



2004. L: Milos Resnik, vice-president and CFO (2000-2016), R: Matjaz Lukac, President (2000-2022)

The 2000's marked the development of a new generation of Fotona medical laser systems based on proprietary, first-in-the-world VSP (Variable Square Pulse) power electronics technology.



XD-1 dental diode laser



Novalis, a ruby and Er:YAG aesthetic laser system



XP Max, an Nd:YAG hair-removal laser system



Dualis SP, an Er:YAG + Nd:YAG aesthetic laser system



AT Fidelis, an Er:YAG + Nd:YAG dental laser system



QX Max, a Q-switched nanosecond Nd:YAG + KTP aesthetic laser system



With 60 years of experience in building lasers, Fotona's production facility serves as a role model for how to efficiently build and test the highest performance, best-made laser systems in the world. Exceptional quality is just the starting point.

LA&HA Institute, a state-of-the-art laser research and training facility located within the Laser and Health Academy's global headquarters (next door to Fotona).



Jeff Jones, co-CEO of the Fotona group (2014-2021), giving a speech at Fotona's 50-year anniversary in 2014.



Marcelo Tettamanti, with Fotona since 1998. LA&HA R&D Director (2020-)

2010s

In 2014, Fotona was privatized when the Slovenian state decided to sell its majority share to a financial investor in partnership with Jeff Jones, the founder of Fotona's distributor in the USA, T4Med, LLC.

The fact that since the privatization, Fotona has partnered with financial investors, has allowed the company to remain independent and to continue to grow and strengthen the Fotona brand.

During this decade, Fotona continued to develop its partnership with the Laser and Health Academy (LA&HA), a non-profit institution that was originally established by Fotona in 2010.

LA&HA is a platform for the exchange and dissemination of scientific knowledge among peers and promotes evidence-based laser medicine and dentistry among practitioners and the general public.

Partnership with the Laser and Health Academy



Opening of the LA&HA Institute, a state-of-the-art laser research and training center in 2015.



Training and Education	Research & Publishing	Professional Networking
<ul style="list-style-type: none"> ✓ In-person and virtual training and event capabilities run globally 	<ul style="list-style-type: none"> ✓ LA&HA provides management and support to local and global clinical research projects 	<ul style="list-style-type: none"> ✓ LA&HA meetings, events and website promote physician networking and exchange of experience and know-how
<ul style="list-style-type: none"> ✓ International and regional LA&HA Symposiums provide a unique opportunity for continuous learning and exchanging of experience 	<ul style="list-style-type: none"> ✓ Offers related publications such as peer-reviewed Journal of LA&HA and LA&HA magazine as important clinical forums 	<ul style="list-style-type: none"> ✓ Access to highly educated personnel including Fotona employed MDs and PhDs, and world-class MDs, PhDs, etc.
<ul style="list-style-type: none"> ✓ The extensive LA&HA Masters program in Laser Dentistry has been enabling dental practitioners to become real masters in their practice and future teachers for their communities 	<ul style="list-style-type: none"> ✓ Supported by best-in-class research centers & leading laser experts 	<ul style="list-style-type: none"> ✓ Opportunity for clinicians to cooperate with leading experts in their own clinics to provide training sessions.



LA&HA international and regional symposiums.

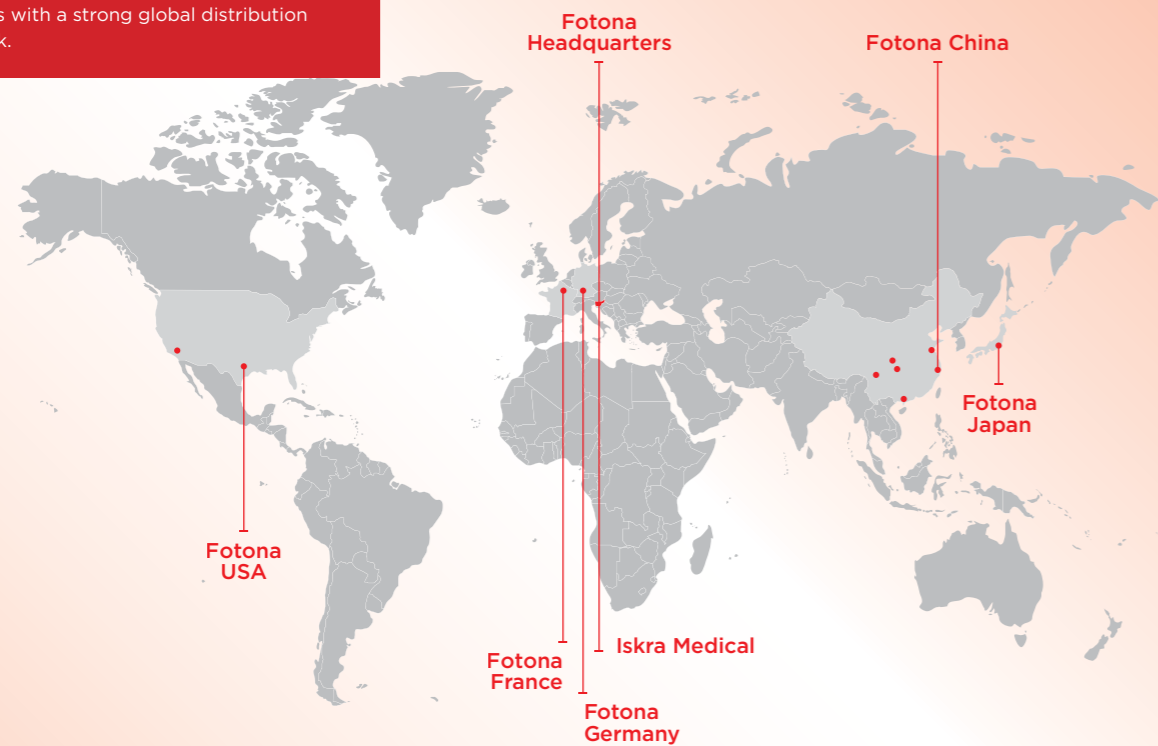
Peer-reviewed Journal of LA&HA and LA&HA Magazine.

Body sculpting with Fotona's PathFinder Robot in the LA&HA Institute. Fotona's decades of experience with developing new technologies and bringing them to market has enabled the company to act like an entrepreneurial start-up, rapidly identifying new opportunities and leveraging breakthrough solutions.

Fotona
choose perfection



Global Commercial Sales Force Footprint.
Combination of direct presence in key markets with a strong global distribution network.



2020s

Today, Fotona stands tall as a global leader in developing and commercializing energy-based devices for the aesthetic, dental, gynecological, urological and surgical markets. The company has established a global commercial organization with over 75 distributors covering 65 countries and a direct sales presence in key markets such as the USA, China, Germany, France and Japan.

Since 2004 when Fotona decided to focus solely on the medical laser markets, the company's medical revenue has been consistently growing, with the combined rate of growth and profit margin substantially exceeding the Rule of 40.

With the acquisition in 2019 of Iskra Medical, a manufacturer of magnetic, ultrasound and RF energy-based medical devices, Fotona expanded its activities to technologies other than lasers.

Underscoring its unwavering commitment to its „Choose Perfection“ slogan, the company consistently ranks among the top 3 Slovenian enterprises and is considered as one of Slovenia's business ambassadors. In 2022 Fotona was awarded as the exporter of the year, and in 2023 Fotona was named as the best company in Slovenia.

Fotona: a Global Leader in the Medical Device Industry



Fotona's medical business has grown substantially since 2004, as can be seen from the group photos of the global Fotona family during traditional joint annual IFW (International Fotona Weekend) and LA&HA Symposium meetings in 2004, 2014 and 2023.



Fotona won the "Exporter of the Year" award in 2022. The award was accepted by Branko Tovornik, Director, Matjaz Lukac, Director, Ladislav Grad, President and Janez Pusnik, CFO.



Joze Jelenc, CEO and founder of Iskra Medical and Matjaz Lukac, President of Fotona (2000-2022) at the signing of the purchase agreement in Dec. 2019.



Fotona's substantial competitive advantage is that, due to the company's organic growth, all of its R&D and manufacturing take place at one location, in Ljubljana. As a result, the R&D function is closely integrated with the manufacturing process throughout the product lifecycle.

Commitment to Science and Evidence-Based Medicine

Fotona's core competences lie in its knowledge of advanced laser technologies, precision engineering, and a comprehensive understanding of medical and aesthetic applications. Fotona has a rich history of building its products from the ground up, and the company's core R&D philosophy has remained to develop and manufacture all critical components in house. It is on this philosophy that Fotona based its commitment to provide the global medical community with the highest performance devices in the world.

It is no accident that all of Fotona's CEO's have had engineering backgrounds and R&D experience: Dr. Zvonko Krevelj, Physics (1964-1980), Marko Štular, Physics (1980-1986), Mitja Kovačič, Physics (1986-1991), Jože Žakelj, Physics (1991-1992), Dr. Alenka Rožaj Brvar, Chemistry (1992-1998), Tomaž Frelj, Electr. Eng. (1998), Matija Juvan, Electr. Eng. (1998-2000), Dr. Matjaž Lukač, Physics (2000-2022), Dr. Ladislav Grad, Mech. Eng. (2022-).

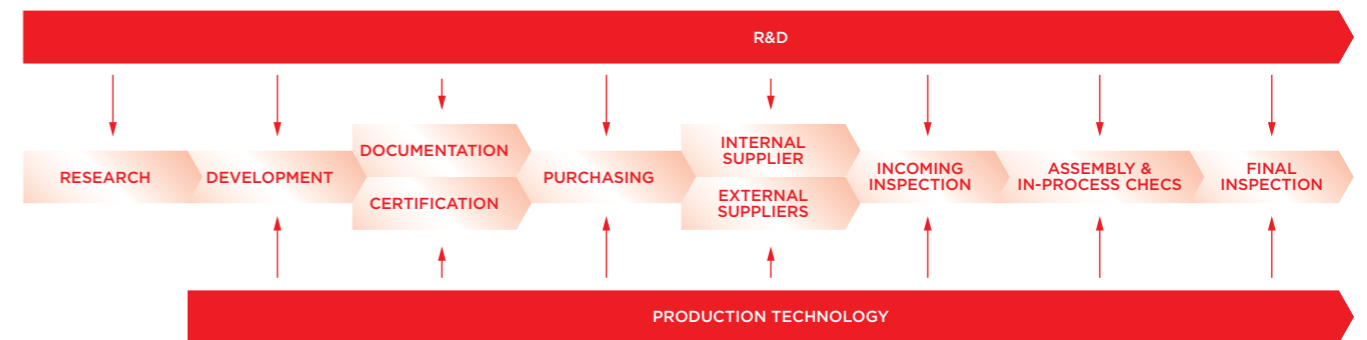
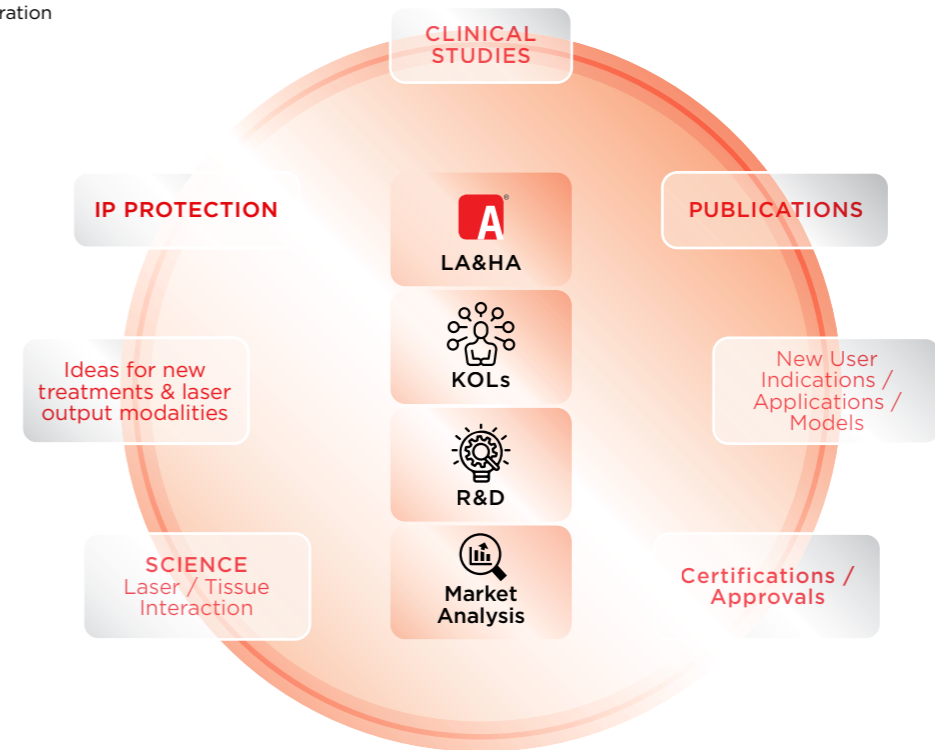
Fotona is also uniquely positioned with its strong focus on science and research. Currently Fotona's team includes over 20 PhD's and 5 medical doctors, many with decades of deep experience. To date there have been over 700 Fotona papers published. Currently there are over 100 ongoing clinical and other studies.



Zdenko Vižintin, Clinical Research Manager (2006-). With Fotona since 1978.

Integrated R&D Function Throughout the Product Lifecycle

Fotona's idea generation ecosystem.



Highest Quality, Best-Made Devices - Manufactured In-House



Fotona is believed to be the only laser device manufacturer with a highly advanced and equipped CNC machining facility.

Fotona Family, All Together



