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APRIL 2023

Central European and Baltic States
Newsletter

**Creative
Entrepreneurs
Boosting
Science**

CEBS Women





CEBS Women Creative Entrepreneurs Boosting Science

Presenting the first issue of the Central European and Baltic States (CEBS) Newsletter (CEBS Newsletter), titled “CEBS Women – Creative Entrepreneurs Boosting Science”, gives me many reasons for joy and satisfaction.

I would like to stress that the CEBS Newsletter is a result of a collective work of the CEBS Members. We have come together to share with you the outcomes of work of women innovators, scientists and entrepreneurs representing our countries. These efforts galvanize close cooperation within the CEBS group. We have also received an invaluable support from Colleagues from the Division of Transition and Developed Countries of the World Intellectual Property

Organisation (WIPO). I take this opportunity and extend my gratitude to everyone who contributed to this issue of the CEBS Newsletter. It has been an inspiring and successful cooperation, based on mutual understanding of the salience of topics contained therein.

Neither the timing, nor the focus of this issue of the CEBS Newsletter are random. This year's World Intellectual Property Day, to be held on 26 April, 2023, is devoted to

the role of “Women in Accelerating Innovation and Creativity”. The issue of the CEBS Newsletter feeds into the series of projects and initiatives launched for this occasion. More importantly, it amplifies the message that women in the Central European and Baltic countries play a pivotal role in defining and designing better futures of the societies. Indeed, in this way the feature of the CEBS societies that is noticed not too often is also brought across. Meaning that inclusion, fairness, access to opportunities, and equal burden sharing are not strange to the members of the CEBS societies.

This Newsletter presents achievements of some of the innovative and novel products created by women from the CEBS region. Notably, by shedding light on the role of women in the CEBS region growth and development, we recognize their role in accelerating innovation and creativity in general.

There is an unspoken agreement that the existing gender gap in the fields of science

and innovation needs to be addressed. Efforts aimed at making this change happen have been made in the CEBS region. The projects and programs designed by the CEBS Members to support women innovators, scientists and entrepreneurs, featured in this CEBS Newsletter, may serve as a source of inspiration for others.

And yet, even if seemingly only the sky can be the limit for a typical female entrepreneur, innovator, researcher, academic and scientist from the CEBS region, favourable climate is needed for their skills, capacities, and potential to flourish. This requires a concerted action. I trust that while the success stories presented in this Newsletter will encourage women to pursue their dreams, they will also foster a conversation on how to boost the unexplored potential in the fields of science and innovation our societies hold.

ZBIGNIEW CZECH

AMBASSADOR, PERMANENT REPRESENTATIVE
OF THE REPUBLIC OF POLAND
TO THE UNITED NATIONS OFFICE
AT GENEVA



News from WIPO Transition and Developed Countries Division

The World Intellectual Property Organization (WIPO), through the Division for Transition and Developed Countries (TDC/CEBSMC Section), has been a strong supporter of developing and implementing impactful projects that encourage creativity and innovation for everyone everywhere in the Central European and Baltic States (CEBS) Group. These projects include helping SMEs and women entrepreneurs gain recognition and financial benefit from their work, while, in return, societies benefit from their great and innovative products and services.

It is our pleasure to highlight the following selected three WIPO projects of 2023 focusing on women entrepreneurs and creators.

The first project worth mentioning is the **WIPO Training, Mentoring and Match-making Program on Intellectual Property for Women Entrepreneurs from Local Communities in the Central European and Baltic States Region**, developed by the collaboration of the Traditional Knowledge Division and TDC/CEBSMC Section. This Program is designed to support tradition-based women's entrepreneurship, innovation, and creativity and focuses on traditional textiles and designs, including lace, embroidery, carpet making, weaving and blueprinting. The Program was launched with the selected 22 participants from across 16 CEBS Group countries, with a 5-day Practical Workshop on Intellectual Property (IP) that took place from March 6 to 10, 2023, and will be followed by a mentoring and matchmaking phase throughout the year. Through the Program, local communities are expected to build their capacity in IP, including in the digital economy, acquire basic knowledge of related fields useful in an entrepreneurial context, such as business modelling, marketing,

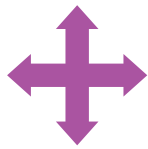
social media strategy, as well as partnership building. Participants will benefit from the support of a mentor to further develop and implement their IP strategy as well as their tradition-based businesses and projects. The participants will have an opportunity to be part of a region-wide community of Program participants to amplify networking opportunities among themselves and their communities, as well as with experts, industry representatives, WIPO partners and colleagues.

Our dedication to women creators doesn't stop there. The WIPO's Department for Economics and Data Analytics and TDC/CEBSMC Section are cooperating with the CEBS Group countries in the preparation of a **report on the Transformation of the Economy via Design – Women and Innovation**. The Report, through available national and international data, has the objective to explore the engagement of women in design creation in the region, bringing light to the current state and potentially the way forward. It is foreseen that the report will be officially launched in mid 2023 with a preliminary findings presentation.

Another project developed with inclusion and diversity in mind is the project on **Videogame Development: A Quest for IP**, launched mid-march. In the frame of the project, a **side event on Women in Gaming** is foreseen to be organized on April 28, 2023, linked to the annual World IP Day celebrations. This targeted online event will focus on showcasing success stories and provide some advice in the context of IP and marketing. It is also being explored together with the Department for Economics and Data Analytics if IP related research results could be presented during the event on diversity in the videogame industry.

19 MEMBERS

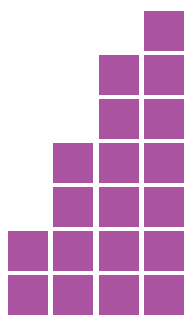
The regional group represents important regions from the European continent (Central Europe, Baltic states, the Black Sea region countries as well as the Balkan Peninsula).



MORE THAN 2 MLN SQUARE KM



Albania
Bosnia and Herzegovina
Bulgaria
Croatia
Czech Republic
Estonia
Georgia
Hungary
Latvia
Lithuania
Republic of Moldova
Montenegro
North Macedonia
Poland
Romania
Serbia
Slovakia
Slovenia
Ukraine



\$ 2.23 trillion

The collective GDP of countries from our region currently stands at 2.23 trillion USD



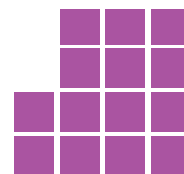
The share of women with a university degree significantly exceeds the men's share in majority of the CEBS Members.



**11
EU MEMBERS**



**14
NATO MEMBERS**



There is a balanced gender share among the CEBS Special representatives to the UN in Geneva. Currently 9 Permanent Representatives to the UN Office in Geneva are women.

CEBS Statistics

53%

On average across countries of the CEBS region **women represented 53 % of overall number of doctoral graduates**. The number of Doctoral Graduates among women has grown at the faster rate than in the case of men. **Women doctoral graduates prevail in the field of Education.**

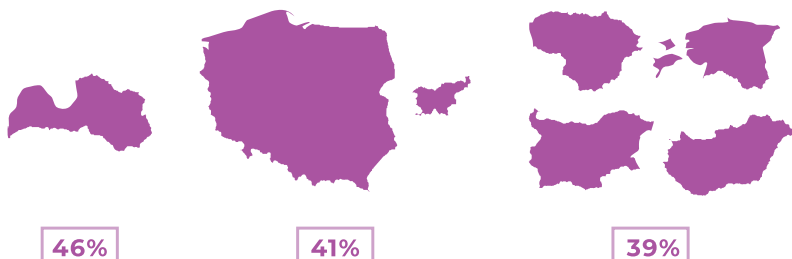
CEBS
Researchers

44%

CEBS
Scientists
and
Engineers

40%

Women from the CEBS region represent approximately 44 % of the total population of researchers in their country and more than 40 per cent of the CEBS population of employed scientists and engineers.



CEBS Members are among those EU states that represent the largest proportion of women in the managerial position: **Latvia (46 %), Poland and Slovenia (both 41 %), Hungary, Lithuania, Bulgaria, and Estonia (all 39 %).** This is higher than in the EU average (34 %).

15.5%

2020

16.5%

2021

According to the World Intellectual Property Organization (WIPO) statistics in 2021, women inventors share in international patent applications showed a **gradual increase (from 15.5 % in 2020 to 16.5 % in 2021)**. According to the European Patent Office (EPO) 13.2% of inventors in Europe are women.



10%

15%

6%

Work to be done:

Women obtain only 10 % of patent applications, and less than 15 % of start-ups are founded or co-founded by women (and only 6 % by women-only teams).

13.2%

Investors
in Europe

Bosnia and Herzegovina

When it comes to participation of women in intellectual property (IP), Bosnia and Herzegovina follows global trends.

According to data released by the Agency for Statistics of Bosnia and Herzegovina, share of registered patents by women in the period from 2018 to 2020 is 13 percent. Regarding registered copyright and related rights in the same period share of women is 27 percent.

In 2019, number of women engaged in research and development in Bosnia and Herzegovina was 1496 (men 1387).

Positive trend is noticed in Bosnia and Herzegovina in the entrepreneurial start-up ecosystem where the role of women has increased in the last few years.

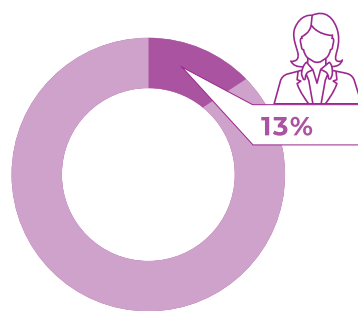


Maja Halilović

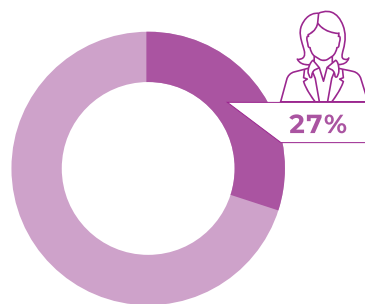
One such example is bio designer Maja Halilović, working with organic waste and living unicellular organisms in order to innovate new biodegradable materials for design purposes. More on Maja's work at MAJAHALILOVIĆ – "Biodesign embodies a newly emerging design movement that works with living organisms." (majahalilovic.com)

Aiming to contribute to the celebration of the World IP Day, the EU Support to Intellectual Property Rights project, with the Intellectual Property Institute of Bosnia and Herzegovina will organise an event in Mostar to raise awareness of women and the IP, including an award ceremony for the different formats of art that symbolise World Intellectual Property Day 2023's theme: Women and IP: Advancing Innovation and Creativity.

World Intellectual Property Day 2023 is an opportunity for Bosnia and Herzegovina to celebrate its talented women, inspiring inventors, creators and entrepreneurs helping them find out how IP rights can support their business goals.



Registered patents in the period 2018-2020



Registered copyrights and related rights in the period 2018-2020

Source: Institute for Intellectual Property of BiH

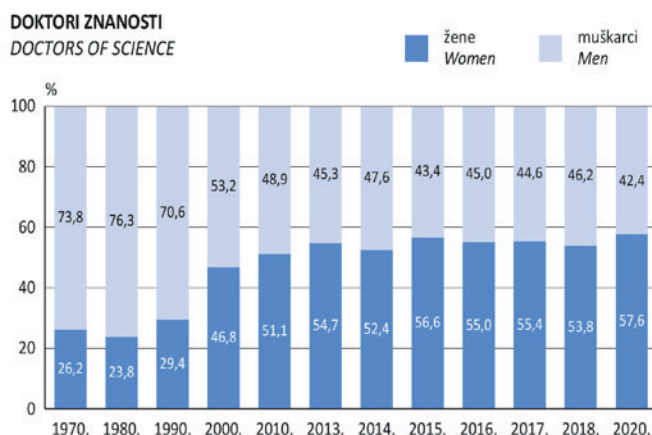
Croatia

According to the EPO study „Women’s Participation in Inventive Activity“, Croatia is among EPC contracting states with highest women inventor rate and with 25.8% it is ranked on the 3rd place.

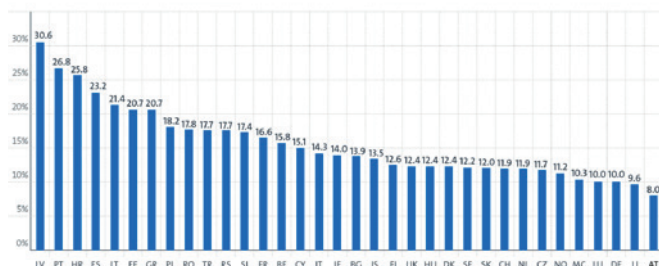
The share of women graduated from higher education institutions in Croatia has shown a positive trend in the last 70 years ranged from 30% (1960) to 60% (2020). According to EUROSTAT data from 2021, the **share of women in the total number of employees in science and technology at the European Union level was 51%, in Croatia this share was about 55%**. When it comes to natural science doctors in Croatia, the share of women in the total number in 2020 was 57.6% resulting that **Croatia is the country in which women make up the majority of researchers**.

According to the EPO study „Women’s Participation in Inventive Activity“, **Croatia is among EPC contracting states with highest women inventor rate and with 25.8% it is ranked on the 3rd place**.

Croatia is proud of the numerous women that are giving contribution to development of science and art worldwide. **Zlata Bartl** made a lasting imprint on Croatian society by inventing the first instant soups and the famous Croatian spice Vegeta wick is recognisable in more than 40 world markets. Two Croatian scientists participated in a project to land NASA’s rover on Mars, an experimental geobiologist **Tanja Bosak**, PhD, who is looking for evidence of life on the Red Planet and **Sarah Milkovich**, PhD, a planetary geologist and science system engineer at NASA’s Jet propulsion lab.



WIR by EPO country, 2010–2019 (priority year)



Iva Tolić, PhD, who has just published a study with her international team revealing events that precede cancer, was granted the Austrian Academy of Sciences’ Ignaz L. Lieben Award (2017), the EBSA Young Investigators’ Medal and Prize (2015), the Cell ‘40 under 40’ (2014). In 2017 a product designer **Ana Tevšić Nauković** won a silver medal on the European product design award and the Annual German Design Award 2018 in the lighting category. A product designer **Dorja Benussi** won the second prize for Tink Things furniture line at Salone Satellite on the Salone del Mobile in Milan.

Czech Republic

Women for Innovation and Creativity

Rut Bizkova



Rut Bizkova is a former minister of environment and a former head of the Technology Agency of the Czech Republic. She has years of experience in the management of research and innovation, energy and environmental protection. At present she acts as a consultant for smart regions, research strategies, digitalisation and the development of rural areas.

Delana Mikolášová



Delana Mikolášová is the first ever Czech scientific diplomat to Israel. She promotes cooperation between Czech and Israeli scientists, universities and research institutions in various areas of cutting edge research. Most recently, she has been involved in supporting the “Czech-Israeli Innovation Internships” programme, enabling talented Czech students to spend 2 months in top research teams in Israel.

Klára Hrušková
Doubková

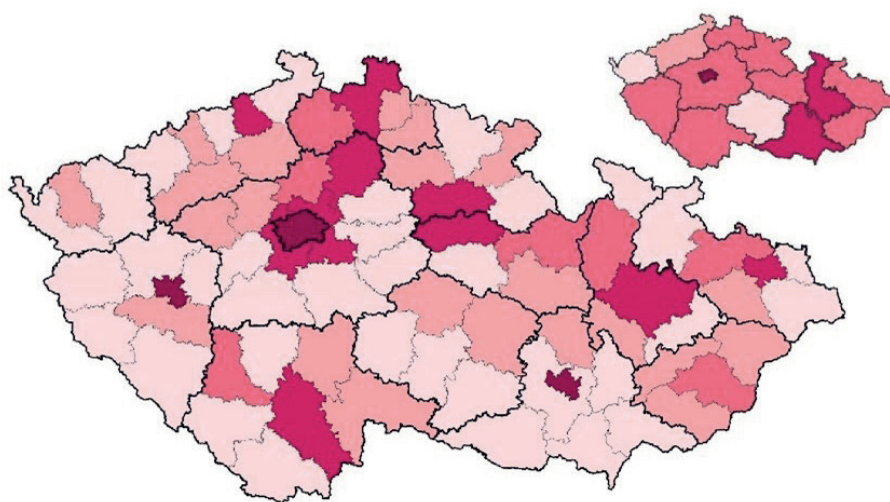


Klára Hrušková Doubková is a leading Czech bra underwear adviser and the owner of the Caresse BraExpert store with branches in several Czech cities. In her stores she sells high quality underwear which is comfortable, individually designed, relieves back pain and is aesthetically interesting. Professional advice in the field of bra fitting is a matter of course in her stores.

Top Women from the VC and Startup Ecosystem in the Czech Republic

Research and development personnel, 2021 – WOMEN (as at 31 Dec.; headcount)

Source: CZSO, Annual questionnaire no R&D



Per 1000 women aged 20-64 years in a given region

2 5 10 25

Estonia

The Estonian Patent Office has a new initiative – we have chosen a trade mark of the month since the start of 2022. By doing this, we hope to draw attention to excellent, distinctive trade marks and inspire business owners to protect their intellectual property.

Having been doing this for a while – and because so many small enterprises are run by women – it can be claimed that women are the foundation of small business. Now I'd like to give a more thorough introduction to the trade mark, which originated from a family's daily activities and was registered by a female entrepreneur.

Opadii was chosen as the best trade mark of September and the protection was granted in children's clothing, toys and sales of these goods.

According to Hille Allmäe (seen on the picture with her children), the company's creator and owner, Opadii had been in her head as a fantastic name for a business for a very long time. According to Hille, **„Opadii became a company from an idea only after the birth of our first kid, when we found cloth diapers for ourselves. Due to the constantly growing demand, a company was developed to deliver this hip and sustainable product to others.”**

Opadii's product line evolved throughout time in response to the requirements and knowledge of their family in encouraging the child's development. Only those products that had passed the most demanding product testers (the family's three little children) made it to the counter. Opadii

Hille Allmäe



developed into a type of lifestyle in the rhythm of their nomadic existence—high-quality, deliberate consumption connected with common time spent.

It became increasingly obvious as the business grew how important it is to safeguard the inventions' intellectual property.

The company's founder and owner, Hille Allmäe, explained their motives for registering the trade mark: “We were thrilled to learn that this uplifting and straightforward trade mark is quickly recalled by customers and, more importantly, attracts attention. It for sure required Opadii to be registered as a trade mark! This way we can ensure that

the trade mark is used in a specific field in such a way that it cannot be used arbitrarily by anyone else.”

The word “opadii” in Estonian refers to either a child sitting on your lap or you inviting a child to do so. It is connected to these products and services in a creative way that appeals to the intended market.

You can read more about all the trade marks of the month from the blog of the Estonian Patent Office (only in Estonian). By the time this article is released, Mää, the trade mark of the year for 2022, has been chosen and proclaimed from among the trade marks of the month from the previous year. The Estonian Chamber of Commerce and Industry, Institute of the Estonian Language, and the Chamber of Estonian Patent Attorneys collaborated with the Estonian Patent Office on this. On February 14, Valentine’s Day, the Estonian Patent Office held the official announcement of the winners and prize ceremony.

A brief overview of the other women-only trade marks is provided below:

Eripesa OÜ was born out of the desire to share the expertise obtained in professional work with parents and education professionals, according to Agnes Aasmäe, owner of the February trade mark and special educator-consultant. Trade mark protection is granted to educational books, teaching materials, children’s activity books,

games and educational services that develop children’s intellectual abilities. The name Eripesa stands out as a symbol of language and mind games; when used in reference to these products and services, it conjures images of exceptional youngsters and a secure setting where they can learn effectively and have fun.

Trade mark of the month for October is SIILIPUSA, which represents a hedgehog shelter and has gained protection in the field of wildlife rehabilitation services.

The Estonian Patent Office’s trade mark of the month for November is POKTEIL, which has received legal protection for mixed drinks made from dairy products. The owner of the trademark is SA Järvamaa, which created the trade mark with the aim of promoting Järvamaa’s special food product – milk. “Pokteils” are the name given to milkshakes.

Eve Tang
Head of Communications
Estonian Patent Office

Hungary

Solar energy use, gene therapy processes and procedures to inhibit tissue scarring, stockings with exchangeable feet, bags with interior lighting, a finger exercise device for pianists – a great many inventions that we owe to Hungarian women.

We, Hungarians, have always been a very innovative nation, and there are countless inventions that have been known and used worldwide for decades or for even more than a hundred years. Let us mention, among others, János Irinyi's safety match (1836), Ányos Jedlik's dynamo (1856), László Bíró's ballpoint pen (1938), Ernő Rubik's magic cube (1975) or, more recently, Gábor Borsányi's teqball table (2014). Hungarians have also played an important role in the protection of intellectual property, with Árpád Bogsch, for example, playing a prominent role in establishing the international role of WIPO.

Fortunately, it is not only Hungarian men who proved to excel in creating practical tools or even inventions that were a resounding success on a global scale: our women inventors have set equally outstanding standards. Pianist Paula Braun, for example, filed a patent application in 1916 for a finger exercise device developed for pianists, and in 1934 for an auxiliary keyboard built for keyboard instruments. The famous writer Frigyes Karinthy's sister, Emmi, who in fact worked as a translator, patented exchangeable feet for stockings in 1932. And it was amidst World War II blackouts that Klára Freyberger came up with the idea of developing a handbag with internal lighting.

Mária Telkes had a distinguished scientific career in the United States in the middle of the 20th century: several patents related

to solar energy, including a mobile, solar-powered seawater desalination plant, are associated with her name. What's more, the portable solar-powered oven is still known in America as the Telkes oven, and passive houses are still called Telkes houses.

Katalin Karikó, a research biologist, has also achieved breakthrough results at the international level, since the technology she developed has been the basis for the latest generation of mRNA-based vaccine formulations (e.g. Pfizer-BioNTech vaccines), which are an effective tool in the fight against the corona virus pandemic. Another significant invention related to the corona virus is paediatrician Andrea Fekete's patented device, which stimulates the Sigma-1 receptor and could thereby lead to a breakthrough in the treatment of pneumonia and tissue-scarring that develops as a complication of the disease. In 2021, the two aforementioned ladies were awarded the Jedlik Ányos Prize of the Hungarian Intellectual Property Office (HIPO) for their successful research and intellectual property protection activities.

It is a proven fact that encouraging the employment of women in innovation and intellectual property related fields has numerous benefits. In 2017, HIPO examined the national applications and they found that between 2000 and 2015 13.3 % of all inventors were women. The most popular fields among Hungarian female inventors were microstructure, biotechnology and organic chemistry.

Women

inventors and patents

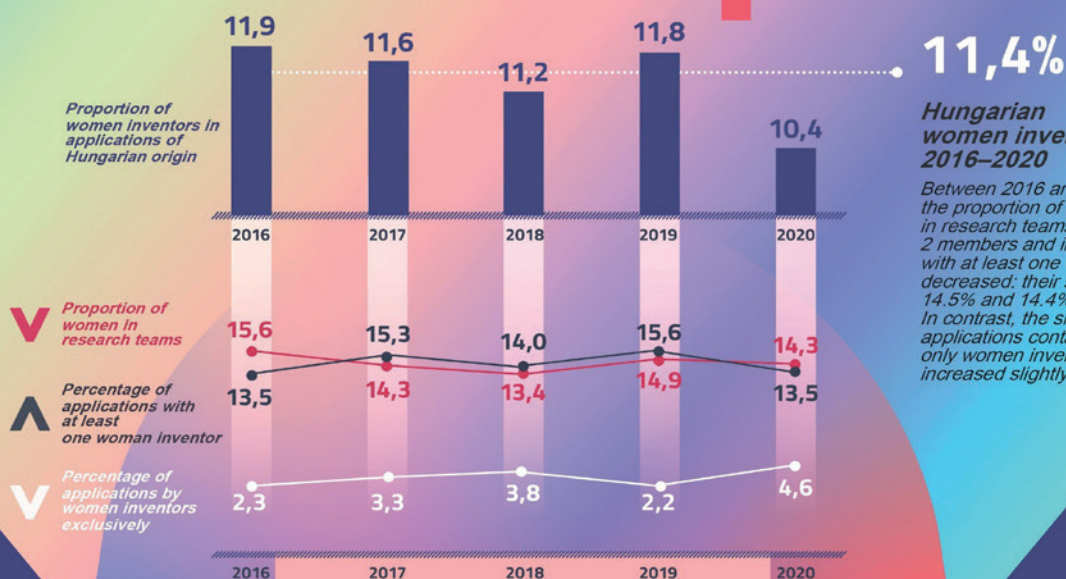
Analysis of the role of women in national applications by Hungarian inventors between 2016 and 2020 - a comparative analysis



One in nine

Hungarian inventors in national patent applications filed between 2016 and 2020 were women (11.4%).

%



Breakdown of inventor groups in applications

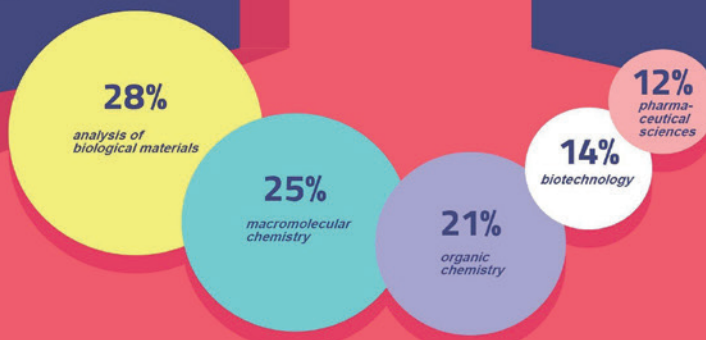


Technology fields with the highest percentage of women inventors

(2016–2020)

Hungarian women inventors are **the most active in the life sciences.**

This is in line with the international trend observed by WIPO.



2015 → 2020

In 2020, the proportion of applications by a single man inventor increased (59%).

In 5 years, the share of mixed groups doubled

and in 2020 one tenth of all applications were from such research communities.

However, the activity of individual women inventors decreased (4%).



Hungarian Intellectual Property Office

Georgia

According to Inclusive sustainable development, the Government of Georgia pursues socially inclusive and ecologically sustainable growth.

This requires a structural transformation of the economy, enabled by technologies, knowledge, and investment in human capital, women empowerment, effective institutions, and modern infrastructures, increased involvement of the private sector in ecosystem development.

Women empowerment is one of the priorities of the innovative ecosystem of Georgia. The government is increasing the expenditure on innovation every year, more importantly, the increase of private sector investment in the startup ecosystem, promoting experimentation, ensuring knowledge diffusion across sectors, using technology well, and making the most of the potential inherent in efficiency-seeking FDI and far-reaching export opportunities, while investing in hard and soft infrastructure.

Through the support programs and competitive selection process, which is done by independent peer reviewers and judges from strong ecosystems (Silicon Valley) Government has already financed more than 291 high-growth potential, globally scalable startups among them 127 female founders. For instance, Georgian startup Theneo has 3 female founders. Theneo won pitch contest at Web Summit 2022. The startups offer developers and non-technical team members to create API documentation.

Georgia's Innovation and Technology Agency, supervised by the ministry of economy

of Georgia provides special and deferential treatment (additional screenings) to female entrepreneurs during popular startup programs among them, Startup Matching Grants and 500 Global.

Ana Robakidze



The objective of Startup Matching Grants is to stimulate innovation and the creation of innovative enterprises in the Georgian economy through the development and commercialization of Innovative products and services with the potential for internationalization. www.Grants.gov.ge

500 Georgia has the role of catalyst for the development of the startup ecosystem. This program marked Georgia on the international map of emerging locations <https://500.co/accelerators/500-georgia>.

Latvia

Latvia has made remarkable strides in the field of intellectual property and innovation, especially when it comes to women's contributions.

According to the data collected and analyzed by the European Patent Offices' (EPO) study in 2022¹, the largest proportion of female inventors in EPO member states can be found in Latvia, with 30.6% of all inventors in the country being women.

Such a woman who has made a significant impact on the field of intellectual property is Latvian-born chemist Esther Sans-Takeuchi. Her work in the medical equipment manufacturing company Greatbatch has led to over 150 US and 40 European patents and numerous prestigious awards, both in the US and Europe and is often referred to as the female scientist with the highest number of patents in the world. Her most notable invention, the long-lasting battery in heart cardioverter defibrillators, has been described as a revolutionary invention in the field of heart disease. In 2009, she received the US' highest award in the field of technology and innovation, the National Medal of Technology and Innovation, from then-President Barack Obama, who described her as an inventor who has saved millions of lives. In 2018, Esther Sans-Takeuchi also received the European Inventor Award.

Equal opportunities for women are also high on the agenda of the Latvian government, which has launched multiple initiatives to encourage women to pursue careers in technology and entrepreneurship, being programs providing training, mentorship, and funding for women-led startups. An

**Esther
Sans-Takeuchi**



**Riga
TechGirls
CEO Anna
Andersone**

important policy is the Latvian National Plan for the Development of Science and Technology, which includes a specific focus on promoting gender equality and diversity in the tech industry. There are also multiple NGO's that create communities in Latvia dedicated to educating and inspiring girls & women about technology like "Riga TechGirls". In 2021, the organization provided training and brought nearly 6,000 women into the Tech Industry. Just recently in February 2023, Google.org, the philanthropic arm of Google, awarded Riga TechGirls a grant of USD 250 000 to boost digital skills. With this funding, Riga TechGirls will help additional 11,000 women acquire the knowledge and skills they need to work in the fast-growing technology sector.

1. <https://www.epo.org/news-events/press/releases/archive/2022/20221108.html>

Lithuania

Profiles of Famous Women in Innovation and Creativity, Business.

Karolina Gailė



Karolina Gailė

Co-founder and business developer of the startup that produces smart mirrors.

Mrs. Karolina Gailė together with a team created smart mirrors that show videos and have an interactive field where a person can read news, watch promotional videos, or weather forecasts. Later, another type of mirrors was developed – Mrs. Karolina Gailė and her team began to create photographic mirrors. Today photographic and advertising smart mirrors delight people at various parties, exhibitions, venues, and openings. “Both men and women can be interested in technology and create innovative things we have never seen before. All you need is desire and persistence”, - says Mrs. Karolina Gailė.

Vlada Musvydaitė-Vilčiauskė



Vlada Musvydaitė-Vilčiauskė

Founder and CEO of a globally working sustainable walking platform and app Walk15, with a former professional athlete background.

Mrs. Vlada Musvydaitė-Vilčiauskė together with her team created a solution for companies and organizations, helping to engage employees, increase productivity, motivation, and healthiness at work through innovative steps challenges. The solution is already used among more than 1000 companies and 450,000 users.

STATISTICAL DATA OF LITHUANIA (2022)

PATENTS



203 inventors named in national patent applications were Lithuanian, **35** of whom were **women**

TRADEMARKS



508 trademark applications were filed by natural persons, **224** of which were filed by **women**

DESIGNS



15 design applications were filed by natural persons, **13** of which were filed by **women**

THE STATE PATENT BUREAU OF THE REPUBLIC OF LITHUANIA

Republic of Moldova

Women of the Republic of Moldova are known for their beauty, intelligence, talent and perseverance. Many of them have managed to become famous far beyond the borders of the country, thanks to their contributions in various fields, from research and innovation to arts and business. Below are some examples of outstanding women who managed to bring positive changes in the Moldovan society and in the surrounding world through their work and creativity.

**Olga
Covaliova**



Olga Covaliova is the most active inventor in the Republic of Moldova, with 256 patented inventions in the field of chemistry, 9 books and over 120 published scientific papers. Her inventions have been rewarded with more than 30 gold medals at international exhibitions of inventions, as well as other prestigious awards and prizes. In 1999, she received the WIPO Gold Medal “Woman Inventor”.

**Eva
Gudumac**



Academician **Eva Gudumac** is a renowned pediatric surgeon who has made a significant contribution to the development of the specialty of pediatric surgery in the Republic of Moldova. She is also the patent holder for the medical diagnostic differential radiometer. In addition, Eva Gudumac received the Order of the Republic in 1990 for outstanding contributions in this field.

**Varvara
Buzila**



Varvara Buzila is an ethnographer and museographer with vast experience in collecting and preserving folk culture items. She has published more than 50 scientific papers and organized several national and international symposia and conferences.

**Valentina
Nafornta**



Valentina Nafornta is an opera soprano of the Republic of Moldova. She has won several international singing competitions, including the BBC Cardiff Singer of the World Competition. In 2011, she won the Dame Joan Sutherland Audience Award.

Montenegro

Women make up 51 % of population of Montenegro. According to official data from 2011, only 9.6 % were female business owners. Today, women account for 23 % of owners of micro, small and medium enterprises. Women entrepreneurs make up a total of 32 % of entrepreneurial businesses in the country.

This percentage reflects desire and effort of Montenegrin women to earn money through their own business, to be useful to themselves, their family and the whole society. Such percentage also puts Montenegro high on the list of women's representation in research & development. Worldwide, 30% researchers are women, while in Montenegro this figure is much higher.

Strategic framework

In 2021, Government of Montenegro adopted Strategy for Development of Women's Entrepreneurship in Montenegro for the period 2021-2024 with strategic goals:

- Building an environment for sustainable development of female entrepreneurship;
- Ensuring better access to finance and strengthening the competitiveness of women's business;
- Advocating the interests and positioning of women entrepreneurs.

National Digital Platform for Economic Empowerment of Women in Montenegro was created with the aim to provide support to women in business.

Funding

Several programs for financial support of female entrepreneurship are currently active in Montenegro. Loans are available in the Investment and Development Fund of Montenegro, within special lines:

- Support program for women in business - Start Up;
- Program for promotion of female entrepreneurship;
- Micro loans to support women in business;

Some commercial banks also provide loans for women under favorable conditions.

Success story

Women in Montenegro can boast for their active involvement in innovation through their creative activities, grounded on their high education.

Creative women in Montenegro accomplished remarkable results in various areas of economy. They are professors at Universities, owners of trade mark rights, entrepreneurs, creators of handicrafts, fashion designers, marketing experts, etc. Their contribution to the economic map of Montenegro is precious and contributes greatly to development of both their communities and entire society.



North Macedonia

Modern society does not differentiate gender approach to modern technologies. When we talk about successful women in technology, we are actually talking about an absolutely balanced approach to resources where women create solutions with dominant utility value in numerous technological spheres.



In North Macedonia, the presentation of their inventions at exhibitions and filling of national or international applications are being creating proof of their success.

In 2022, the patent of the year award was given to an innovative team in which a female inventor also participated. Innovator **Naumovska Grnarova Marta**, daily inspired by the needs in the immediate environment, finds new technological solutions with her creativity. The invention is a mobile mixer for performing all steps of the complete dissolution procedure under vacuum or pressure with variable temperature of liquid

or semi-liquid medical preparations in a single machine unit.

Inventor **Liljana Simjanovska**, a longtime embryologist and scientist with work experience at the Research Center for Genetic Engineering and Biotechnology of MANU, created a prototype of an incubator for cell culture of embryos. The innovative method where the CO₂ Incubator with a device for directly controlled air ionization allows increasing the success of in-vitro fertilization and provides better conditions for embryonic development than standard incubators.

The successful invention of the inventor **Daniela Rizova**, the corrective device for the breast, spinal column, torso and hands is presented as specific technical solution which provides effective results without the use of invasive methods and drugs.

Inventor **Jana Klopchevska** creates a successful innovative story with a symbiosis of production and science. Innovative solution was recognized and supported by the Fund for Innovation and Technological Development. Her research in the area of food and pharmacy results in the discovery of a new food product – cakes that are both food and dietary supplement.

Poland

“Even if something seems unattainable, it does not matter, because we [women] do not realize what we are really capable of. Sometimes women can be surprised at how much they are able to accomplish. That’s why I’m in favor of setting the bar so high that it’s no longer in sight.”

Olga Malinkiewicz is a Polish physicist and inventor of an inexpensive patented method of producing flexible printed solar cells based on perovskite. Contrary to the traditional, silicon-based photovoltaics, they are thin, lightweight and able to generate energy from both natural and artificial light, as well as remain efficient in the low-light environment. For her work on thin film photovoltaic devices, which was part of her PhD thesis, she received the prestigious Photonics21 Innovation award in Brussels in March 2014, and a few months later, she co-founded the Saule Technologies company.

The name of the company is not accidental and refers to Saulė, one of the most powerful deities from Baltic myths, who was the goddess of the sun itself, responsible for all life on Earth. This feminine accent is a characteristic of Malinkiewicz’s work. When setting up the company, she focused on diversity, a culture of creativity and partnership, where neither age nor gender or having or not having children matters. Strong in her female entrepreneurship beliefs, she became the face of the “Inclusion and Diversity” campaign in 2022. In interviews, she often advocates for women and encourages them to believe in themselves and realize their potential. Olga encourages them to leave self-doubt

behind and pursue their goals, for she insists that the future of women in science and business is bright and encouraging.



Olga Malinkiewicz

In May 2021, the company opened, as the first entity in the world, the production line for flexible perovskite photovoltaic cells. Opening a factory in Poland was no accident. Having already established a strong, international team consisting of over 100 scientists, engineers and experts in their fields in the Saule HQ in Wrocław, building a factory locally was a given. Together with co-founders Piotr Krych and Artur Kupczunas, Olga Malinkiewicz aimed to create a factory and scientific center of the global impact and they reached their goal as scientists and investors from all over the world come to Saule Technologies in Wrocław, impressed with their achievements.

Saule Technologies not only has the first perovskite photovoltaics production line in the world, but also one of the best-equipped optoelectronic laboratories in Europe.

Thanks to their flexibility and lightness, Saule Technologies' solar cells based on perovskite are perfect for tents, sails, and all other surfaces as they are fully customizable in matter of needed shape. Additionally, Malinkiewicz's technology allows for the breakthrough concept of light recycling as the cells in perovskite technology are able to recover a large part of artificial light and convert it into electricity, which is a step in the right direction towards a greener source of energy.

Examples of utilizing this technology have had a positive vertigo effect. The WWF organization contacted Saule Technologies with a request for the possibility of using the technology to monitor the location of European bison in Ukraine. Two European bisons, Adam and Eve, roamed freely while wearing lightweight perovskite-powered collars. Soon Malinkiewicz's invention will reach the stars, literally, as the world's first mission to test perovskite cells in space in real-time will begin!

Throughout history, there have been a number of stories that hit home to many female scientists and creators: self-doubt, lack of support, and imposter syndrome. Nevertheless, Olga Malinkiewicz has achieved so much in the world of physics while being a modern model of a female scientist who knows what she wants,

she clearly articulates what bothers her. She admits that building her brand and founding a startup was not an easy task. *"If I had a choice between building [a startup] again or climbing Mount Everest barefoot, I would choose the latter. It's not fun for everyone because it takes up almost all of your free time,"* she vividly states.

As for Malinkiewicz's approach to the intellectual property rights protection system, she emphasizes the importance of the patent, especially for the smaller market players and start-ups. She soberly admits that having a patent does not always protect against unfair competition, but it gives the company the freedom to operate right and gives a sense of safety in that no other entity can block production and distribution. She also emphasizes the importance of partnerships at the stage of commercialization of innovations. This is a challenge, as investors often disproportionately assess the role of scientists in the project.

As for the advice that Malinkiewicz would give to women, not just scientists and inventors, she says to set the bar high. *"Even if something seems unattainable, it does not matter, because, in my opinion, we [women] do not realize what we are really capable of. Sometimes women can be surprised at how much they are able to accomplish. That's why I'm in favor of setting the bar so high that it's no longer in sight."* She has indeed. To Malinkiewicz, the stars are no longer the limit—especially the big bright one that keeps us all warm.

Poland

WOMEN: SCIENCE, RESEARCH, DEVELOPMENT

116 764 The number of women in R&D personnel in 2021

WOMEN AS THE SHARE OF R&D PERSONNEL

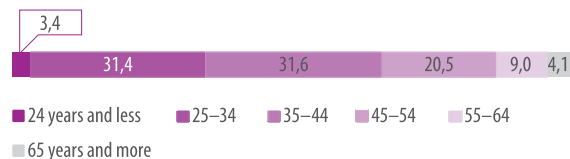


The ratio of women to men in R&D personnel was 62 to 100

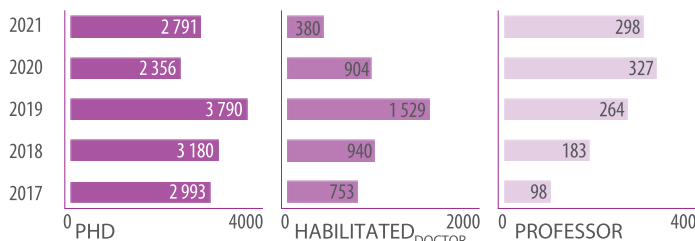


67% were researchers

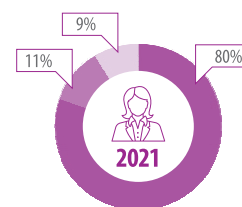
THE STRUCTURE OF FEMALE RESEARCHERS IN R&D PERSONNEL BY AGE GROUPS



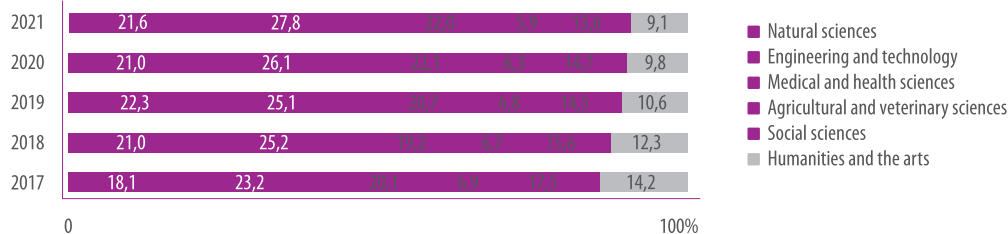
SACADEMIC DEGREES / TITLES AWARDED TO WOMEN



3 469 ACADEMIC DEGREE / TITLES WERE AWARDED TO WOMEN



THE STRUCTURE OF WOMEN IN R&D PERSONNEL BY R&D FIELDS

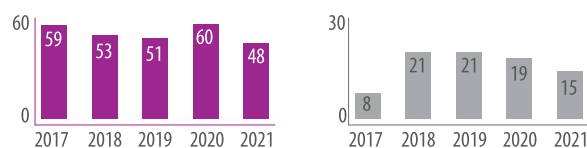


IN 2021

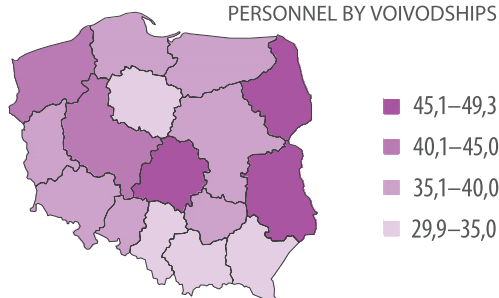
48 PATENT APPLICATIONS WERE SUBMITTED BY WOMEN

15 PATENTS WERE GRANTED TO WOMEN

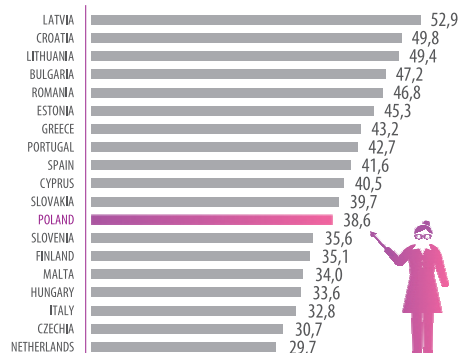
PATENT APPLICATIONS AND PATENTS GRANTED



WOMEN AS THE SHARE OF INTERNAL R&D PERSONNEL BY VOIVODSHIPS IN 2021



WOMEN AS THE SHARE OF R&D PERSONNEL IN SELECTED COUNTRIES IN 2020



Statistical Office
in Szczecin

Zachodniopomorskie Regional Research Center
Szczecin 2023

Romania

IE Clothing

Romanian brand, with love for folklore

Iulia Ghenea
and Emilia Tudoran



IE Clothing is a luxury clothing brand, founded by Iulia Ghenea and Emilia Tudoran, two young women passionate about fashion by all means. They graduated from the National University of Arts in Bucharest, with a degree in Fashion and Costume Strategies.

IE Clothing offers everyone the opportunity to proudly wear modern outfits inspired from the Romanian tradition. Handsewn, the brand invites every customer to embark upon a unique time travel experience. In a consumerist world, devoid of majesty, the brand meets the most sophisticated expectations, offering clothes that bring excellence and emotion.

"IE Clothing is more than a business, it is a heart & soul project, via we want to bring into the spotlight the unique and valuable

identity of the Romanian nation, but keeping that traditional vibe authentic". Declared the two creators.

Brand's mission is to create unique clothing with a personal touch, rich in meaning and history. Led by their passion, the fashion designers Iulia Ghenea and Emilia Tudoran are pretty courageous to tailor up remarkable clothing articles and always ready to break the rules since 2014.

Serbia

The Association of Business Women of Serbia, in cooperation with the Intellectual Property Office of the Republic of Serbia and under the auspices of the World Intellectual Property Organization (WIPO), for the first time in 2022, awarded a special recognition WIPO IP Enterprise Medal for 2022.

The Association of Business Women of Serbia, in cooperation with the Intellectual Property Office of the Republic of Serbia and under the auspices of the World Intellectual Property Organization (WIPO), for the first time in 2022, awarded a special recognition WIPO IP Enterprise Medal for 2022.

This award for women entrepreneurs that successfully implement intellectual property was presented to the business company “EKO Team” Ltd, from Loznica whose owner and director is Ms **Ljiljana Matković**. The award was presented at the celebration held on November 9, 2022 in the framework of the manifestation “Success Flower for Dragon Woman”. This event is traditionally held every year, and in 2022 it was its sixteenth anniversary.

EKO Team, Ltd, since 1993, has been providing services of preventive sanitary protection – control of pests in public hygiene and agriculture and it deals with the production of Biocide preparations for the prevention of rodents. In its business it combines scientific knowledge about pests with individual demands and needs of every user of services, which contributes to the safety of natural environment. The registration of trademark – logo of the company, performed in 2019 (trademark number 76649) secured for the company the protection of investments realized after

Ljiljana Matković



2019. Thanks to the protection of trademark, this company obtained stimulating funds, in the form of grants by the Centre for Digital Transformation, which contributed to the finishing of the project in 2022, dedicated to digital transformation through the introduction of platform for the digital control of pests. That also contributed to the increase of productivity and enabled market competitiveness.

Ms Ljiljana Matković said in the name of the company: “I hope that this award shall become traditional, that it shall motivate my other colleagues to protect intellectual property rights in greater numbers and to come with their ideas to the market and realize in such a way greater chances for the growth of their businesses, their inventiveness, and productivity, and consequently for profit. We recognized and used that chance in “EKO Team”.

Slovakia

Slovakia has recently enrolled in the WIPO project dedicated to women in the traditional textile industry called “Tradition Meets Business: A Woman Entrepreneur’s Journey”.



Our candidate is working with Detvan Embroidery, which are ornaments made with a curved needle following the pre-drawn pattern on a canvas stretched on a wooden frame.

Embroidery patterns can be dense, carved, backed with tulle fabric, or a combination of both.

Like WIPO, IPO SR also decided to dedicate traditional annual conference to Women in Creative Industry, and on April 26th, will host successful Slovak innovators, who have contributed to the Slovak innovative ecosystem.

For the summer season, Slovakian representation plan to join the Design exhibition and Fashion show during the WIPO Assemblies, which should display designs created by women.

In Slovakia, during the years 2010-2022, out of 977 applications were filled by men and respectively 369 – by women in the field of designs applications.



Slovenia

Women participation in the intellectual property (IP) system and encouraging women's involvement and contribution in the business of innovation and creativity to close the persistent gender gap are a part of a bigger picture.

Slovenia ranks high on various indices of equality between women and men. In 2022 it was ranked 39th out of 146 countries on the World Economic Forum's Global Gender Equality Index and 12th in the European Union (EU) on European Institute for Gender Equality index. Over the years we have implemented progressive legal and policy framework that strives to create the right conditions for equality between women and men, yet there is still room for improvement also in the economic, innovative and creative sector. Based on the data analysis by Analytics CCIS¹ the gender pay-gap in 2020 was among the smallest in the EU, as Slovenia ranked 3rd with 3.1%. Even so, as the Slovenian Minister for the Economy, Tourism and Sport stressed at the 4th conference Industry of the Future titled "Industry is of the female gender", it should be non-existent. Furthermore, in the EU, only one third of all managers are women, even though almost half of all employees are females. In this regard, Slovenia is above average, ranking 5th in the EU with 42% of women in managerial positions. Share of Slovenian women participation in research and development is 35.6%. An interesting statistics also shows that the share of female innovators that have participated with innovations proposals for national awards was 23% in 2020 and had risen since 2015.

While we don't have a comprehensive data analysis of women participating in the IP

system at a national level, the data from the latest European Patent Office survey² highlights the gender gap in innovation since only 13.2% of European inventors listed in patent applications are women. Slovenia ranks slightly above the European average with 17.4%. Under-representation of women is a complex issue, and cannot be solved by legislative policies alone. Slovenia tackles the matter also with the help of programs such as different incentives for entrepreneurs, scholarships for women scientists as well as dedicated awards in both creative and innovative sectors. For example, the Slovenian Film Centre dedicates 8th March to Slovenian female directors with an event that promotes talented Slovenian female filmmakers. To encourage and promote girls' enrolment in STEM study programmes, the award Woman Engineer of the Year celebrates excellent female role models and platforms the achievements of one winner and shortlisted candidates to broader audiences each year etc.

Even when going head to head in competition with their male colleagues, Slovenian women innovators and creators have been recognized at home and abroad. From winning awards by Salon de Beaux Arts in Louvre to recognitions at international innovation fairs in Seoul, Slovenian art, patents, models and their female creators and innovators have triumphed.

Slovenia

We are proud to say that in three years since the WIPO Medal for Inventors³ is being awarded in Slovenia, two out of three winners were women:

Prof. dr. Alenka Vesel, head of the Department for Surface Engineering at the Jožef Stefan Institute, is an expert in the field of non-equilibrium eco-friendly plasma technologies for tailoring surface properties of solid materials. She has been granted several international patents for plasma deposition of nanomaterials, for obtaining super-wettable surfaces, packaging material with antibacterial surfaces, and a mercury-free source of UV-C radiation. Prof. Dr. Vesel is also a co-founder of the spin-off company Plasmadis Ltd., which trades innovative patented sensors and provides complete solutions for upgrading industrial plasma reactors to meet the standards of Industry 4.0.

Dr. Marta Klanjšek Gunde is a researcher at the National Institute of Chemistry, currently working on chromogenic materials and smart applications based on them. She is an inventor and holder of national and European patents for time-temperature indicators (2017) and thermochromic materials for permanent colouration (2022). The first patent led to the founding of the start-up company MyCol, which combines licensed technologies from her earlier work with new knowledge, giving the 2022 patent, to develop smart labels with the patented temperature-sensitive ink that permanently colours at a certain critical temperature. She is the co-founder, co-owner and CEO of the company, which currently has six full-time R&D employees.

To further celebrate the historical achievements of female creators, the brochure **»Slovenian Female Artists & Copyright and Related Rights«** will be published by the Slovenian IP Office. It will highlight sixteen female artists from the 19th and 20th centuries and their works. From one of the most important painters Ivana Kobilca to internationally-known actress Ita Rina, the publication celebrates prominent Slovenian female artists from various fields who moved barriers and achieved breakthroughs during the times that were less favourable to them than to their male peers, and paved the way for future Slovenian creators.

We invite you all to flip through the brochure when published online on the occasion of the World IP day. You will be able to find it on the website of the Slovenian IP Office.

Prof. dr. Alenka Vesel

Foto: Marjan Verč



Dr. Marta Klanjšek Gunde

Foto: Marjan Verč

1. Entire presentation available at: <https://vmo.mko.mybluehost.me/in-dustrijaprihodnosti/index.html>

2. <https://www.epo.org/service-support/publications.html?pubid=244#tab3>

3. The goal of the WIPO Medal for Inventors is to award inventive and innovative activity of Slovenian public researchers (individuals or a group of researchers) whose patented invention has shown a significant economic and technological development in Slovenia.

Ukraine is pioneering the way when it comes to empowering Women in Science, Creativity and IP.

WOMEN IN IP



Olena ORLIUK - UANIPIO Director, PhD, Doctor Habilitat, Professor, Academician - 20 years' experience in IP sphere as expert, lecturer, researcher and manager.

Ukrainian National Office for Intellectual Property and Innovations – new IP Office UANIPIO in numbers:

75.5% of employees are women

68.5% of management are women

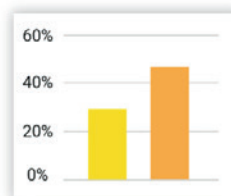
57% of patent attorneys are women

WOMEN IN SCIENCE

According to the UNESCO Statistics:

- Only 28% of scientists in the world are women
- In Ukraine 45% of scientists are women

In 2020, 3.9 thousand people were involved in R&D, 46% - women.
50.6% of all Doctors of Sciences in Ukraine are women



Maryna VIAZOVSKA - PhD in natural sciences, awarded the Salem Prize for her work on the densest packaging of bullets in 8- and 24-dimensional space.

Tatiana TATARCHUK - chemist, winner of the L'Oréal-UNESCO Award "For Women in Science", in TOP-2% scientists of the world.



WOMEN IN CREATIVITY

According to the UNESCO study "Culture for Development" (2016), there is parity in the culture and creative industries in Ukraine: 48% of women and 52% of men.

According to the Ukrainian Cultural Foundation (UCF), a state institution created to promote the development of national culture and art, out of 432 projects supported by UCF in 2019, 275 were coordinated by women and 157 by men.

SUPPORT PROGRAMS

Ukrainian women participate in Government Business Support Program 2022/2023 – a microgrant to start or develop their own business. In 2022, more than 7,000 women have applied for microgrants, 1,500 women awarded (43%). Program Budget 2023 – 45 million USD. Free training under the program "Start in IT".



POLAND

CEBS WIPO 2023 COORDINATOR



Permanent Mission
of the Republic of Poland
to the United Nations Office
at Geneva

Prepared by: Permanent Mission of the Republic of Poland to the UN Office at Geneva, based on inputs received from CEBS Members and WIPO TDC

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