



**We Create #SuccessStories**



5 YEAR ANNIVERSARY OF THE FUND FOR INNOVATION AND TECHNOLOGY DEVELOPMENT

# STATE INSTITUTION SUITED FOR THE ECONOMY

Five years ago (when only foreign companies could receive state aid), forming of an institution that would fight and take care of domestic businessmen's needs was almost impossible. But today that dream is a reality and indeed FITD has selected a group of enthusiasts with great professionalism who do everything in their power to make life easier for the domestic mini, micro, medium and large companies. Therefore, dozens of millions of euros have already been injected into the domestic economy, and this number is increasing daily. In addition, domestic companies through their collaboration with the Fund have been further educated to become competitive for grants and loans from international financial institutions.



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# INTRODUCTORY ADDRESS: JOVAN DESPOTOVSKI

## DIRECTOR OF THE FUND FOR INNOVATION AND TECHNOLOGY DEVELOPMENT

# WE ARE GROWING AND SO ARE THE COMPANIES

I first joined the Fund for Innovation and Technology Development in August 2017. The institution has operated for two years, but very little was known to the public and companies. My predecessor, Jasmina Popovska, welcomed me first. I deliberately mention her at the beginning, because she and all former associates who are no longer part of the team, deserve to be mentioned as part of the story of the Fund for the past five years. The fund is not and will not be an institution that starts and ends with just one person. It has proven to be much broader than that.

At first, many of my friends wondered why I was doing this. But, as a person who finds work a personal challenge, I recognized a huge potential in the Fund. From this perspective, I can say that I was right.

FITD was established in 2015, with financial support from the World Bank and established criteria for the distribution of money. We inherited it with only 0.8 million euros invested in 35 projects in three years, mostly small businesses. I received a warning from the World Bank that the loan agreement would expire in a year and a half, and we had only 9 percent of the funds used - more for salaries and running costs, and much less in business plans, which is not typical for an investment fund according to the world standards. Instead of using the money for the economy, the country would have had to return money that it did not use at all.

The reason? The analysis showed that domestic companies are not sufficiently informed about the opportunities offered by the Fund, i.e. that they were not aware of the existence of such an institution in

Macedonia. Those who knew, on the other hand, faced difficulties in fulfilling the conditions for application, some the conditions were very restrictive, but also the existing instruments had restrictive conditions for application due to which they did not decide to apply.

What we did is realizing that we had to open the Fund for domestic companies, we gathered all relevant factors, including the chambers of commerce and together we worked on changing some of the conditions, such as expanding the instruments, introducing new criteria for encouraging the non-IT companies sector, increasing the level of financial assistance and making a more intensive presentation of the Fund to the public.

In addition to the existing instruments for support of start-up companies and commercialization of innovations, within the initiative "Economic Growth Plan", the government, through the third pillar, opened the possibility for financial support implemented by the Fund.

We have also improved the selection and decision-making process and completely removed it from the influence of politics and state administration. The final decision was to be made by a five-member independent Investment Approval Committee, composed of foreign experts selected in an international competition, but in the pre-selection phase we added a Committee of domestic experts selected in a public competition, which makes the first filter. In our database we have over 200 experts from different fields.

With this type of a system, we put an end to party booklets, family ties and blue envelopes in the allocation of public funds. In partnership with Transparency International, we have developed a Risk Assessment Protocol for companies with public office holders. FITD is the first and only state institution that requires declaration of a holder of public office upon self-application and conducts risk assessment in such cases.

We have set transparency and two-way communication as an imperative in our work. We especially invested in stronger promotion of the possibilities, tools and clarification of the whole application process. We have simplified things, explaining that innovation does not mean that someone has to invent a rocket and send it to Saturn, but that it can be quite small things that simplify our daily life and work. An innovation is when you use the camera of your mobile phone to help a visually impaired person, who is thousands of kilometers away from you, to cross the street smoothly.

The results were there. The balance of the three-year story is a total investment of 70 million euros, 450 companies supported so far and over 2,000 submitted investment plans and proj-







ects. This means that the total investments in the private sector from 2017 until today, through the programs of the Fund, have increased by over 3,800 percent, and the volume of financial support for these companies has increased by nearly 2,800 percent compared to the period before 2017.

What makes me especially happy and motivated is that we “awakened” the companies and encouraged them to invest their own funds in development and progress, since 30 million is their investment. To almost every denar from the state, companies invest one of their own. We have changed the mindset of both companies and the public.

We are growing, and so are the companies. The analysis shows that the companies financed by the Fund registered a

71 percent increase in profit on average in 2019, compared to previous years, an 11 percent increase in revenue. In 2019 these companies paid 3.5 million euros more in public funds than FITD paid to the economy in the same year. These results return to society. Only these, three and a half million euros in the budget as a result of the operation of these companies, are more money for schools, hospitals, pensions, social welfare and other needs of the citizens.

The crisis caused by the Covid-pandemic showed that in North Macedonia there are companies ready to help the community in difficult times and have shown courage to enter new investments that will help them adapt to the new conditions and to grow. They encourage us to think about the future pos-

## INTRODUCTORY ADDRESS: JOVAN DESPOTOVSKI DIRECTOR OF THE FUND FOR INNOVATION AND TECHNOLOGY DEVELOPMENT

sibilities. As one of the measures in the third set of government aid measures, was trying to shift the focus of companies' plans from survival to development.

Since it was not fair to call on companies to be brave and the public sector to play "safe", we introduced a financing model, where the return on assets is tied to participation in future profits. That meant that we succeed together and share the loss together.

Through FITD, the state has shown how to be a sincere partner of the economy. There is more and more talk of innovation, whether in a positive or in a critical way. There is and must be criticism! Well-intentioned criticism and suggestions on how to improve are always welcome and we listen to them very carefully. That is exactly what probably makes us successful. We listen to what the real sector has to say, which should benefit from these funds, and based on that we adjust the instruments.

These numbers motivate us to look forward and make plans to increase funds. If we moved from 1.7 million euros of investments in July 2017 to 70 million euros in June 2020, then what is the limit of this growth? With ambitious work, as before, I believe that the level of 250 million euros encouraged investments in the private sector in the next 3-4 years is an absolutely achievable goal.

The success of the Fund is the merit of the whole team. I gave a chance to the younger people, professionals, we imposed a different, more dynamic pace, and now we all enjoy the results. Our offices where we work are arranged in a way that reflects a less formal atmosphere, pleasant ambience, transparency, open space with mobility and kindness of the employees.

The FITD model is already recognized as a successful example - a model from which other countries in the region should learn. This confirmation comes from the World Economic Forum, which in the latest study funded by EU funds recognized the Macedonian Fund for Innovation and Technology Development as a model institution for the countries in the region. Encouraged by this, our proposal was creating a larger - regional Innovation Fund instead of national funds, operating in limited markets. We are working hard for FITD to grow into a regional innovation fund, with a market 12 times larger than the existing one. I expect this to be achieved very soon. The Fund's partners today are the bilateral development agencies of the United States, Switzerland, the United Kingdom, the State of Israel, as well as UNICEF, UNDP and other international organizations. We are developing cooperation with several directorates of the European Commission and are committed to continuing and expanding cooperation with our friends from the World Bank.

The work model applied by the Fund, in fact, exists in all developed western economies. The United States, Israel, France and the United Kingdom are targeted for funding the development and implementation of new ideas that "disrupt" the market and society, in a completely positive



way. In these societies seldom does anyone make fun of someone else's idea. I am a supporter of the concept by which "stupid idea" does not exist and all ideas deserve a chance. Macedonia has no oil fields, unfortunately, no sea nor powerful weapons, but we do not lack minds and ideas. And those ideas need support.

The new development concept of the state should be based on the support of the young, the creative, and the brave. Let us realize that we are not so rich as to afford to save on public health and the quality of education, nor to educate young people and literally give them to the Western countries as a ready-made staff.

I am aware that we have a significant loss in the critical potential of society in the past 15 years, due to the outflow of young people and the fact that capacity largely depends on political will. Still encouraged by the results of the Fund I think that this country has sufficient capacity to define and implement such a new development concept. The Young Minds Fund that we started as an initiative in 2018 already supports over 1,000 students and teaching staff, from over 100 primary and secondary schools across the country. The development of critical and creative thinking remains our priority as a driving force for the transformation of society.

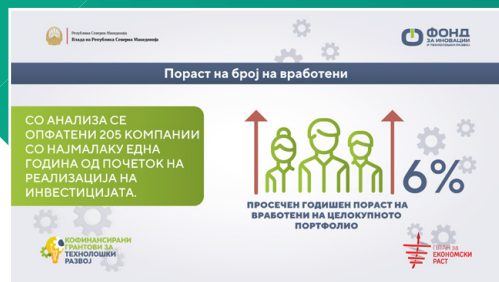
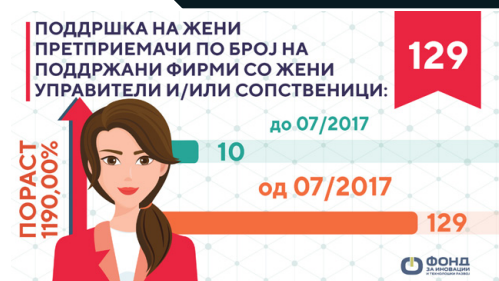
We managed to encourage many young people, even in times of crisis, to open their own companies and invest in their own businesses here, at home. Now, over 50 percent of FITD's portfolio are start-ups, mostly founded by young people.

You just have to think "outside the box". If you are open to news, to changing bad habits and practices, success is guaranteed. I am a person who wants to invest in something that will make a difference, not a politician who gives false promises. I am proud that in my career I have succeeded in maintaining a high professional level guided by my principles of open communication and transparent operation. I will continue doing this in the future for a simple reason - because I want my children to be proud of their father, and to fulfil their ideas and dreams here.

We have all the predispositions for that. We have managed to become a member of NATO, and we are starting negotiations with the EU. The key issues for the survival of the country have been resolved and now we need to use the profits from all this, especially economically. It is not simple. We need to make strong decisions, which in such a crisis will bring results in the long run. But only with a strong economy, as a partner of domestic companies, can we thrive and grow all together, both individually and as a country!



# FTD THROUGH NUMBERS



# DAY SPENT IN THE PREMISES AND WITH THE STAFF OF THE FUND FOR INNOVATION

## AMAZING HARMONY BETWEEN HYPERPRODUCTION AND QUALITY

**T**he premises of the Fund for Innovation are probably one of the few places in our country where you really feel like you are in another country and at least ten years in the future. The very architectural arrangement of the premises, in combination with the way of working and other modern principles and techniques of communication, make the Fund for Innovation itself really the most innovative and most development-oriented institution in our country.

At first it was really difficult to guess what's the reason for their success, but after a detailed analysis of many factors, we definitely concluded one thing: that success is not accidental.

### THE BEST INSTITUTION HAS ALSO THE BEST TEAM

Seen from the outside, we as a public think that the Fund is a machine in which we submit an application, and from there we automatically receive technical advice, funds and numerous offers and opportunities for development. But in practice, someone has to process that. And this is done by really great and successful professionals with enviable careers even before coming to the Fund for Innovation, although there are many young people among them, who managed to develop at a really higher level for Macedonian standards.

**Ilinka Palchevska-Deleva, head of the finance department**, is one of those more experienced staff with a really impressive background. She has worked for 17 years in another prestigious institution (Secretariat for European Affairs). She says that the decision to change the work environment after so many years was not easy, but that it was definitely a challenge from the first moment.

"In the previous institution I gained a lot of work experience, many challenges, as well as overcoming many problems that the work brings, but at one point I really needed a change. "The offer to work at FITD came at the right time, and the decision was made to gain new knowledge and face new challenges."

According to Palchevska-Deleva, she faced a big change in terms of work dynamics.

"Here at the Fund, the work is much more dynamic. There is much more direct communication with external clients, i.e. users of funds, and a larger volume of work given the growing number of supported domestic companies."

The second interesting interlocutor with whom we had the honor to talk is **Valentina Jovanovikj--Dimitrievska from the Sector for conducting public calls at FITD**. She also has a big professional background because she comes from a private foreign company and says that she came to the Fund because of ambition, i.e. advancement.

"There was simply no room for advancement, which is especially demotivating for a person like me always eager to learn new things, with big ambition and work on projects or tasks, whose ultimate goal is to contribute to make some change, or if you want some difference in our society. That is why I decided to leave and then I was given the chance to work in the Fund, which is definitely very different from all my previous work experience, but in a positive sense. "Everyday work allows us to make contact with a variety of subjects and intellectual advancement, while previous work experience on the other hand allows me to think "outside the box" and approach problems with creative solutions."

**People in FITD work hard, long and under the pressure of great responsibility, but that does not mean that there is a bad working atmosphere or other restrictions of a similar type. On the contrary, the dream team of employees has already accepted the dynamic pace of the director Despotovski which they themselves had noticed gives extra good results so far. An even greater reward is the humanitarian mission they carry out and the opportunity to help the domestic economy, which has been neglected for so many years. And of course what motivates them to persevere in the future are the really encouraging announcements that every single expert has about the future of this institution.**





Among so many ladies we managed to get to talk to one of their younger male colleagues. That is **Nikola Klopchevski, head of the monitoring department**, who has been with the Fund for Innovation since its beginning. “As a graduate economist, the decision to work here was a real challenge for me, because it was clear that innovation is what will change and move the world forward, and I wanted to be part of a team that would try to do something for the first time in their country in this regard. Being part of something that is being built and that we now see turning into a success story is really a source of satisfaction, personally, but also motivating for what can still be done and upgraded. The previous working experience in Mozhnosti Savings House and in several marketing agencies has helped me a lot in my current work with customers, taking into consideration that in the monitoring department, which I manage, we have daily communication with all companies that are users of the Fund.

According to Klopchevski, this is an institution, which is different from all others in our country and beyond.

“The myth of “easy money”, which exists in the public for working in the state administration, cannot be used at all for this institution, because your working day at FITD is fully engaged, and often we work even more. What is important to me, first as a person, and then as a colleague, is that the team functions as one and there is a great level of mutual cooperation and communication. This is very important because if one part of the system does not work, the whole thing will collapse. This is probably the formula for the successful operation of the Fund. “

Many of the other employees we managed to ask about also have an enviable academic or professional career, which guarantees not only the current quality of the Fund’s work, but also a very bright future.

## THE DESIRE TO HELP COMPANIES MOTIVATES THEM TO COPE WITH THE PRESSURE

The Fund for Innovation is definitely the most favorite state institution in recent years, but it is also a target of a lot of pressure. We talked to **Katerina Krecheva - Head of the Project Preparation Sector** about how the employees are coping with this pressure.

I accept the “pressure” from the public as an extremely positive thing. I have always argued that the way each of us acts is very important to the society we create. In recent years I have been working on the development of programs aimed at education and connecting the academic community with industry and I am happy when a student gives us a remark. And I am especially happy when the criticism is followed by a proposal for improvement that we would not think of because it comes from a different worldview. “The only pressure I feel at the moment is the need to get as much support as possible for our educators, academics and, of course, young people and help them realize their potential.”

She also explained to us the great responsibility they face and carry on a daily basis.

“In the case of state aid to the private sector, it is a thin line between risk sharing and disrupting competition. It was a challenge to create a policy that precisely targets the need for financial investment without affecting the market economy and the capital market. Another challenge was to explain what is meant by the term innovation, as well as to precisely identify the mechanisms that encourage innovation in companies.”

Her colleague **Tanja Ilijevska, (Head of the Sector for Strategic Planning, Analysis and Private Sector Support Programs)**, who has 14 years of working experience in commercial banks, shared similar views.

## DAY SPENT IN THE PREMISES AND WITH THE STAFF OF THE FUND FOR INNOVATION



TANJA ILLIJEVSKA



ILINKA PALCHEVSKA-DELEVA

“According to her, pressure is a good motivator to give something extra that everyone carries inside. There is no job where there is no certain kind of pressure. “Positive pressure, the one that makes us better and deliver better results, is always welcome, while I think every professional knows how to isolate negative pressures.”

According to the official statistics so far, over 2,000 domestic companies have applied for the Fund’s calls, and over 400 companies have received support. The fund has pledged to invest 40m euros in the private sector, and the companies that it has supported employ more than 8,000 people.

According to Ilijevska, all those numbers that we analyze daily within the sector, speak enough about the trust of compa-



NIKOLA KLOPCEVSKI

### THE PACE IMPOSED BY DIRECTOR DESPOTOVSKI IS A CHALLENGE ITSELF

It is not a coincidence that we started the last part of the conversation related to the operational functioning of the Fund with Nikola Klopchevski, who openly admitted that under the mentorship of the director Jovan Despotovski a lot is being done, but the results are visible.

„The pace is tough, but that’s why we are where we are at the moment. If five years ago, a very small percentage of the public knew that there was a Fund for Innovation and Technology Development, because it was an institution in its beginnings, we are witnessing that today there is a lot of talk about innovation and the opportunities that the Fund offers to domestic companies. In fact, the numbers confirm that - the Fund’s portfolio, only in the last three years since his appointment has increased significantly, from 36 to about 450 supported companies.

His more experienced colleague Katerina Krecheva gave us a less direct, but therefore very wise answer.

„A good manager is the one who knows how to assess the workload and set optimal conditions and deadlines for successful implementation. In this regard, the Fund has always kept a tough pace and a young energetic team. I think that the director recognizes the strengths and capacities of the employees, as well as our weaknesses and tries to motivate everyone according to his/her affinities. I am quite analytical and for me long-term strategic planning and well-established regulation is a religion, and it takes a lot of time. Demand from companies and other social factors, on the other hand, imposes a slightly faster pace. In this regard, the director shows entrepreneurial spirit and strives to meet the needs of the market. This changes me as a worker, who prefers to devote time to strategic planning rather than realization. However, none of us are alone. I work in a team with three other ladies and each of them has her advantages. It is especially important for me that in the long run, in the team we build a culture of mutual respect and help, so what I miss as a worker is complemented by Neda, Sandra and Verica. The pace is the result of mutual work and agreement.”

However, the most vivid answer was given by Tanja Ilijevska, and here is why:

„The pace of the director is identical to the pace of work in the private sector, and for me it is not a new dynamic and is not a problem. Experience teaches me that in all dynamic work environments the balance between private and professional life is crucial and that personal organization and productivity must be at a high level in order to achieve this. There are really periods that are very intense, especially the past months with the beginning of the crisis with Covid 19, but these are periods in which most of us give our best, and there are periods in which we work with some more normal, but still dynamic pace. On the other hand, in the Fund, the team spirit is at a high level and when you are part of a team that works well and complements, then every challenge is easier. Of course, the director also makes a good balance of the team and knows exactly when to „push” more or less, but I will mention again that with a good team, every challenge is much easier to overcome..”

In general, the Fund’s employees are never bored with such a pace of work.



## DAY SPENT IN THE PREMISES AND WITH THE STAFF OF THE FUND FOR INNOVATION



VALENTINA JOVANOVIKJ--DIMITRIEVSKA



KATERINA KRECHEVA



nies in the Fund on the one hand, but also contribute that we all feel pressure, and, above all, responsibility for quality and professional performing of tasks.

Their above-mentioned colleague Nikola Klopchevski (head of the monitoring department) says that their biggest motivation is the positive comments from the companies.

"I often get comments like 'if it were not for the help of FITD, the innovation/ the project I am developing would be halfway through.' And here I do not mean only the financial support they receive from FITD, but of course the mentoring support we provide and I am very glad that FITD is seen as a reliable institution. In fact, an indicator of this is always the great interest and the number of received applications for any call published by FITD. "

After all these answers, our horizon really opens and it becomes clear to us that the work of this institution that rises on its own, is not simple at all, but, here, it is a proof that everything can be done with an honest leader and a good team.

### IT IS A STEREOTYPE THAT MACEDONIAN COMPANIES ARE BUREAUCRATICALLY ILLITERATE - WE HAVE MANY POSITIVE EXPERIENCES WITH THEM

We asked Ilinka Palchevska-Deleva what interests the Macedonian public at most - related to the competence or incompetence of Macedonian companies, according to whom, our companies are getting better every year.

"In the beginning we did not have so many difficulties, i.e. we learned from each other, but now it is easier, I am talking about my domain. From the daily communication with the companies, the support that we provide to them, but also the results that they achieve, there is really progress. As I

said, we have really talented young children, who are more courageous and aware and I would say, who are more and more deciding to start their own business here in the country. Additionally, from what we see from the success stories of companies supported by the Fund, I am convinced that there is a really great entrepreneurial potential in the country, in which the Fund could invest in the future.

Her colleague Valentina Jovanovikj-Dimitrievska from the Sector for conducting public calls of FITD, confirmed this thesis in more detail.

"As in any business, especially with clients, there are certainly challenges. At the Fund we are in touch with creativity and innovation, which makes our work much more interesting, and thus easier to perform current tasks and learn something new every day. From my experience in the Fund so far, I can say that a certain degree of illiteracy does not mean an innovative and unsuccessful project. I believe that in our country there are companies with potential, in which the Fund should invest and with our work we encourage and motivate others to think more creatively, which in the future would increase the number of such companies. What is particularly motivating is that we already have a number of success stories among supported companies, including young people who have decided to try to become successful here in the country - and these are real projects from ordinary people from our neighborhood who got the courage to put their ideas on paper, to apply and to implement them successfully."

These are really very valuable words that break an old stereotype or inferiority complex, which is very common among our people. For the first time we have a state institution, which is fully committed to domestic companies and which really appreciates their work and opportunities.

EXCLUSIVE: WHO ARE THE PEOPLE  
THAT DECIDE ON THE DISTRIBUTION OF  
FUNDING FROM THE INNOVATION FUND?

## EXPERIENCED PROFESSIONALS WITH GLOBAL REPUTATION THAT OFFER NO ROOM FOR ANY EXTERNAL INFLUENCE OR INTERVENTION

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### NIKOS GEORGOULAS - GREECE

My professional background is that of Telecom and IT B2B and B2G business starting from 1987. I have been a senior manager for companies like OTE/DT, Argo, Multipack and from 2003 created by own Group of Companies that named Whitesteps based in Swiss – Greece – Bulgaria and Israel. The Group deals also with investment in High Tech Companies usually Start-ups. I was selected to be a part of this Committee through an International Call published in The Economist.

I don't have an experience being a Committee member in a Governmental Fund. I do have experience of being a member in the Investment Board of several companies in the world investing for Start Ups and Grown Companies as well

Innovation in the 21st century is the means to create jobs that are fading due to the fast development of digital approach in things. To vision Innovation as the idea of creating digital applications to my concern a non-correct approach. The whole "innovation" now has moved to Marketing and Sales.

North Macedonia needs a lot of time to become a Start Up Nation. The E Government is at its starting point and there is a serious lack of Human Resources Capital in a country that has probably less than 2.1 million people living in it. Also the Country is not a active member of the international community of R&D in IT or Engineering and has not been a frequent participant in Global Start Up Events. Having noted that the way to become is not easy but is feasible. That would mean a series of fundamental changes happening in Labor Law, Taxation, E Government etc.

The Committee I am a part is a part of a Fund that had 6 employees in 2017 and accumulates probaly more than 40 today, It had 50 projects ongoing and has over 450 now. So the last 3 years a gigantic work has been achieved. To the question of whether I am

This article offers an exclusive opportunity to introduce to the Macedonian companies the persons that decide the fate of their applications to the FITD (Fund for Innovation and Tehcnology Development). It is a special team of five people, selected in an international call for applications, in which four different countries and continents are represented. Literally all applications to the Fund go through them and they decide on the fate of the applications. Their professional biographies offer ample proof that they have the necessary knowledge and background to make those decisions, and we offer you their biographies in this feature. We also offer you an exclusive opportunity to read their thoughts and opinions on several key issues related to innovations and innovative approaches in our country and in the world in general.







satisfied: The mechanism of controlling the investments is hybrid and incorporates the Fund and very well known companies like Grand Thornton and Deloitte that check results plus field visits from the Committee. The results of these 450 projects on the way and probably another 1000 in the next couple of years we shall be able to see in the mid future: If more jobs are created and the economy jump starts and has serious GDP Growth it will be a success. You can't judge the result while the projects have actually now started being implemented. The Macedonian Economy should expect within the next couple of years a +1 raise on the estimated GDP raise.

The Committee will view the business plan, idea, the Team that will do the project and the Go To Market ability of the applicant. I am more interested to see if the applicant knows the market and can bring the correct market info (market depth- and how the applicant will create or get a part of the market). Decision are being done with majority in the Committee and "painful" discussions per case especially when the Committee is on a borderline voting. I am not aware of any thoughts of the Public towards the impartiality of the Committee. I suppose you refer to the issue of 2018 PEP involvement in Applications that is not a Committee concern. Being all members of the Committee not North Macedonians (meaning we are foreigners and flying in for maximum 50 days a year) we don't know the politics and are not affiliated with people or politicians. The FITD put mechanism after 2018 autumn so the PEP would have to declare themselves and a Risk Assertion. Impartiality is granted through the mechanism created from the World Bank and the fact we are completely unknown to each other. Currently we are members two Americans, one Dutch-Indian, one Scotch, and one Greek and we hardly know each other. As per accountability of the Committee is proved by the fact we took over Audit doing ourselves physical auditing companies and freezing applicants. So we try to go down to the end mile and see what happens. Finally we have a 3 year term and unless anyone grant us a renewal that I doubt a new Committee will come and take over.

Advice to North Macedonian Entrepreneur: You want to succeed you need to get a grip of what is happening in a Global Environment and that means travel to visit Fairs, Companies and

Countries. Also you must understand what is really missing from your market in your country. Unless you do you will be a part of a vicious circle. Business is about who you know, who respects you and who trusts you and its not only ideas or dreams. Be prepared to fail and NEVER cheat. What I say to my employees in a lot of countries: You cannot imagine how small is the world guys... we are a huge world that is basically a small village... not more than a few hundred people in any industry. So: Anyone can run but no one can hide.

#### DR. CLARISSE BEHAR MOLAD, CHAIRPERSON OF THE INTERNATIONAL INVESTMENT COMMITTEE - ISRAEL

I have over 25 years experience in leading mission critical global change efforts successfully initiating industry-wide global change and was part of establishing many startups and innovation initiatives. Furthermore, I am a recipient of numerous awards and commendations. For example, I won the prestigious Fulbright Scholarship of the US State Department three times. For my Fulbright missions, I was sent to the Balkans, where I provided advising and lecturing to regional universities and local governments on the use of technology as a catalyst for economic reform. I also worked for the US government as a USAID adviser on major e-business initiatives in South Eastern Europe and consulted USAID on making key economic investments.



## EXCLUSIVE: WHO ARE THE PEOPLE THAT DECIDE ON THE DISTRIBUTION OF FUNDING FROM THE INNOVATION FUND?

Throughout my professional career, I also developed and delivered courses for multiple academic institutions around the world, focusing on global entrepreneurship and technology. And, in addition to lecturing, I have been consulting future global economic leaders to deal with the challenges of international markets through the use of technology since the advent of the internet, in industries as diverse as construction, industrial manufacturing, healthcare, high-tech, oil & gas, and so forth.

As a pioneer user and developer of Internet applications, I worked in countries such as Canada, Mexico, Columbia, Israel, Great Britain, Germany, France, The Netherlands, Sweden, Norway, Finland, Italy, Austria, Macedonia, Serbia, Slovenia, Bulgaria, Russia, Japan, Singapore, and Australia assisting businesses and governments in adopting e-business practices for economic prosperity.

Innovation is a term that has been overused and diluted as a result in many contexts. But in the RNM context, it applies to diverse scenarios due to the fact that the country in the ongoing process of re-inventing itself as an independent nation as well as a future member of the EU. Therefore, it is seeking to find new ways to establish a strong economic base while raising its standards to EU levels. So innovation, in this context, touches on so many areas, whether process oriented or product/service oriented. Lastly, innovation needs to always embed itself in the mindset of those needing to create it and develop it and those needed to consume it. As a result, it is a never ending quest to meet change pro-actively.

North Macedonia is still planting seeds towards that goal, and FITR is critical for that to happen together with the education system of the country. The country is still awaiting a catalyst event/entity that can provide the impetus for others to follow. A breakthrough invention that can become a global phenomena (ala Skype from Estonia) can change the course for a small country such as this. On the other hand, the persistent commitment of government through financial assistance together with educational reform must create a strong foundation for entrepreneurship to take hold. As an Israeli, I experience daily the spirit of a Startup Nation that permeates throughout our society. It is precisely this spirit that needs to be cultivated in RNM if it is to grow into becoming a startup nation.

I am very pleased with the work of my committee to date in choosing the projects to be given financial support through the Fund from the RNM government and World Bank. We are currently in the process of auditing the first ones and hope to finish another round later this year. The results of the audits is very promising and we are pleased to also see the on going increase of number applicants in the last couple of years. The RNM government as well as World Bank have continue to increase their investments due to these positive results, which means that we are moving towards a critical mass of companies that will be able to benefit directly from the work of the Fund and its Committee for Investments. Overall, I am looking forward to providing financial support to many more applicants in the coming years and am particularly encouraged when I mingle with people in the country and get so much positive feedback about our work.

Having taught entrepreneurship to hundreds of Macedonian university students throughout the years, I always ask them the same question: "what is your global value proposition and how will you make money?", while emphasizing that failure is the best lesson and cannot be avoided. And I like to reinforce the message that while investors look at the numbers, they invest in people. So it is critical for an entrepreneur to grow themselves by gaining experience out of the country and undertaking any leadership opportunity.

### VIBHU SHARMA - INDIA

I am a technology evangelist (innovator, strategist, business development) in the broad area of Internet of Things. I have over 20 US patents, several high impact factor publications and authored a book on memory design for the wireless sensor networks. I have also contributed to technology differentiated new business models for enabling Circular Economy and has worked with Siemens, NXP semiconductors and ST Microelectronics. I graduated with MBA from University of Cambridge, UK, Ph.D. from KU Leuven Belgium and M. S from S. University of New York, USA. I was selected through a competitive process which was advertised in the Economist.



I have an experience of being a member in the innovation portfolio selection committee of technologies based new business investments.

21st century economy is driven by the digital transformations which have been disrupting the conventional business models and have resulted in a new asset class "data". The purpose is to create long lasting sustainable economic excellence and wellbeing.

New entrants always appear in the dynamic environments, when the rules of the ecosystem are in transition. In other words, a nation aiming to become the hotbed of start-ups have to board the upcoming technology innovation waves (e.g. digital and sustainable economic revolution for 21st century). North Macedonia has to transform its work force to a world class digital talent having a global outlook and an entrepreneurial spirit. This will result in the creation of new companies, and transformation of the existing RNM entities, in order to occupy a vital place in the global innovation value chain.

It is very early for me to comment on the achievements as I have very recently gotten on board. Increasing the competitiveness (job creation) of the Macedonian economy is the expectation, by a) investing on the innovation activities that can become part of the global value chain, b) providing means for the entrepreneurs to make the difference in their business results and c) helping the SMEs with the technology adoption for their business scale up.

Applications are individually assessed by each IC member based on the documents submitted by the applicant. IC member individually gives the score based on the quality of the application covering aspects like technology progress, market potential, capability fit of the project team, impact etc. Then the scores are aggregated to figure out the applications with unanimous decision (pass or fail). Then the failing applications are rigorously discussed for effective judgement and then based on the voting results final decision for the funding recommendation is made. The impartiality is maintained with the adoption of subjective evaluation criteria, documentation of the evaluation and voting process, compliance with the conflict of interest provisions etc.



## EXCLUSIVE: WHO ARE THE PEOPLE THAT DECIDE ON THE DISTRIBUTION OF FUNDING FROM THE INNOVATION FUND?

Strong customer focus right from the ideation stage is the key advice, I would like to give to all the entrepreneurs. Then work on crafting the right value proposition and strategizing for the means to deliver it. At the end what makes the real difference is the right value proposition from the customer's perspective. Quoting the famous words of Gandhi, "A customer is the most important visitor on our premises. He is not dependent on us. We are dependent on him. He is not an interruption of our work. He is the purpose of it. He is not an outsider of our business. He is part of it. We are not doing him a favour by serving him. He is doing us a favour by giving us the opportunity to do so".

### GREGOR PATERSON-JONES - SOUTH AFRICA

I have a long career as an investor in the Renewable Energy and Development and Innovation Finance sectors globally. I run the consulting practice bearing my name Paterson-Jones and am currently advising the Asian Development Bank, The World Bank, the UNDP, REEEP, the EU's DG Climate Innovation Fund, Horizon2020, DG Mare, the EU's and GIZ Get Invest Programme, and two Middle Eastern Sovereign's on new investment vehicles for Energy, Infrastructure and Innovation. I was previously Managing Director the UK Green Investment Bank, and CEO of Sterling Waterford Securities, a South African private equity and asset management firm responsible for the World's first listed Carbon Instrument on the JSE Securities Exchange in 2005. I was educated at University of Cape Town and Oxford University.

Other than FITD, I act and have acted as an Investment committee member for the EIB's 100 Bn Euro European Fund for Strategic Investments, the Se Asian SEACEF Fund, the UNCDF's Loan platform IC, The UNCDF Local Development IC, three South African infrastructure Funds.

Innovation predominantly involves the application of technology to improve processes, reduce costs or disrupt business models. However in some cases however it involves the introduction of new technologies to create a process that previously didn't exist (e.g. marine energy). The early stage development of these technologies and first commercial implementations often require soft finance until the market has reached a level of maturity that can provide a commercial return.

North Macedonia is a small economy and consumer / business market. For new technology innovation to survive at a commercial scale, it needs to have at least a regional relevance, which means satisfying the rules and regulations in the European markets, as well as the larger international markets. It also means partnering with foreign firms to acquire expertise and use the advantages of the Macedonian market to enhance competitiveness.

I have been an IC member just during the 2020 year so it is too early to offer a personal opinion on this. I do however believe that the small amount of money that the FITR has at its disposal can make a large impact on the businesses it supports if it allocates on a fair and commercially focussed basis and supports those businesses with the best prospects of increasing activity and employment in the long term.



I would provide the same advice to any entrepreneur any country. Don't give up. As Nelson Mandela said, I don't fail, I learn. The other piece of advice would be to entrepreneurs looking at businesses which need to scale. Prepare the business with an international outlook immediately from the beginning. North Macedonia is the size of a small international city - think of it like that. It can be a very good pilot for local business but to be competitive and scale, benchmark yourself against an international business.

### DON LLUIS - USA

I have been a faculty member in the Department of Management at the Mays Business School at Texas A&M University since 1999. I am also the director of the Blackstone Launchpad program at the McFerrin Center for Entrepreneurship. I teach entrepreneurship and small business courses. I am also currently president of several real estate holding groups and an active real estate investor.

The meaning of innovation is the collision of people and their ideas, with opportunity, where commercial criteria determine success. The collision is ultimately a process of creative destruction where existing products and ways of doing business are destroyed and replaced with new ones.

The purpose of innovation is to fuel economic growth create employment and overall generate prosperity.

North Macedonia as a country and thru its people, has many qualities that offer a fertile ground for entrepreneurial activity. My involvement on this committee has opened my eyes to the numerous people and organizations that contribute to growing and supporting these activities and ultimately the community. This is particularly noticeable in the young adults. There are a growing number of millennials in your country that are truly vested in future success. I have witnessed the unselfish commitment many have to growing the startup community thru offering their time, treasure or talent and promoting entrepreneurial activity. It is well known that there is a strong positive relationship between the rate of entrepreneurial activity and economic development in a country. Consequently, while perhaps not a predisposition there is certainly the opportunity to become a startup nation.

Imagine the difference between offering stimulus packages to governmental organizations that distribute funds based on political agendas versus strategically creating an organization ("the Fund") that rewards people with sound business ideas. The process of earning financial support thru having to articulate and prove these sound business principles is a brilliant and creative way to ensure the most deserving and most qualified are financially rewarded. Thru this process, I suspect the pump has been primed and the fruits of the investments and the methods used will prove plentiful in the years to come.

Being able to give and receive constructive criticism is a critical component to development, not only in business, but in life. In the context of starting and running a successful business, young entrepreneurs should seek truth not confirmation. Finding people who tell you what you want to hear is of little real value. So, find people who will objectively assess your idea. Usually these are your would-be customers.



# THE FUND FOR INNOVATION WAS THE FIRST TO TACKLE THE CONSEQUENCES OF COVID 19

**T**he agility and proactivity of the Fund for Innovation, by which it is distinguished in peacetime, continued at an undiminished pace and in conditions of global crisis and pandemic like the one related to Covid 19.

Namely, FITD was one of the first state institutions to offer actual assistance to Macedonian companies. So, the FITD-Creation tool was launched on March 19, 2020 and through it the companies were given access to 10,000 EUR for digital solutions, for easier handling and overcoming the consequences of COVID 19.

This project, implemented in cooperation with the Embassy of Switzerland in the Republic of North Macedonia, USAID, UNDP, UNICEF, MASIT and other partners/experts, encouraged creative tools and solutions for online and interactive activities or animation, aimed at different categories of citizens.

"We encourage and will practically support all those who want to contribute to easier overcoming of this situation." "Introduction, above all, of digital tools can really help, not only many citizens and companies, but also many institutions to become more efficient and to function equally efficiently with a smaller number of employees," said FITD Director Jovan Despotovski, when launching this new tool.

Despotovski was also among the first officials to announce new draft-measures in addition to the government's package of economic measures.

"These are extraordinary circumstances that require extraordinary solutions, sometimes radical, but I think we should try to get out of this stronger. This means that we should propose measures that do not always result from theory, be a little creative and get out of the box. We should take measures that will really help companies, not only to overcome the crisis, but also to become stronger. The Fund team is already working on a draft package of measures within our policy mandate that will be submitted to the government. I believe that some of them will be accepted and we will be able to implement them, because as before, the measures we are implementing, which are not traditional, are already yielding results, I believe that these will also yield results," Despotovski said on that occasion.

From this statement to the present day, FITD does not deviate from the initial promises that they will make life easier for companies in times of crisis.

## DESPOTOVSKI GAVE UP HIS SALARY, AND FITD THE REPRESENTATION EXPENSES

The Fund for Innovation and Technology Development has shown its commitment to dealing with the consequences of Covid 19 in many other ways. Back in March, the director of FITD, Jovan Despotovski, donated half of his salary to establish a solidarity fund, whose aim is to help employees in domestic companies, primarily micro and small, to mitigate the consequences of crisis due to coronavirus.

This example was followed by some companies from the family of the Fund for Innovation and Technology Development, whom the Fund publicly thanked for the shown high awareness and social responsibility by their joining the FITD's appeal.

In the following weeks of March, FITD cancelled the annual tender for procurement of beverages and food products - these budget funds were expressly reallocated to the University Clinic for Pediatric Diseases in Skopje.

The Fund for Innovation and Technology Development gave the Children's Clinic also protective suits, goggles and gloves for medical staff and patients.

"Let's give together our support to the Ministry of Health in the fight against the coronavirus", was the message by which FITD approached these activities.

## INSTRUMENT FOR ECONOMIC RECOVERY FROM COVID 19

In May, the Fund for Innovation and Technology Development (FITD) submitted to the Government a new instrument for technological development for rapid adaptation to the COVID environment, with an initial total budget of 200 million MKD. It is intended for economic recovery of domestic companies in the post-crisis phase, their fast adaptation to new market conditions and rapid development.

**Although there are many institutions and officials who have really left their hearts on the field in the fight against the Corona virus, the role of the Fund for Innovation must not be overlooked. On the contrary, this is one of the most active institutions, which from the first day of the crisis tirelessly and unceasingly fights to deal with its consequences and for the greatest possible facilitation of the functioning and survival of companies in such impossible conditions. When you look at the scope of the list of specific activities that the Fund has undertaken in this direction, then you really get the real picture of the huge role that institution has in our society**



**Presentation of the ICT system that will encourage Covid19 social responsibility, to the Minister of Information Society, Damjan Manchevski**

This measure was prepared in consultation with several chambers of commerce and business associations in the country, and initial approval was provided by the World Bank, as a key financial partner of the Fund.

The focus of the measure is fast reorganization and introduction of digital systems and tools in order to adapt to new operating conditions, improvement of the organizational structure, reorganization of the work processes for increased productivity, acceptance and introduction of guidelines for protection of employees and customers related to the Covid crisis, as well as the introduction of new products or services for which there is an increased demand in the new market conditions. The Fund for Innovation and Technology Development pointed out that this measure introduced an innovative financing mechanism, through which funds are allocated with a return of 15 percent of gross profit achieved in the first three years after the completion of the project.

Domestic companies are not obliged to provide guarantees for obtaining financial support. The use of the Fund's assets, as before, will be monitored by renowned foreign audit firms engaged by the Fund.

As many as 166 companies applied for this measure in the first cycle, and a record number of over 2,000 domestic companies took application packages at the public call for quick adjustment to Covid 19. The companies expressly requested almost 90 percent of the projected budget of 200 million MKD, due to which additional funds will be required.

"The results of this first cycle show that part of the domestic economy is already considering recovery and has concrete investment plans. In less than 45 days, over 2,100 application packages were taken, which is an indicator that the domestic economy is transforming this period of survival into a period of thinking about how to develop. The fact that almost 90 percent of the funds will be used in the first cycle, means that in each

subsequent cycle the Fund in cooperation with the government will work to provide an additional amount of funds, said the director of FITD, Jovan Despotovski. Eighty-eight percent of applicants proceeded to the next stages of evaluation and assessment, while 12 percent dropped out as ineligible. Particularly encouraging is the fact that 76 percent of them apply in the Fund for the first time, 16 percent have applied before but did not receive funds, so they try again, and only 8 percent use or have used funds. The companies will invest in 15 different branches, including sales, trade and distribution, health, ecology, agriculture, and for the first time the IT sector is not dominant. It is especially positive that with this call there is increased interest among companies from all regions, as well as an increased number of companies with women entrepreneurs. With this call, for the first time, an additional evaluation criterion was introduced and more points for companies with women in the management, i.e. ownership structure and for companies coming from less developed regions. In terms of the volume of companies, the most represented applications are from small companies, 51 percent, as well as from micro-enterprises, 42 percent. For large businesses that are not covered by the support, Despotovski announced the creation of a new model, together with the Chambers of Commerce and the World Bank.

In anticipation of the second cycle, the Fund, together with the World Bank and the Chambers of Commerce, will approach all 2,100 companies that have expressed interest in the support. "We will be open to all their suggestions and proposals for further improvement of this model of support." In the next cycle, which is planned for the end of August, we will consider expanding the support, we will discuss a special measure for the export activity. At the beginning of September, with the second cycle of support, we can expect the continuation of this support and possibly additional measures that will result from the consultations with the chambers. I appeal to all domestic companies to be



# THE FUND FOR INNOVATION WAS THE FIRST TO TACKLE THE CONSEQUENCES OF COVID 19



actively involved in this process, to give their opinion, proposals and suggestions, said the director of FITD. This call of FITD is part of the third package of economic measures of the Government of RNM and is intended for fast economic recovery, for micro, small and medium companies, with potential for successful operation.

## STIMULATING A SPECIAL COVID 19 SOCIAL RESPONSIBILITY

The Innovation Fund also introduced a novelty through which it is planned with ICT solutions to create a system that will upgrade the social responsibility of the citizens in the time of Covid 19. Such an approach under the mentorship of the Fund was presented by the companies DUNA and Green IT, at the meeting with the Minister of Information Society and Administration, Damjan-Manchevski, and the Director of the Fund, Jovan Despotovski.

The company DUNA has created an innovative device - a high-quality contactless thermal terminal that scans faces, measures temperature and registers whether a person wears masks, while the company GREEN IT already has success with the application Challen-

ger Home, which encourages socially responsible behavior in the time of Covid, but also support for local businesses. The goal is to join such "smart" solutions in order to make a greater contribution to tackling the Corona crisis and increase public awareness and responsibility. This is the beginning of a new initiative of the Fund for Innovation and Technology Development for connection and cooperation of domestic companies supported by the Fund.

Otherwise, the solution of the company DUNA, Vector-19 is a device that can be installed in any room, in companies, in schools, hospitals, in state institutions, and it allows contactless temperature measurement of everyone who enters the room, their face is recognized and the wearing or not wearing a mask is controlled. The recording is in the course of 24 hours and has continuous monitoring. The company says that as an innovative and socially responsible, they have been actively involved in finding solutions that will help in the fight against the Corona virus.

"DUNA has been on the Macedonian market for 26 years and is considered an innovative company, which works on creating useful solutions. At the height of the Corona crisis, together with our engineers we developed this product, whose database will be useful in the analysis of the spread of the disease and its prevention. We are working on innovations, but the support from the Fund is important to us and I hope that this cooperation will continue in the future," said Aleksandar Pajkovski, owner of the company.

On the other hand, the Challenger Home mobile application already has 2,700 active users, and so far over 2,500 discount coupons have been downloaded from over 70 companies. The Green IT application, backed by FITR's Creaton public call, uses the mobile phone's geolocation to verify every 30 minutes if you really have stayed home. For every hour spent at home, customers receive so-called home points, which they can exchange for coupons, for a discount at local Macedonian businesses.

Simon Janevski from this company says that the benefit from this solution is twofold. "Small businesses are also satisfied, and people are becoming socially responsible."

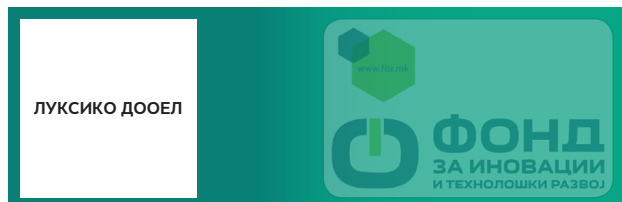
FITD will continue to encourage this type of cooperation of domestic companies.



# THE FUND FOR INNOVATION WAS THE FIRST TO TACKLE THE CONSEQUENCES OF COVID 19

## "YOU TOO CAN CONTRIBUTE" IS A MOVEMENT THAT UNITES RESPONSIBLE COMPANIES

The magnitude of the Fund for Innovation in this crisis, however, is not only because of the activities it undertakes directly, but also because of the authority it has among companies to be able to persuade them to join and contribute to the fight against the virus. So, in addition, we provide you with almost the entire expanded list of companies-users of FITD services, which were directly encouraged by the Fund to help the country in these difficult times



- The company LUKSIKO DOOEL from Sveti Nikole, which is financially supported by FITD, produced a portable UV sterilizer, which has the role of complete sterilization of indoor rooms with UV rays and will be donated to the health institution where it is most needed.

The sterilizer is 1.5 m high, 0.5 m wide and uses 4 ultraviolet germicidal tubes (UV-C), 60 cm long, placed vertically to distribute light of 360 degrees. UVC rays kill bacteria and viruses in the air and on the surface, while the installed power is suitable for disinfecting a room of 30 square meters in a period of 30 minutes. The device is mobile and can be moved around the premises with the help of installed wheels and uses a built-in battery as a power supply. Switching on and off can be done manually, remotely or with a mobile application.

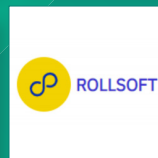
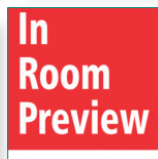
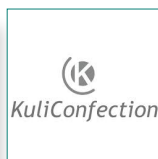
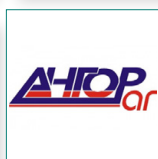


- „Alkaloid“, which is financially supported by FITD, donated an amount of 12,300,000 MKD (200,000 EUR) to the special purpose donor account of the Macedonian Ministry of Health established for the purpose of dealing with the health crisis.

While resources are still being consolidated to deal with the stronger impact of the Covid-19 virus, Alkaloid, despite all the logistical and resource challenges, has decided to reduce the prices of 158 products that are currently on the list of probably every Macedonian household: the pharmaceutical brands „analgin“, „caffeine“, „proculin“, „betadine“, „acerola“, „blockmax“, „bronles“, drugs for lowering body temperature, certain aids, various vitamins and dietary supplements, cleaning products from the „Gloss“ collection, all disinfectants, antiseptics, antibacterial agents and other similar products.



- The Macedonian company „Vauron“, which is financially supported by FITD, donated 10 air purifiers to the Clinic for Infectious Diseases in Skopje, department for patients with coronavirus, by which they directly want to contribute to the fight against the spread of this virus. The company informs that the multi-layer Hepa H13 filter, used by the purifiers of this company, cleans the air from the corona virus. According to tests, the SARS-CoV-2 has an average size of 0.125 micrometers, which the sensors do not detect because it is very small, but the filter can trap it.



**500.000 EUROS IS THE VALUE OF THE DONATIONS THAT THE COMPANIES SUPPORTED BY FITD GAVE IN THIS CRISIS**



# STUDENTS AND PROFESSORS OF THE FACULTY MECHANICAL ENGINEERING IN PURSUIT OF MORE AND MORE INNOVATIONS

**T**he most significant benefit of the whole story about the popularization of innovations in Macedonia is that more and more young people started to deal with them. The best possible example is the Faculty of Mechanical Engineering in Skopje and the students under the mentorship of Professor Atanas Kochov, Professor Ile Mirchevski and Assistant Ognen Tutevski, who together with their mentors make truly wonderful innovations that are recognized not only in the country but also in the most developed innovative locations in the world, such as Korea. In order to plastically capture what the professors have managed to teach their students, we single out three of their most successful examples of innovation.

## HIGH-TECH PROSTHETIC ARMS ARE MADE IN MACEDONIA TOO

If anything in this world gives hope for a better future, it is certainly innovations related to improving the quality of life of people with disabilities. It is a world trend, which is especially present in developed countries, and thanks to the students from the Faculty of Mechanical Engineering, Macedonia too made a pioneering step in that direction.

Development of a prosthetic arm is part of the projects of Project Hub 2020 from the Faculty of Mechanical Engineering - Skopje



**The prosthetic arm significantly improves the quality of life of people with disabilities**

in cooperation with the 3D printing department of the company Future Innovations. This project, which started in November 2019, is aimed at making two models of prosthetic arms: mechanically active and a model with an integrated mechatronic system in it - myoelectric, both of which should be donated.

The students say that part of their goal has already been reached because the mechanical arm has already been made and donated, and that with the myoelectric arm they are in the process of testing the mechatronic components and optimizing the model.

„Researching this topic in our country, we concluded that there is a great need for the development of such a device, starting from the number of people in need, up to the price of the same. Namely, in more developed countries there are humanitarian organizations, including E-Nable, which use ready-made CAD models of prosthetic devices. They modify them depending on the person who needs it (dimensions, type of disability), print them on a 3D printer and donate them. The Project Hub competition for projects opened at the right time, so we decided to seize this opportunity with both

**International recognitions for the practically applicable innovations of our students are the greatest proof that we as a nation are not behind the developed world in intellect and creativity in general. On the contrary, our young geniuses just need proper encouragement and minimal support to do real miracles worthy of respect on a global scale. The team of professors and students from the Faculty of Mechanical Engineering that we contacted showed us in a practical manner that the young generations are way more creative than their parents.**





The award-winning bicycle that purifies the air

hands to start such a humanitarian movement in our country. „Disabilities of the arm are often present and the idea of making an arm with an integrated mechatronic system in it, whose movement would not be simply mechanical but on the contrary close to natural, encouraged us to focus on this topic,” said in an exclusive statement for us, the successful team of students.

The prosthetic arm was donated to a little girl aged 5 years. For the purpose of donating a prosthetic arm, two models have been made, which are completely adapted to her needs and desires, and today she can easily use the device as needed. The students say that the socializing with the girl's family will continue in the future in order to develop new and improved models of the prosthetic device.

But this project does not stop there. The young team from the Faculty of Mechanical Engineering in cooperation with the company Future Innovations plans to make two types of arms, mechanically active and myoelectric.

“We plan to donate the first one, which costs us only our time and some material, for free to people in need who cannot afford a myoelectric arm. The second one will still have a higher production price, but the sales price will be much lower than the current of such arms on the market. „

The team that made this really creative and at the same time humane solution consists of undergraduate and postgraduate students: Ina Krstevska, Tashuli Taleski, Filip Serafimovski, Sara Petreska, Bojan Trajkovski, Martin Spasovski and ass. MA Ognjen Tuteski, as well as the company Future Innovations.



**What young students-engineers from Skopje managed to make, looks really futuristic**

# STUDENTS AND PROFESSORS OF THE FACULTY MECHANICAL ENGINEERING IN PURSUIT OF MORE AND MORE INNOVATIONS



**The happy faces of the children speak best about the humane aspect of this invention**



**A sketch of a skateboard for people with disabilities**

## PEOPLE WITH DISABILITIES WILL NOW BE ABLE TO RIDE A SKATEBOARD

Although the title of this section seems like science fiction, from the text and photos you can see that this innovation is very real.

This project too started on the initiative of PhD. Atanas Kochov, who as a subject professor forms a team of students at the Faculty of Mechanical Engineering - Skopje. In fact, it is a prototype of a device for people with disabilities that allows the user to safely ride a skateboard and feel the pleasure of this activity.

The construction itself is made of steel and its weight is about 25 kg, it was made in the company „Brako“ from Veles and it is constructed to withstand a weight of up to 60 kg. Mountaineering ropes are used for fastening, and the user's body is secured with a belt that completely covers him from the area of his/her shoulders, through the torso all the way to the area between the legs.

As the students and Professor Kochov told us, the first prototype was tested on two children with cerebral palsy in order to see the pros and cons of the prototype.

„During the work on this project, contacts were made with experts: specialist doctors from the State Hospital in Skopje, physiotherapists from the Center for Persons with Cerebral Palsy in 11 Oktomvri, as well as regular discussions with parents of children with disabilities. „During all those discussions, we gained new knowledge on the condition of people with disabilities, what an ordinary day looks like for those people and what they can gain when using this device.“

The next goals of this team, which is an ideal combination of experience and youth, are: to expand the functionality and enable modularity of the device in order to increase the range of clinical picture of users to whom it would be applicable.

## BICYCLE THAT PURIFIES AIR

Such activities of our Faculty of Mechanical Engineering are already recognized on the international scientific and innovation scene. So, the students from the Faculty of Mechanical Engineering from Skopje Ina Krstevska, Filip Poposki, Marko Naseski, Martin Spasovski, Igor Djambaski and Aleksandar Jankovikj, together with Professor Ile Mircheski and the mechanical engineer Toshko Ristov won a gold medal for innovation at the 12th International Exhibition „KIWIE 2019“, held in Seoul, South Korea, for their innovation „Air filter built in a bicycle wheel“.

The students won a gold medal for this invention from the International Commission composed of experts in the field, a gold medal with a diploma from the Association for the Promotion of Inventions and Innovations from Indonesia and a diploma for best invention from the Center for Women Innovators of Uzbekistan.

It is a bicycle that runs on batteries, which has built-in proactive filters that trap harmful particles by rotating the wheels. This should be a step forward in creating a new ecological system of public transport.

„The entire air purification system will be composed of filter material, which will be built into the holders, these are the orange parts. „With the rotation of the wheel, the air will be received and some particles will be retained, the air will be released, thus purifying the air,“ said the students.

The exhibition in Seoul was held from 20 to 23 June 2019, organized by the Korean Women Inventors Association KWIA and with the support of the Korean Intellectual Property Office KIPO and the World Intellectual Property Organization WIPO.



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AND TECHNOLOGY DEVELOPMENT





JUBILEE  
5 YEARS



**FUND**  
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AND TECHNOLOGY DEVELOPMENT

# REPORT ISRAEL

## THE COUNTRY THAT IS A NOTION OF INNOVATION AND STARTUPS

Israelis are so obsessed with the ideology of their innovations and startups that after just a few days they become bored repeating these two terms countless times. But when you look at the numbers, people really have something to be proud of: There are over 7,000 startups in Israel with dozens of incubators and accelerators. It is a country in which the book "Startup Nation" by Dan Senor and Saul Singer has become a real new bible. As many as three innovation museums have opened in Tel Aviv so far. One is located in the innovation center of former President Shimon Peres, and the other two are located in the stock market and in the library.

The Israelis themselves say that Israel has been based on innovation since its establishment in 1948, and modern trends of privatization and the emergence of startups have enabled individuals to create their own innovation on a commercial basis.

The state itself stimulates the process in every possible way, from financial to infrastructural and even propaganda. Three hundred and fifty startup accelerators are a number that Israelis are not completely happy with and want to achieve much more.

The story of the Israeli startups begins with 1.5 million Jewish immigrants flocking to Israel after the collapse of the Soviet Union. The state, unable to find them regular job, devises a master plan, which will become the basis for the future development of Israel. It simply launches the idea of local startups, which through innovative ideas will serve the world. Thus, Israel not only solves the problem of unemployment, but in just ten years, becomes a "Startup Nation", from which we can all learn today.

### COUNTRIES THAT HAVE NO RESOURCES CAN SELL ONLY INTELLIGENCE AND INNOVATIONS

Innovations and startups may be almost branded under these names, but they have existed in Israel since the beginning of the country.

The reason for this is that this country has virtually no natural resources, not even water. And the only thing the Israelites could export during all these years were their ideas.

Starting from the basic needs, Israel from the very beginning had to become a leader in the technology of desalination of water or simply put, the conversion of salt into fresh water, suitable for irrigation of the desert, which in 70 years since the independence has become a fertile oasis. Well, here is the difference, while in Macedonia, 70% of the arable and relatively fertile land stays uncultivated, in Israel the last category of uncultivated desert land is cultivated and planted.

But the process of Israeli innovation regarding water does not stop there. In the exhibition space of the Israeli Stock Exchange, where the Museum of Innovation is located, we had the opportunity to see a device that literally makes drinking water from air. The principle is similar to any air conditioner, except that the water is further purified and some heavier minerals are added, which naturally cannot be found in the air.

Israeli innovation does not stop in one sector. The OrCam company which we visited introduced us to glasses with smart sensors for the blind, which have the ability to recognize faces, read signs and whole texts, and search the Internet. Which means they are rapidly improving the quality of life of every blind person. But this is only the first stage. Another Israeli innovator from the Peres Center for Peace and Innovation, presented his idea of connecting a state-of-the-art scanner and artificial optical lens to the natural optic nerve of the blind. This means that 100% blind people, who never saw in their life will be able to see. The case of a man who saw his daughter for the first time in his life was presented to the journalists.

In the same innovation center, we were presented with a capsule with a camera and a reflector, which elegantly replace the complicated and painful examinations of the stomach and colon and, most importantly, are safely and without feeling anything removed from the body. On the other side of the hall was presented the drone that scans the wheat crops and analyzes and detects where more water should be added and where fertilizer.

The list of such Israeli innovations is infinitely long and we have seen with our own eyes their real practical success, but what is most important is why all these successes are achieved in Israel and not elsewhere.

Thanks to the Fund for Innovation and USAID we had the opportunity to see and learn something from the experiences of one of the most innovative countries in the world. It is matter of Israel, country where more than 7,000 startups successfully operate united in more than 350 accelerators, and the best of them, like Viber, are already selling for tens of billions of dollars. The Israelis themselves jokingly say that Macedonia has the same predisposition to be a good startup nation like Israel because, like them, it is surrounded by enemies and lacks significant natural resources. It remains to listen to their advice and try to turn our creativity, instead into political quarrels, into a major export resource to the more developed countries of the modern global society.





**Jerusalem - a historic city  
that is becoming a symbol of  
start-ups and innovation**

This was told to us by the representative of the Israel Innovation Fund, who received us in the office of the late Israeli President and Prime Minister Shimon Peres. According to her, Israel did not start with thousands of successful startups, but on the contrary, had a low success rate of no more than a few percent.

- What makes us different is that we try harder than others and try to do the same thing many times. "Our government was skeptical at first, so we managed to persuade it to invest more and more in startups every year," she said.

Professor Michael Mizrahi of Azrieli College also confirmed these theses.

- Today we have 600 startups on just one boulevard in Israel. And that's because we have to. We are surrounded by enemies and isolated from the world and the only way to survive and thrive is through startups. That is why both the universities and the state are very concerned with this issue. We are currently the first in the world to invest in startups. We invest as much as India, Korea and Japan combined.

He said that he had visited Macedonia and that he already saw potential for the development of young entrepreneurs and innovators in our country, but also advised us what conditions should be met for that.

- Our students of technical sciences are provided with literally everything for free. From software through access to crowdfunding opportunities. As an illustration, we have 270 business accelerators in Jerusalem, and in Frankfurt there are only 3. There are as many in entire Macedonia too. "That must change," Mizrahi said.



**The virtual reality room in the Shimon Peres Center  
for Peace and Innovation**

# REPORT ISRAEL

## THE COUNTRY THAT IS A NOTION OF INNOVATION AND STARTUPS

### JERUSALEM HAS GROWN FROM A CITY OF CONFLICT INTO A CITY OF STARTUPS

According to the above-mentioned book published in 2009, called "Startup Nation" by Dan Senor and Saul Singer, the Israeli startup miracle is based on two main factors: compulsory long military service and immigration. The authors believe that the Israeli army gives future potential entrepreneurs the opportunity to develop various skills and make many contacts.

Immigration, on the other hand, also plays a major role in Israel's economic growth.

"Immigrants are not unfamiliar with starting all over again. They are by definition risk takers. So the nation of immigrants becomes a nation of entrepreneurs. Israel has been a land of immigrants many times in history, 9 out of 10 Jewish Israelis today are immigrants or descendants of first or second generation immigrants. "This specific demographic is a great incentive to try one's luck and take risks, because immigrants have nothing to lose," said the authors of "Startup Nation".

During our recent visit to Israel, we were also told that in Jerusalem, known for its fragile inter-religious and inter-ethnic relations and forever on the brink of conflict, they managed to make a start-up paradise, helped by the Made in Jerusalem-MadeinJLM platform, a non-profit organization that connects entrepreneurs, research and development centers, universities and research institutes, investors and all in order to develop the Jerusalem innovation ecosystem.

Founded in 2012, MadeinJLM now has more than 500 startups in its ecosystem, 150 of which in the biotechnology industry, 250 in the Internet, mobile and software sectors, 100 in clean energy, microprocessors and industrial technology. In the last three years, more than 100 startups are opening in Jerusalem each year. "In 2015, Time magazine selected Jerusalem as one of the five fastest growing technology hubs in the world, and since 2013, more than 1 billion USD has been invested in Jerusalem startups."

The apparently unusual circumstances in which the state of Israel developed, the troubled relations with the Palestinians and the surrounding Arab states, which impose a constant risk of conflict and martial law, further increase the world's astonishment at the incredible rise of Israeli startup culture. But all this on the other hand made the entrepreneurs there to be terribly creative and intuitive.

### DEFENSE AND SECURITY AS AN INSPIRATION FOR INNOVATION

If in former Yugoslavia the army was seen as a retrograde factor, in Israel, on the contrary this category of people is considered the most avant-garde part of society. There is almost no big or small company that in some way does not cooperate with the military and does not contribute in any way to the defense of the country.

The first thing we were told in Tel Aviv was that we were only 50 km from the Gaza Strip and only 20 km from the West Bank, as two Palestinian-controlled territories. But we were immediately told that the home-made Israeli air defense was so perfect that no world-known missile could penetrate it and that we could feel completely safe.

In the Innovation Center in Jarok, on the other hand, we saw young people working on specially trained robots, which can be used not only for playing games, but also for special battlefield tasks such as demining, road safety checks and many other things, which could cost human life.

However, what impresses us most about Israeli inventions is the innovation or the machine that creates drinking water from air. It is a device, which is like an ordinary air conditioner, which as we know, due to condensation, creates excess water, which in Macedonia usually drips on our heads when we walk on the sidewalks in summer. In Israel, they noticed the same thing on the battlefield, where soldiers tired from the desert drank water directly from the air conditioner, so they decided to construct a machine that would make water in a similar principle. They are now literally able to produce hundreds of liters of water in just one hour in the middle of a barren desert. They even found a solution for some minerals that are lighter than air and cannot be obtained by the principle of condensation, so they made that the machine dose them in the produced water.

We do not even need to comment on drones with built-in artificial intelligence and self-propelled tanks because we were not able to fully understand Israeli futurism. But in any case, miracles are performed there.

### MEDICINE IS NEVERTHELESS ISRAEL'S GREATEST STARTUP MIRACLE

Believe it or not, at ORCAM in Jerusalem we saw a device that helps totally blind people recognize other people's faces, get information about everything in front of them, and even search the internet on the go. These are the benefits of their new camera, which could be mounted on glasses and without or with internet access has a large enough database to facilitate the life of anyone who was born or got himself in such a difficult position.

OrCam was founded by Amnon Shashua and Ziv Aviram, the former founders of Mobileye, a company that develops intelligent solutions for safe driving in traffic. Mobileye became world famous when it was taken over by Intel in 2017 for 15 billion USD, the largest acquisition ever made of an Israeli company.

There are not many technological solutions in the world today that can make life easier for blind and partially sighted people, but fortunately for them, the OrCam company is working in Jerusalem, which has developed a device that can change their lives a lot.

The Israeli company also has offices in New York, London and Toronto. Two members of the top management of OrCam explained to us how their OrCam MyEye device, launched in 2015, works, and today the second generation MyEye 2 is on the market. It is a small device, which with the help of a built-in camera and algorithm that works with artificial intelligence helps people with lost or partially impaired vision to read text, identify persons, objects, product barcodes, etc.

The lighter-sized device could be attaches to any glass frames, with the help of the camera it scans the text from a book, newspaper, flyer, restaurant menu, tablet, etc. and then the algorithm converts it into verbal words, which the user hears through the small speaker built into MyEye 2.



The Israeli machine that produces water from clean air



# REPORT ISRAEL

## THE COUNTRY THAT IS A NOTION OF INNOVATION AND STARTUPS



### Glasses that help blind people read and lead normal lives

The camera can also scan faces, which the device will then remember and when the person in question approaches the MyEye user again, it will signal who is actually in front of him/her. The device helps users find out what time it is, and can also help them shop in store by reading the barcodes of hundreds of thousands of products previously stored in the device's memory.

MyEye users, with the help of twenty intuitive voice-activated commands, can easily manage the device, which costs around \$ 4,500 worldwide.

OrCam told us that they are aware that the price of the device is too high for most of the people on the planet to be able to purchase it themselves, so their strategy is to work with state health funds, humanitarian organizations, etc., which would fully or partially cover the purchase price. They also revealed that the Macedonian health authorities are also discussing the purchase of MyEye devices, which would help the blind and visually impaired in the country. The first to use this device is a girl from Bitola, for which all the details have already been agreed.

But that was the smaller surprise for us, because in the Museum of Innovation we also saw an operation on the optic nerve, or more precisely its connection with a sensor, which also sees 100% of the blind.

It was exposed next to an ampoule, which contains a 360-degree angle camera and a strong enough reflector to see the inside of the entire throat, esophagus, stomach, colon and small intestine, all the way to the anus. And without any pain and inconvenience.

But the highlight of our entire visit to Israeli startups was the realization that more companies are working on nanotechnology, which should selectively eat cancer cells and leave healthy tissue intact. So the Israelis have a solution for everything, just someone should invest enough money to start mass consumption.

### THE OTHER SECTORS TOO ARE NOT WITHOUT STARTUPS

Israelis would not be Israelis if they did not deal with good management. In that sense, we were introduced to the company "My Interview", which through their high-tech online platform deals with facilitating the work of job applicants, but also those who need to assess their true value. Well, this application, which you can download to any device with a camera, allows you to record your own CV and cover letter and automatically apply for a job in hundreds of the world's largest companies. The catch is that this application is so smart and equipped with artificial intelligence that based on your gestures from the video, it analyzes all the necessary parameters of your character and sends that prepared analysis to the HR

department of the respective company. I know it sounds almost amazing, but believe me it works great, and if you are still skeptical, look it up online and you can see for yourself.

But that is not all. We have also seen startups related to tourism, construction, transport, ecology and all other areas of life that one can imagine. And most importantly, unlike here, the success rate of Israeli startups is really high.

### "EQUALIZER" STARTUP, WHICH STIMULATES SOCIAL RESPONSIBILITY

In the end, what struck me most was that in the land of the Jews, to which all known stereotypes apply, there are people who develop startups designed to help other socially disadvantaged people. Yes, yes, that is true, and there are many such examples in Israel, and we had the honor to get acquainted with the "Equalizer" program, which helps young football players from socially vulnerable categories to gain a proper education.

More than 5,000 children are already involved in this original private initiative, which has recently been recognized and supported by the state of Israel, and its operation in Israel alone employs more than 200 people.

According to the founder and head of "Equalizer", Liran Garesi, their goal is not to make football players, but with the help of football to motivate children to get a better education.

"The idea is simple. Almost no one loves school, and everyone loves football. This is especially drastic among children from socially disadvantaged families. That's why we tell them: you have the right to train football twice a week, but that's why you will come to classes twice a week. If you are not a regular, there will be no football either." And so we managed to help and to some extent get thousands of children from Israel on the right track."

The program has already been extended to Serbia, where 12 teams and more than 250 children are successfully functioning, with Hungary, Bosnia and Macedonia next on the list.

The same Equalizer has already been developed in Latin America and is operating successfully in several South American countries.



**Tel Aviv is not only a regional but also a world business center - and much of the structure of the economy is based on startups and innovation**



**FUND**  
**FOR INNOVATION**  
**AND TECHNOLOGY DEVELOPMENT**





**We Create #SuccessStories**

SUCCESS STORIES OF COMPANIES SUPPORTED BY  
THE FUND FOR INNOVATION AND TECHNOLOGICAL DEVELOPMENT

# ELEVATE GLOBAL

## ALWAYS ONE STEP AHEAD OF OTHERS

Elevate Global is building tools that help energy companies forecast the electricity production and consumption several days in advance. As a result of these predictions and the expert knowledge of the operators, these companies determine the amount of additional energy that needs to be purchased in the energy market in order to have a stable energy system. We get the ideas by reading relevant scientific literature and combining new techniques with everyday problems in the industry. In our case, it is especially important to have constant communication with our clients who deal with these challenges every day. They help us better understand the specifics of the problem. Our products help solve the problem of unpredictability of renewable energy sources. Given that we all want to live in an ecological world, companies are aware of the challenges they face in terms of balancing the energy grid. The increasing presence of renewable energy sources makes the energy system dependent on weather conditions, and in this regard, Elevate helps them to make better forecasts. In this context, we see our customers more as partners working together to stabilize the energy system in the region.

**Our goal is to build a stable energy system**



**Elevate Global is building tools that help energy companies forecast electricity production and consumption several days in advance**

### ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

At Elevate we are focused on the latest technologies in the development of our products. To be successful, we need to be one step ahead of others in the market. That is why we pay great attention to every part of our software. In order to have reusable solutions, we have set software architecture on the principle of micro services. Currently, we have services for data preprocessing (time series), internal communication, time series forecasting, statistical processing, visualization and presentation and so on. However, the heart of our products and what makes us different from other companies in the market is our expertise in artificial intelligence and machine learning, led by Prof. Dr. Gjorgji Madzarov.

### SUCCESS REQUIRES SUPPORT

Innovative solutions are a great driver in technology-dependent societies. Although everyone can have an innovative idea, success depends on how it is implemented, the team and the institutional support. Therefore, for the development of each idea, help and infrastructure from all stakeholders is needed. At a time when young people need to be encouraged to innovate and create their own future, state support can provide stability for them to take risks and be encouraged to start their own company. Although we are all aware that not all companies succeed, it is clear that this is the way to stimulate the entrepreneurial worldview in the country.



### ELEVATE CONTINUES WITH THE PLANNED GROWTH

We are currently preparing for expansion in the regional market and active approach to a large number of potential clients. At the same time we are opening the doors to applying our solutions in other industries, with an initial focus on the telecommunications industry, where we already have several successful prototypes. We continue to build our company as a brand in applied artificial intelligence in the region. At the same time we want to encourage all other innovators. The roads are open to everyone and with enough faith and persistence, any idea can be brought to the market. At the end of the day, it is the market that will decide if the idea has great value.

## Панел дискусија



#StraightToThePoint насоки  
од успешни стартап приказни

Драган Јосифовски - Paket.mk

Гентиан Елмази - Notarised

Алех Фејза - Notarised

Душан Гајик - Cognism

Душко Јовановски - H4

Горан Стојановски - Elevate Global



рмс

At a time when young people need to be encouraged to innovate and create their own future, state support can provide stability for them to take risks and be encouraged to start their own company.



## SHORT INTRODUCTION



"Elevate Global" is a company founded in 2017. Its main activity is the application of artificial intelligence and machine learning to predict the situation in the energy industry and telecommunications companies. Currently, Elevate has 6 full-time employees, and the total team is composed of 11 experts. Their software is used by several large regional energy companies and they are currently getting prepared for expansion in the markets in Europe and the United States.

FITD'S SUPPORT CAME AT THE RIGHT TIME

We found out about FITD through the social networks and we decided to apply. Our idea had already been developed and we needed time to present it in accordance with the recommendations of the Fund. We received fast and accurate answer to all questions through the FITD email service, which was available at the time the call was opened. Young companies need assistance before they stabilize the incomes from their own clients. From that point of view, the assistance from FITD came at the right time for Elevate. Most of the funds were used to further develop our prototype into a real service that can be used by companies. Also, a good portion of the funds was used on market research, as well as for the preparation of suitable marketing strategy, which helped us find the right partners in the market.



## VEDA DOO SKOPJE

# RAPID EXTINGUISHING OF FIRES WITH NON-TOXIC MATERIALS

Our system is a system for quick fire extinguishing and not only for computer center systems, we also have a system for ventilation ducts, roofs of houses, electrical cabinets. Our aerosol system is very efficient in terms of speed, it extinguishes the fire and does not allow its spread, is not toxic and does not damage the protected space. It can be connected to existing fire alarm systems, but we have also developed our own sensor systems.

Veda is a research and development company. We have a prototype production and we are currently looking for an investor or partner to start production. Our market is small for this type of product, given the changes in regulations in the field of fire protection, we expect the aerosol to become a market leader worldwide. Our advantage is that we can adapt the technology and model it according to the needs of the space that is to be protected. It is our specialty just like setting up production processes.

### WE GOT ENCOURAGED AND WE APPLIED

All these years we have been self-financing, but due to lack of funds we did not have the strength to get certificates and become producers, so we sold our technologies when they were cheapest, without certificates. For the first time, with the FITD's support we were encouraged to create an industrial product that will have the necessary licenses for use. The Industrial zones now offer benefits to domestic companies as well. We sincerely hope that we will be able to collaborate with one of the investors and convince him to make the production in the country, but we are not the ones who decide since we do not invest alone. I think that in this phase the state is implementing the support well, however the banks are still inert. They do not recognize the business potential. If we have all the guarantees they require, we will not need credits. You still have to prove to the banks that you actually don't need a loan. Especially since setting up production is a process that takes one to two years, so far not one bank has given us support. In the field of innovation, we compete with innovators in the field of IT industry, which requires a small amount of funds to start a business. It is a problem to receive funds from banks when you are not a well-known brand.

## Innovation in the fireprotection system



**We hope that we will be able to collaborate with an investor and convince him to carry out the production in the country, says the owner of Veda, Iskra J. Mihajlovska**



### THERE ARE PEOPLE IN THE FUND WHO UNDERSTAND WELL THE PRODUCTION PROCESS

We received the co-financed grant in the first tranche and filled in the application ourselves. We received help from the consultants offered by FITD and I can freely say that there are people there who understand well the production process and we receive great support from them. It is a pity that the banks do not understand or simply do not want to take risks with this type of production, because the profits are incomparable, and this is all in the analyses we do with potential investors. Our project is still ongoing, there is a small delay with the delivery of certain equipment from China, due to coronavirus and that made us prolong the final goal. However, FITD anticipates such situations and we hope that with a little delay we will make the industrial product.



The company "Veda" has created an aerosol system, which is very effective in extinguishing fire and does not allow its spread, is non-toxic and does not damage the protected area



## SHORT PRESENTATION



"Veda" has been operating since 1991 and since its beginnings the company deals exclusively with research and development of new technologies in the field of composite materials. The number of employees changes, but it is always around 10 and they are all engineers. They target companies outside the country, offer services to improve their production processes or sell entire technologies on a turnkey basis.

THE POTENTIAL IS GREAT, BUT INVESTORS ARE NEEDED

Our plans are to partner with an investor or sell the technology outright. For the first time we are trying to set up production in the country since the potential of the product is enormous. Just imagine selling fire protection for wooden houses and roofs in America, Sweden ... And unlike the competition, our product is non-toxic and can be used in rooms where people stay. Based on our experience and our work with a lot of documentation, published papers, and presentations at congresses, we would like to advise companies which have innovative ideas, not to be discouraged, but to be thorough. Only this way the investors will try to understand and take their ideas seriously. People are inert to new ideas and changes; you have to fight hard to explain your idea.

# VENITO KOMERC

## ELECTRIC BICYCLE THAT PURIFIES AIR

Our goal is to create an intelligent city transport system of electric bicycles, which can be rented and which will purify the air with filters, while reducing the number of cars in city traffic. We are frustrated with pollution, which is intensified by the lack of interest in changing habits by some citizens. The project is originally intended to help local governments in the country and citizens in large cities by creating an intelligent transport system for renting electric bicycles. This system would in some ways resemble JSP (Public transport company). This system offers great flexibility and low cost of performance. Users would rent the bike from a station, or from the location where they would „find“ the bike. This rental will initially take place by scanning cards by which the bike could be unlocked. When the user unlocks the bike, he can ride it to the desired destination. After finishing with the use, the user locks the bike, thus ending the ride and charging for the service. This means that the charge depends on the distance traveled while driving. The difference between parking the bike at the

station and at a certain distance from it, is in the toll. The territory where the system is used is divided into several zones, divided in terms of distance from the stations. Depending on these zones, the user will be charged differently.

The bike also has filters that will use the movement to purify the air of PM10 particles. The filter material is installed with special holders on the wheel of the bicycle, and during the rotation of the wheel it captures and purifies the air from PM10 particles. A very important aspect of these filters, in addition to not consuming any energy, is that they can be mounted on any bike, whether electric or classic, and the filters can be washed and reused.

### WE CREATED AN ECOLOGICAL BICYCLE WITH THE FUNDS FROM FITD



## An alternative way to move in an urban environment



The filter material is installed with special holders on the bicycle wheel, and during the rotation it purifies air from PM10 particles.

The idea came from Assoc. prof. Dr. Ile Mircheski from the Faculty of Mechanical Engineering in Skopje. The goal was to develop a new product called „GET-Bicycle“, with which we applied at the O2 challenge of the Fund's call. The project „GET-Bicycle“ was realized by a group of six students from the Faculty of Mechanical Engineering in Skopje, led by the owner of „Venito Komerc“, Toshko Ristov and Assoc. prof. Dr. Ile Mircheski.

We found out about the FITD call from the media. The road to the selection was transparent, followed by a public presentation of several projects before a commission composed of experts, who were fully committed to selecting the best. The application guidelines provided by FITD on their website were clear. In the preparation of the application we encountered a small number of ambiguities, whereupon we contacted the experts in FITD and we were given explanations and directions. The funds came at the right time and we made full use of them to develop an intelligent electric bicycle transport system and to make two functional prototypes of an electric bicycle with built-in air purification filters. The support by the Fund was of great importance, we are very grateful that the Fund, and thus the state, takes care of the youth. The struggle to succeed with our product continues and we hope for success.

We recommend the companies is to apply at FITD for funding in order to realize their ideas faster, and young people to get involved together with domestic companies in the development of products that would be competitive in the market. Young people can also start start-up companies, which can be supported by FITD in the realization of their ideas. We advise them not to be afraid and to try.





We are currently interested in finding an investor, because the next step is to move to individual production of bicycles, which will be sold directly to customers.



## SHORT INTRODUCTION

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„Venito Komerc“ DOOEL is a privately owned company, that works in the field of engineering, deals with trade and service of spare parts for construction machinery, hydraulic devices and plant automation. It was founded in 1993 by Tome Ristov, and after his retirement it was taken over by the BA in Mechanical Engineering Toshko Ristov. „Venito Komerc“ is a small company with a tendency to expand its activity in the production sector. It collaborates with professors and students from the Faculty of Mechanical Engineering in Skopje.

THE NEXT STEP IS THE PRODUCTION OF BICYCLES

The invention „Air Filter Built into a Bicycle Wheel“ was filed with the State Office of Industrial Property for patent protection, after which we were selected to participate in the 12th International Exhibition „KIWIE 2019“ in Seoul, South Korea, in the period from 20 to 23 June 2019, during which the Office presented our invention and we were awarded a gold medal by the International Commission composed of experts, a gold medal with a diploma by the Association for the Promotion of Inventions and Innovations from Indonesia and diploma for best invention by the Center for Women Innovators of Uzbekistan.

We are currently interested in finding an investor, because the next step is to move to individual production of bicycles, which will be sold directly to customers. At the same time, we will try to convince the local authorities of the significance of our idea. We are in negotiations with foreign companies so that we can offer our innovative product abroad.

## GEOSOND

# INSTEAD OF DEMOLISHED STREETS, MICRO TUNNELS FOR PLACING INSTALLATION

The methods and machines for making horizontal underground boreholes have been present in the world for a long time, but in the last 2-3 decades they have a great rise and application. In the beginning, they were used only in highly urban and developed countries, but more and more this method of construction is becoming a regular standard for installation, where open excavation (demolition) is strategically and economically impossible. The solution, which I developed together with Geosond, offers universality through modularity, i.e. more precisely with one drive system we have several modules for performing a wider range of diameters (openings in which the installations are placed), with the possibility to combine several methods of construction with minimum number of types of work equipment. We created the solution for the domestic market, but our goal is to respond to the needs and create opportunities for new markets. At the same time, we are developing several solutions that, I believe, will be highly competitive on the global market, and I hope will be accepted soon.

**A machine that will make  
micro tunnels instead of  
excavations on the streets**



**The machine for construction of horizontal underground boreholes enables minimal excavation and demolition of the streets during the installation of underground installations, water supply, sewerage, optics, gasification**

### **OPTIMISM AND PERSEVERANCE PREVAILED, SO WE DECIDED TO APPLY**

From today's point of view, when I go back, when we applied in 2015, it seems far away and I recall what we went through. Of course, at the beginning there was a dose of skepticism, from the first moment we saw the announced call of FITD and the disbelief that someone can believe in what we can offer. Optimism and perseverance prevailed and we decided to apply. When you have an idea, with which you believe you can achieve something, it is a challenge to turn it into a feasible solution. Precisely the role of FITD in that whole process before and after receiving the funds, gave us the opportunity to express ourselves, and then to develop what we imagined. Almost 3 years after the finishing of the project, we still see FITD as a reliable partner, that is not only here to control or limit us, but on the contrary to help us succeed.

Every support is welcome, but when what you believe is acknowledged, it is certainly more than a blessing, pride and incentive. The planned funds were used within the project period - 18 months, to develop the idea, but we did not stop there. With the entry into the domestic market, "Geosond" soon invested in additional equipment, and in 2020 we plan to upgrade a machine that we made in 2017. Of course, the market fluctuations in the construction sector, in the last period, directly affect our activity, and thus the decisions for further steps, especially finance. In summary, for us the project brought a new opportunity to create competitiveness and preconditions for an economically favorable situation. What we can do is to work and prove ourselves.



### **WE ARE WORKING ON A SYSTEM FOR UNDERGROUND GAS INSTALLATIONS**

The experiences so far have brought us different perceptions from the ones we started with, in a positive direction. We are currently working on a system that will offer to install underground gas installations, which will replace the classic method and would have only 2-3 percent excavation, and everything else would be realized by drilling. And all this would be economically competitive. We are working on a technology that, with the help of the existing one, will enable the repair of the old sewerage network in Skopje, to accept a bigger number of users than the initially planned number. All of this with a minimal amount of excavation and demolition. Ultimately, we want to offer our technology in cooperation with an internationally renowned company in the field of TBM (tunnel boring machine) for construction of a tunnel to facilitate traffic in Skopje. For example, from the end of Partizanska to the National Bank. Our recommendation for everyone who wants to offer their innovative solution on the market, FITD is the partner you would like to have by your side. Even if you do not succeed, you do not start from the beginning every time, but with experience.





Almost 3 years after the finishing of the project, we still see FITD as a trusted partner, that is not only here to control or limit, but on the contrary, to help us succeed



# SHORT INTRODUCTION



Mile Shoshevski has been dealing with the problem of construction of horizontal boreholes for underground installations for a long time, especially in the part of his own development of construction machines and offering services with them. A few months before the announcement of the FITD call in 2016, began his cooperation with the company "Geosond", which deepened with the grant from the Fund. The previous experience translated into an innovative solution, which, in addition to the technical advantage, will also offer an economically suitable model, was primarily their goal. The need to offer such a solution, creating a universal modular machine for horizontal geological drilling, has multiple positive meaning, especially in urban areas. The benefits of performing horizontal underground drilling, as opposed to the classical method of open excavation, demolition of aboveground and underground facilities for installation, can be discussed a lot, but, above all, our goal is to work on awareness and acceptance of this way of performance of all stakeholders, especially the responsible persons.

THE FUND HELPED US TO ENTER THE MARKET FASTER

Innovative work and innovations, and especially the creation of a structure that will support them at all levels and spheres of society, is one of the foundations for making conditions for the development of an economically advanced country. Exactly the support from FITD helped us to create a solution for economic competitiveness, and instead of the planned 4 years, to enter the market in 1.5 years. Of course, I do not see the support only as a financial instrument that will allow us to create something new, which if you try it yourself is a big challenge, on the contrary I see a whole system of tools and structure, which even after the finishing of the project, supports us in every way in the further process. Exactly at this moment we are completing another project, which is recommended by the state, as a client of FITD.

# DARIS ENGINEERING DOOEL SKOPJE

## SMART LIGHTNING ROD FOR MAXIMUM SAFETY

In 2015, "Daris Engineering" with financial support from the Fund for Innovation and Technology Development completed the development and promotion of today's state-of-the-art lightning arrester, type "Veda Total" with modular features, which already exceeds all envisaged and planned sales projections. The lightning arrester "Veda Total" guarantees the construction of a safe and efficient system for protection of buildings and open spaces from direct lightning. It eliminates the danger of sudden shocks, maximizes public safety, with the aim to reduce material losses and casualties of people and animals.

### "VEDA TOTAL" DETECTS LIGHTNING

With its robustness, the lightning arrester "Veda Total" guarantees resistance to direct lightning strikes with impulse currents greater than 400kA and endurance even in the worst weather conditions. It is completely resistant to chemical and mechanical influences. The software installed in the lightning arrester with an algorithm for an early start enables automatic, independent or combined intelligent decision-making for timely activation of the necessary assemblies for fast response to lightning and creating conditions for the growth of the fastest streamer. Modular identification options, logbook of

significant events, self-diagnostics, number of lightning strikes received, thunderstorm alarm, ability to communicate with the user and integration into the world lightning detection system, are the features that are applied for the first time to one lightning arrester.

### THE DOMESTIC MARKET HAS BEEN CONQUERED, THE FOREIGN MARKETS ARE NEXT

At this moment, "Daris Engineering" places its products exclusively on the domestic market, with domestic companies, but also with foreign companies that invest and build facilities in the country. There is interest in the technology and the product in several well-known world companies that work in the field of lightning protection, but also in a number of trade companies from different parts of the world. Our tendency is to realize the first export this year.

### INNOVATION MOVES THE WORLD

It has always been so, it will remain so forever. There is no progress without innovation, so it is essential for any society to nurture and support innovative technological development. With good financial support, purposeful educational "training" and encouragement of the innovative spirit, society and the state can "awaken" the innovation in each individual. I think that the establishment of the Fund for Innovation and Technology Development is a very noble idea with a serious mission to support companies and individuals who have innovative ideas, but have not yet been encouraged to start their own businesses.

## Safe and effective direct lightning protection system



**Lightning arrester "Veda Total" eliminates the danger of sudden lightning strikes, maximizes public safety in order to reduce material losses and casualties of people and animals.**



### NEW PROJECT - AIR PURIFIER

With the support of the Fund for Innovation, we are working on a new project - development of a purifier of air and polluting exhaust gases. It is an innovation in the field of environmental protection, whose main goal is to make devices for purification of air and exhaust gases from various pollutants, which will have a wide application. They can be installed in car cabins, buses, trucks, indoors, classrooms, offices, health facilities, public premises, industrial production facilities, etc. In addition to purifying physical impurities (dust, ash, soot, pollen, allergens, microbes, bacteria, bacilli, mold, spores, burns, PM particles, aerosols, hair and skin loss, dandruff, etc.), innovative filtration will be able to purify pollutants, fogs, smoke, fumes, odors and smells, and purified air or exhaust gases will be ennobled through sterilization, antiseptic, aromatics, freshness, negative ions and reduced ozone. Due to the fact that this is a very simple, scalable and upgradeable technology with low energy consumption and cheap replacement of worn filters, Aeromat air purifiers from „Daris Engineering“ will have a low price and we expect their mass application.





The establishment of the Fund for Innovation and Technology Development has a noble mission to support companies, but also individuals who have innovative ideas and have not yet been encouraged to start their own businesses.



## SHORT INTRODUCTION



Daris Engineering was founded in 2012. The main activities of the company are production, design, distribution, installation of equipment and construction of complete systems for certified lightning arresters with early start device type "Veda Total", production of lightning strike counters type BUM-10, accessories for lightning protection installations, construction and control of protection systems, reactive energy compensation, anti-corrosion cathode protection, contact and non-contact temperature measurement in industry, production of air purifiers - room, office, automotive, etc. "Daris Engineering" is certified in accordance with the ISO 9001 standard. The company has its own modern research and development laboratory with the most sophisticated measuring instruments and a respectable machine fleet, tools and equipment.

SIMPLY, EVERYTHING FITTED

The FITD call was announced at the very moment when the project was finished. The idea was our sign, and the vision our first ally. We knew that if the project is approved, the road to its realization will be thorny and we all will have to be persistent. At the time of application, there was little skepticism as to whether the idea of an innovative lightning rod would be recognized - a product that few are familiar with, including people in electrical engineering. The road to the selection was very exciting, full of expectations and hope, but also a great lesson for the next projects. With the optimal distribution of funds, we achieved the goal, the company stood on a stable ground, established itself in the market and enabled us to further smooth development.



DOXTEAM

# WE AUTOMATE COMPLEX PROCESSES

The ideas in Doxteam mainly come from some of our internal processes and are not planned. Some come from the clients themselves, and we made some of the projects as solutions to some of the problems we faced and because of which we wanted to make our work easier. This is also the case with Mikrotica, which is a solution to many of our problems we have faced. Some processes in our company were too complex and time consuming, so we tried to automate them. This prototype has been tested on our projects and was very successful, so we decided to offer it to other companies, which may encounter similar problems.

## WHAT DOES THE MICROTICA PROJECT IMPLY?

Microtica automates the entire cloud software delivery process, from setting up a complete cloud infrastructure to delivering services and applications using a technology called Kubernetes. Microtica enables developers not to worry about technical issues related to software delivery and to focus more on the product itself and its quality. It is designed for software engineers working on complex applications and facilitates the DevOps software delivery process. Our goal is to solve the problems of different teams working in different stag-

es of the software delivery process, with the joint goal of delivering the software as efficiently as possible. Microtica allows developers to easily adapt to the cloud and save a lot of valuable time, which these processes take.

## WE WORK WITH CLIENTS FROM EUROPE, OUR GOAL IS THE UNITED STATES

Although the technology is not yet well known, we are satisfied with the interest we receive in our product. However, there is a need for market education on what exactly this type of tool can offer to developers.

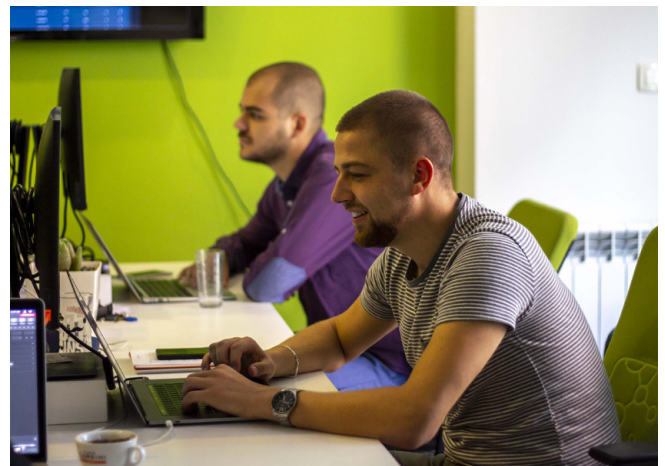
Our business clients are companies that develop applications with many different functionalities and their frequent delivery due to which they need automation and facilitation of certain parts of the process. We have clients from several European countries, and the next market we want to conquer is the USA.

State support is especially important, especially in a small developing country like ours. In Macedonia, unfortunately, we have a small number of successful examples in this area, and state support can be a great incentive for people who have ideas to try to develop them. However, we are pleased that this has begun to change in recent years and we are seeing more and more new, innovative technology products with great potential.

## We facilitate the operation of companies



**DoXteam used the funds from the Fund for Innovation to expand the team, improve the processes and further develop the technology.**



## WE ARE FOCUSED ON CONQUERING FOREIGN MARKETS

Once we have perfected the product, this year we will increase the marketing activities, in order to get as many customers as possible. Concurrently, we have activities in the markets in Europe and the United States and we expect great results soon.

We would like to recommend to all young people who have ideas not to be afraid to start developing them. Today the possibilities are unlimited and you do not need much to develop a demo of an application. Launch the simplest version of your applications and test them on the market to get a quick response and know if you need to further develop that idea. There are a million platforms and tools that can help you build better applications. Take advantage of the time we live in and the opportunities it offers. No idea is bad, it just needs to be adapted to the wishes of the users.



DoXteam's innovative project, Mikrotica, enables developers not to worry about technical issues related to software delivery, it is a platform with which developers can build company solutions by which they would reduce time by 60 percent.

## SHORT INTRODUCTION



doXteam

Doxteam is an IT company that exists since 2015. It deals with the development of software solutions and services for clients, as well as the development of its own products. The Mikrotica project employs 14 people. They received the funds from FITD in September 2018.

### THE FUNDS CAME EXACTLY WHEN WE NEEDED THEM

At that time Mikrotica was separating as a product and we needed a financial injection to make a really competitive and sophisticated application. We are very happy that we received an investment from so many applicants, which means that the Fund for Innovation recognized our efforts and the potential of our team. We used the funds to expand the team, improve the processes and further develop the technology. We have also set aside a great part of it for marketing investments as part of our efforts to expand into foreign markets. We have many goals ahead of us that we are yet to achieve. We are still at the beginning. We expect our product to bring results. We are also looking forward to many new projects and services that we will add to our portfolio.

### FITD RECOGNIZED OUR POTENTIAL

Our company had a complete vision of what the project should look like, but we needed additional funds in order to build the product at a higher level and thus be competitive in the market, which is one of the fastest growing. We found out about the call from the FITD website, where it was explained in detail what we need to do to be able to apply. The application was extensive, a large number of documents had to be collected and while we were completing it, we had the support of the FITD staff, who were available to us for any questions and dilemmas we had.

# SAJTEH DOOEL SKOPJE

## A PLATFORM FOR A MORE EFFECTIVE STRUGGLE AGAINST MONEY LAUNDERING AND TERRORIST FINANCING

When employed in an institution, where according to the Law on Prevention of Money Laundering and Financing of Terrorism, some measures should be taken, employees are interested in how to make it easier and faster as possible, to get a report and most importantly, to clarify what it is actually about. Our company offers a cloud platform, which can be accessed through a browser from any computer or mobile phone, and search through sanctions, blacklists of the USA, EU and UN, to obtain data on PEP status, ie whether someone is a holder of public office. The platform offers a predefined risk, i.e. uses parameters in accordance with international practices and standards, whereby the risk is automatically calculated. The users are only obliged to enter data, and the system itself does the operation automatically. For advanced analysis, we also offer a review of World PEP, Sanction, Law Enforcement, Financial Regulator, Disqualified Director, Insolvent, Adverse Media.

A software platform  
that shows the blacklisted



The company “Sajteh” offers a cloud platform, which can be accessed through a browser from any computer or mobile phone, and search through sanctions, blacklists of the USA, EU and UN

### THE COMPANIES THAT USE THE SERVICES OF “SAJTEH”

Our clients at the moment are law firms, accounting firms, auditing firms, investment fund management firms and financial firms. Potential clients that we expect to establish cooperation in the next period with, are sports betting, casinos, slot machines and notaries, whereas our target group are the entities in accordance with the Law.

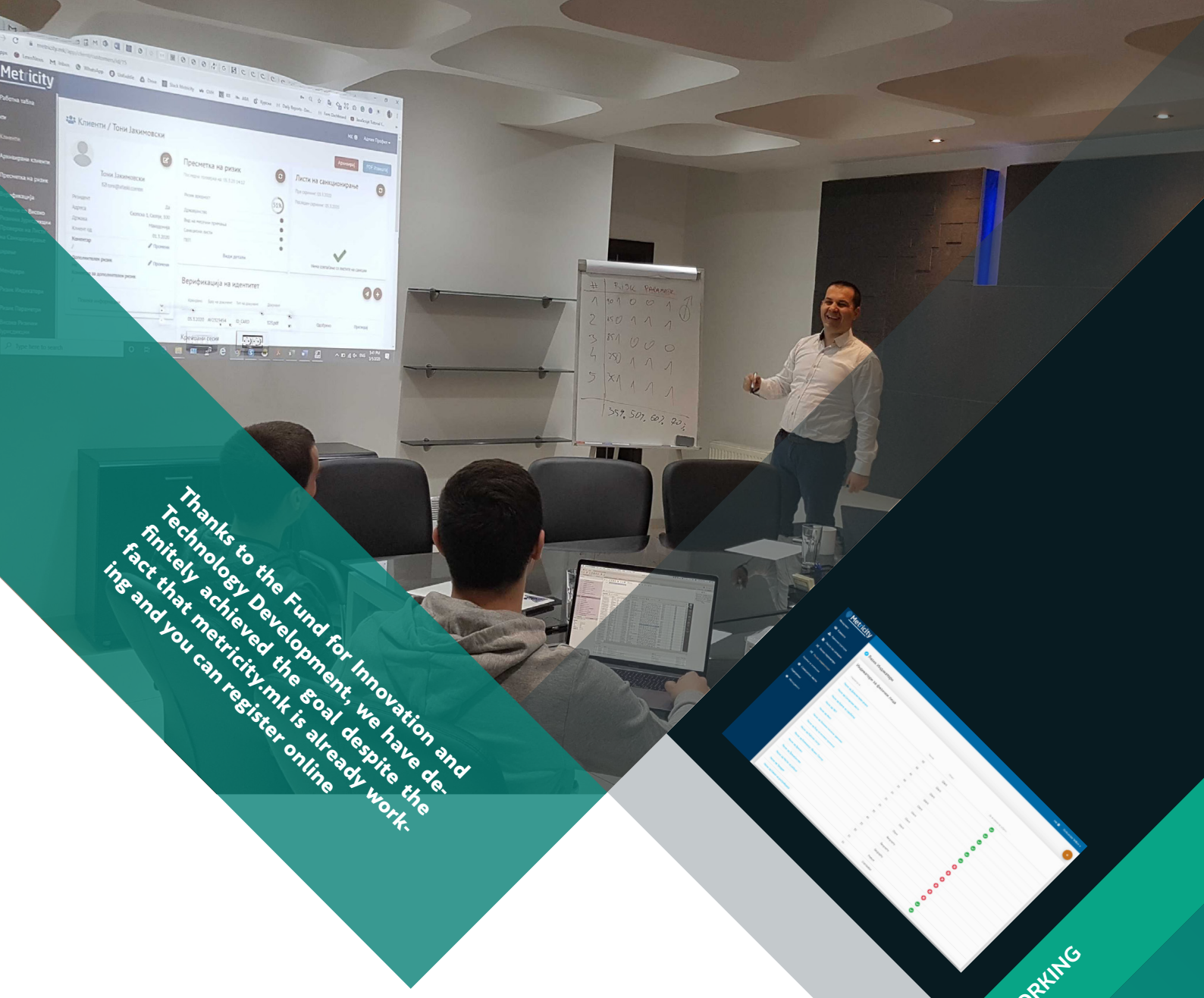
The screenshot displays the Sajteh platform's user interface. At the top, there's a navigation bar with options like 'Датум', 'Како работи', 'Цели', 'Базе', 'APIs', 'Инфо', and 'Контакт'. Below this, three main report sections are visible: 'Скрининг Извештај А' (Screening Report A), 'Скрининг Извештај Б' (Screening Report B), and 'Извештај За Проценка На Ризик' (Risk Assessment Report). Each report has a 'Погледај' (View) button. In the center, there's a section for 'AML Сервис' (AML Service) with a 'Добави нове' (Add new) button. Below these, there's a dashboard with various charts and graphs, including a pie chart and a bar chart. At the bottom, there's a footer with contact information and a logo for 'Фонд за иновации и технолошко развој' (Fund for Innovation and Technological Development).

We are currently working on developing financial technology that will enable instant payments and mobile transactions, without the need for a bank or card

### TECHNOLOGY IS DEFINITELY CHANGING THE WORLD

Our market validation has shown us that we need to focus on developing a reporting platform where you can get a report without having to register. This is our next project, and at the same time we are working on developing financial technology, which will enable instant payments and transactions from a mobile phone without the need for a bank or card. Technology is definitely changing the world. We encourage young people to focus on solving simple problems through innovative ideas. We all want our lives to be easier. Life is a story, business is a story, an innovative idea is a story. Create your story!





Thanks to the Fund for Innovation and Technology Development, we have definitely achieved the goal despite the fact that metricity.mk is already working and you can register online



## SHORT INTRODUCTION



The company „Sajteh“ was founded in 2017 for developing software technology that will assess the risk of money laundering and terrorist financing. The founder of the company is Aleksandar Velkov, who has previously worked for 9 years in the Financial Intelligence Unit. For 3 years, Sajteh has been involved in international projects in the United States and the Caribbean, offering his services. As part of these projects, while working on the development of the platform, they realized that the risk assessment, the sanctions, blacklist and customer analysis were all done largely manually. It took a lot of time, many employees were included, using a ton of paper and no one could manage. For that purpose, Sajteh set a goal to offer software technology that will solve these problems.

THANKS TO FITD, METRICITY.MK IS ALREADY WORKING AND YOU CAN REGISTER

Developing an „in-house“ product as an innovation requires many things, and it is very important that the whole idea is recognized by someone. In our country, the Fund for Innovation and Technology Development as an authority does this very well and encourages people to take actions.

We were informed about the call of the Fund through social networks. Through our network of contacts, we found a consultant who had already gone through the whole process through FITD and submitted the application. We were very happy to learn that we were selected among the large number of applicants. As for the funds, we received them later than expected, because a certain set of circumstances arose due to the change of people in the team. However, with the support of FITD, we applied for a change in the project to the Approval Committee and in the end we received a positive response, which made us even happier. We have definitely achieved the goal given the fact that metricity.mk is already working and you can register online.

# KNIGOTEKA READ E-BOOKS

The fast development of digital technologies was a basic precondition for the emergence of e-books. In recent years, this trend has developed rapidly around the world, especially in the Anglo-Saxon countries, led by the biggest e-book sellers such as Amazon Kindle, Nook, Apple books and Kobo. The interest to bring this trend in our country, as well as the need for publishers to adapt their operations to new technological changes and start their own e-book sales prompted the idea to develop this solution and to stand out as leaders in the market of electronic books.

## THE NUMBER OF READERS IS GROWING

There is a great interest in our solution, especially by the Eastern European countries and countries from the region where the electronic publishing is not developed enough yet and publishers recognize the need of the market and the readers' interest in e-books. The situation is similar in our country. As far as the digital bookstore Knigoteka is concerned, the cooperation with our publishing houses is constantly growing, and so is the number of readers and users of our application.

## FICTION IS MOST POPULAR

Fiction is the most common form of literature in our bookstore, with the greatest emphasis on novels and short stories by domestic and world famous authors. The interest in e-books is great, especially among the younger generations of readers who are already used to mobile devices and reading content electronically.

## Software platform for digital bookstore



**The startup company Knigoteka has created a software platform for selling, distribution and reading electronic books and a digital bookstore.**

We are most pleased that the users are constantly expressing their satisfaction and supporting our idea, saying that they have read e-books, but have not had the opportunity to find them in Macedonian. The most read genres in our bookstore to mention are the thrillers, historical and love novels.

## A MODERN DIGITAL SOCIETY REQUIRES MONEY

Technological development is a very important tool in building a modern digital society. Our country has a great potential for the development of technological solutions, and we are witnessing many innovative ideas from young entrepreneurs, who with the help of FITD and other programs to support innovation develop their projects. However, technology is an expensive and complex process of realization, which requires additional funds, which is why the state support is of great importance for companies that develop innovative solutions.

## THE GOAL IS TO COLLABORATE WITH PUBLISHING HOUSES AROUND THE WORLD

The support from the Innovation Fund came at the right moment when we decided to further develop and commercialize our solution for which we needed additional funds, without which the whole project would not become a reality. The first part of the project was dedicated to product development and we successfully completed that phase, so now we have a complete solution. In the meantime, we have applied for intellectual property protection, such as trademark, industrial design, copyright and product patent. The second



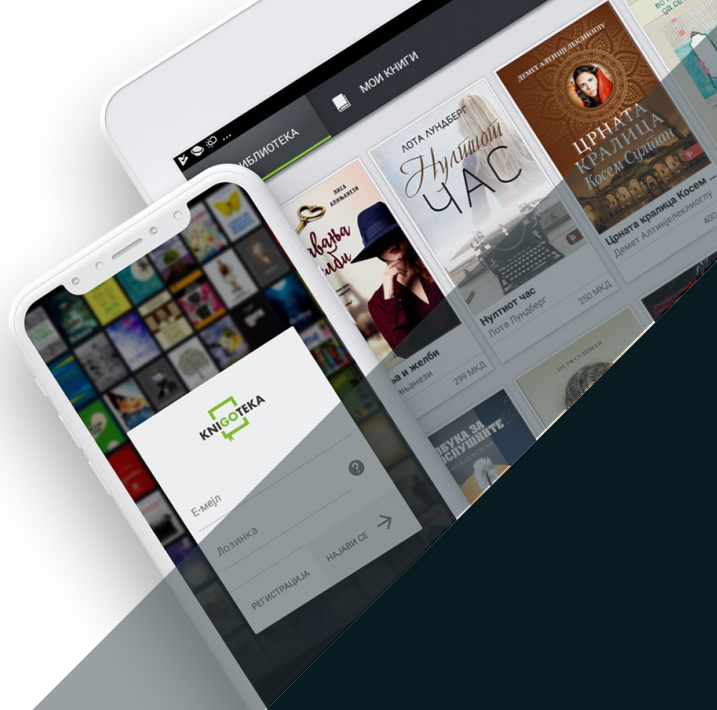
part of the project that we are currently focused on is the placement and sale of our software solution worldwide. In the following period, with the support of FITD, we will visit two European book fairs, which are of great importance to achieve our goal, which is to establish cooperation with publishing houses around the world.

## NEW IDEA – DISTRIBUTION OF PROFESSIONAL LITERATURE

In addition to the publishing sector, our goal is to expand the range of institutions we serve through the development of an educational management system that will offer distribution of professional literature, textbooks and training programs intended for educational centers and scientific and cultural institutions, which also need to digitalize their materials and distribute them to their users. Our recommendation to all who have a business idea or innovative solution to a particular problem or need in the society is to consider all funding opportunities and programs, as we believe that innovative ideas that have true potential for market development are truly recognized by institutions, such as the Innovation Fund.



## Книжарница на дланка



In the following period, with the support of FITD, we will visit two European book fairs, which are of great importance for the achievement of our goal, which is to establish cooperation with publishing houses around the world.



## SHORT INTRODUCTION



Knigoteka is a startup that deals with creating application solutions for the digital publishing industry. Our first product is software platforms for selling, distributing and reading electronic books that will help thousands of publishers around the world create their own, branded digital bookstore. Also, they recently launched the first digital bookstore for selling electronic books knigoteka.mk in cooperation with several renowned Macedonian publishing houses. Currently, their team has 6 employees, and they place their services worldwide.

### WE FOLLOWED ALL FITD CALLS

Since FITD announces various calls and measures, we kept following them so that we could apply to a call suitable to our business. During the application process, in addition to the written rulebook that was publicly announced for each measure individually, we had the full support of the FITD team, which was always available to answer our questions. Through realized personal, written and telephone consultations, they constantly gave us directions and recommendations to complete the application.



PIXYLE DOOEL

# CHOOSE YOUR STYLE WITH IMAGE PIXELS

The textile industry is constantly growing and paves the way for innovation to companies in communicating with their customers. Pixyle follows the new trends in online sales and improves its technology in order to improve the consumer experience and encourage them to shop online. Based on this, Pixel has created technology that offers a simple innovative communication channel to e-shops, and will also improve the efficiency of e-shop data organization, and provide customers with an easier and more accurate way to reach the desired product in a matter of seconds.

## PARTNERSHIP WITH A DUTCH COMPANY

Last year, Pixel switched from a b2c to a b2b company with a business model SaaS API. The company has partnered with a Dutch fashion company for a sustainable fashion to implement the technology in their online store. In doing so, Pixel continues to support sustainable fashion and the message it carries.

## THE MEANING OF VISUAL SEARCH

At the moment we are focused on perfecting solutions based on artificial intelligence: visual search, automatic tagging and similar recommendation. Each of these tools contributes to a more efficient organization of the e-store and offers the consumer a quick and easy way to getting the desired product.

The visual search solution means by attaching an image of the desired product, users can search the entire catalog in the e-shop in just one second, and if the desired product is out of stock, the similar recommendation tool will display an alternative with 90% accuracy. Automatic tagging processes all products in the catalog at a speed of 10,000 images per hour, which saves fashion online stores resources and time.

## BENEFIT FOR THE CUSTOMERS AND THE COMPANIES

Pixyle's technology provides a mutual benefit, both for the companies that implement it and for their customers. Experience shows that online stores, using the tools of visual search and similar recommendation, increase sales by 30%, attract new customers, the visibility of the products increases and the store has additional revenue

A few seconds  
to the desired product



The company facilitates shopping, through visual search, just by attaching a picture of the desired product, users can search the entire catalog in the e-shop in one second



from the alternatives offered to customers. The automatic tagging tool allows you to efficiently and easily manage your online catalog. On the other hand, this affects the consumer experience in the e-store. Finding the desired product in less than a second, without waiting in line, or worrying about whether the product will be in stock, are the biggest benefits for the buyer, which is ready to allocate a larger budget than planned.

## WE NEED POSITIVE AND INNOVATIVE ENERGY

We recommend all the companies with innovative ideas them to apply to FITD's calls, because with the support they will receive, they can realize their ideas, and also influence the development of our society by employing new people and spreading positive and innovative energy in the state.



Supported by FITD, Pixyle has perfected its product and managed to promote it in the fashion industry globally

## SHORT INTRODUCTION



The company Pixyle.ai was founded in 2017, and the main "culprit" for that is Svetlana Kordumova-Trajanova, a PhD in the field of artificial intelligence and a lover of fashion. Following their passions, she has come to the idea of creating technology that by using artificial intelligence, will help online stores in the fashion industry to enable easy and effective shopping for their customers with visual search. With a lot of effort and energy, the Pixyle.ai team today consists of 10 employees and two external collaborators from the Netherlands, and they offer their services globally.



WE PROMOTED OUR PRODUCT GLOBALLY THANKS TO FITD

We were informed about the FITD'S call through social networks. Then we got in touch with representatives of the Fund, who explained the procedure and the documentation we need. We received guidance and support for the whole process. The support from FITD helped us in the development and improvement of the product, and through additional resources related to marketing and promotion, we managed to promote the final product in the fashion industry globally. With the fact that we operate in the field of fashion, our primary goal is the global market. The big fashion brands, with e-shops with a wide range of products, are the primary target for us. Our plans include further product development, as well as the creation of new creative solutions that will find their use in e-commerce.



## PREPLET

# WE HAVE BUILT A BRAND WITH HUMANE IDEA

Preplet design is recognizable by the fact that each product contains a creative message that complements the illustration. Usually the messages are written in Macedonian language in Cyrillic and they convey inspiring thoughts that everyone can relate to in their own, individual way.

The studio has recently expanded its collection of products containing messages in English language and phrases that complement specific illustrations. The team consists of Viktorija Langovska Hajredin and Magdalena Avramovska, who are the founders, Emilija Langovska, who works as a designer and project manager, and Frosina Krstevska, who is a sales agent and takes care of the studio's retail and wholesale network. As a studio, which is constantly evolving and aspiring to grow into a large socially responsible company, we always seek to include projects that will bring the design closer to those groups to whom it is difficult to reach.

### THE HUMANE DIMENSION OF THE DESIGN

Nowadays, knowingly or unknowingly, design plays a very important role in the everyday life of most of the people and it is very hard to put ourselves in the shoes of the people with partial or total visual impairment, to whom art, unfortunately, is still very distant. For these reasons, we see the project intended for these people as a great challenge in which we will convey the design through various tactile media.

**Creative products with  
messages in which everyone  
can recognize themselves**



**The innovation of the design studio Preplet's project is the creation of designer textile products, which can be also used by people with partial or total visual impairment.**

The innovation of this project is the creation of designer textile products, which can be also used by people with partial or total visual impairment. The collection consists of functional products such as: T-shirts, bags, toilet bags and pillows with various optimistic messages in English. The products contain a tactile illustration and a message written in English and Braille, which will be applied directly to the textile by means of textile printing and embroidery. By applying this type of text and a properly designed illustration so that visually impaired people can touch and feel it, we create a product that can be understood by all. Hence, we target everyone, not just the people with visual impairment. With this we aim at better social inclusion and improvement in the quality of life of people visual impairment.

Creating a product line intended for people with disabilities is a factor of utmost importance for our company to grow into a socially responsible company and is something we strive for since our establishment.

Although we have been already negotiating with some design studios and museums that have concept stores, our project is still in the final stage of development.

We sincerely hope that the products will be positively accepted and recognized both in Macedonia and abroad by people with visual impairment, as well as by all those who wish to support the initiative for their inclusion in the world of design.



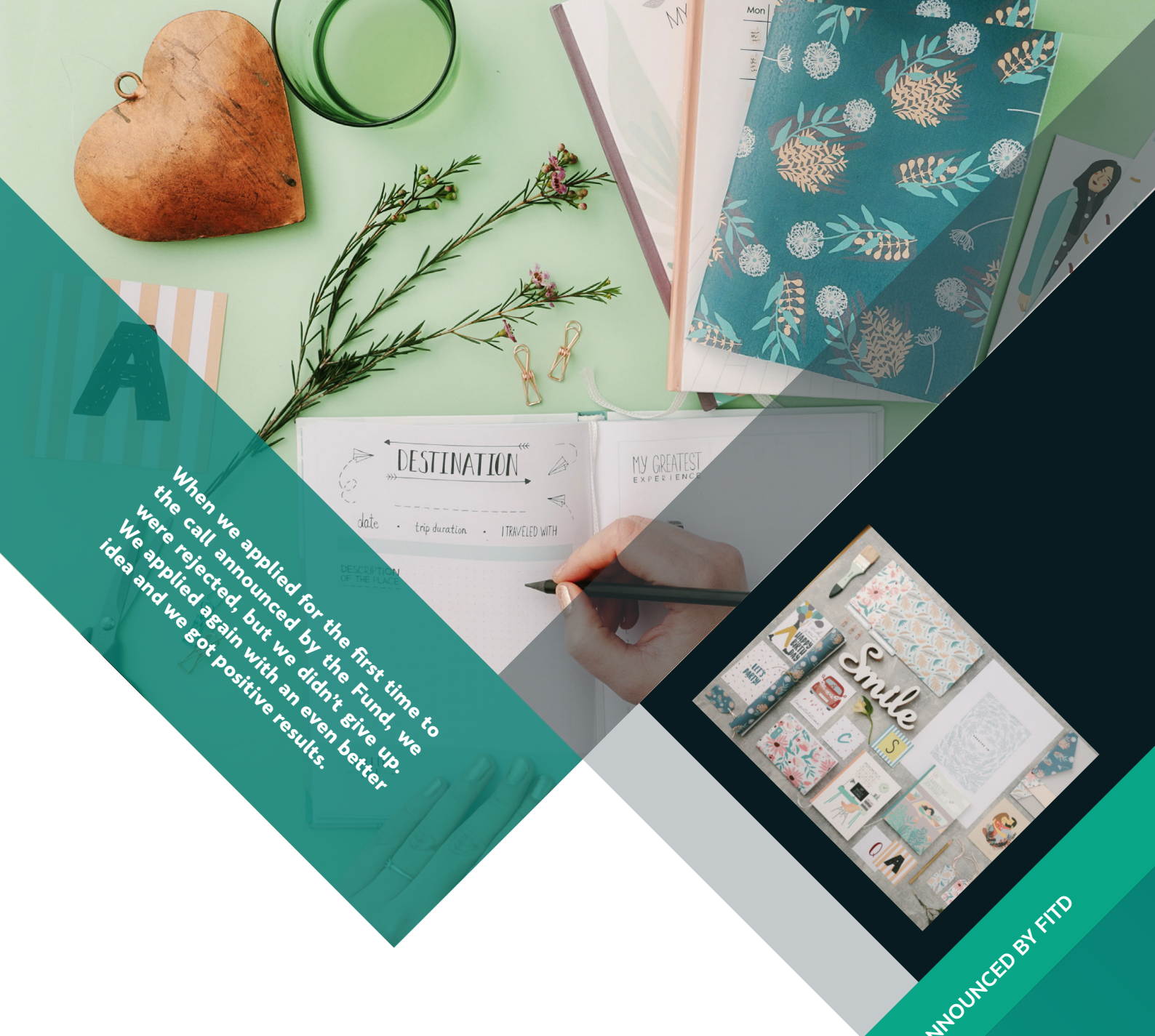
### THE NEXT STEP IS PROMOTION OF THE COLLECTION

At the promotion, which is planned to be carried out through a multimedia event, visitors will have the opportunity to get acquainted with the concept of this project in full. It will be followed by the promotion of the collection in several concept stores across Europe with which we are already in contact.

In the future we would like to continue to work in the field of creating as many designs as possible for people with visual impairments because we have in mind many more ways in which we can reach them through design.

Our recommendation for companies that have innovative ideas is to put them on a piece of paper, develop them into a specific project and to present them at the first moment, because a good and honest idea is always recognized and finds a way to success.





When we applied for the first time to the call announced by the Fund, we were rejected, but we didn't give up. We applied again with an even better idea and we got positive results.

## SHORT INTRODUCTION



PREPLET

"Preplet design" is a studio, a brand that creates products intended for creative gifts and home decor, such as printed diaries, notebooks, pocketbooks, posters, greeting cards, envelopes, decorative wrapping paper etc. In addition to these products, the studio has a product line such as: ceramic mugs, glasses, canvas bags, toilet bags and pillows. Depending on the season and the collection that is prepared, the product type varies.

WE APPLIED SEVERAL TIMES TO A CALL ANNOUNCED BY FITD

We followed the calls on the Fund's website, as well as the advertisements they have in the media for long time. The first time we applied with a project we received emails from them several times informing us where we made a mistake in the application, what we had not specified and what we should add, thus we were learning how we should complete the project. Although our application was rejected at the time, we didn't give up and we applied again with an even better idea and experience, which had a positive result. The fact that our project was selected by FITD was of great importance to us because with the start of this project, our studio had the opportunity to expand the range of products and techniques. By investing in the machines, which are the basis for us to start the project, we will apply new techniques through which we will strengthen our brand identity. The very availability of this equipment allows the development of new concepts, such as creating many designer textile products, Braille labels, playing with new innovative combinations of printing and embroidery and establishing various collaborations.

## SYNAPSE AVIATION

# WITH AIRPORT BRIEFING THE PILOTS ARE READY TO FLY

Airport Briefing is a symbiosis of information technologies and expertise in the field of aviation and is a result of the cooperation between (Synapse Group) and Captain Kocho Mojsov (Boeing 777) from 5 years ago, which successfully continues today. The purpose of the product is to provide a fast, easy and effective briefing process, i.e. preparation of pilots, before and during their flight. The initial version was built with cross-platform technology based on Adobe - Flex / Flash Builder, Away3D and a classic server solution, but the latest version of Airport Briefing will use a brand new 3D engine, will be developed with AWS (Amazon) tools and will have lots of new, exciting functionalities that will make, as we say "The holy grail" of airport briefings! One of the main advantages of Airport Briefing is the 3D engine, through which we visualize the key aspects of the briefing process in three dimensions, which are the airport runways, terrain, lighting systems, critical winds, flight procedures and routes and many other important data.

### AIRPORT BRIEFING IS USED BY 8 AIRLINES; WE NEGOTIATE WITH 10 MORE

I am pleased to say that there is great interest in our product, which is one of the few in the aviation industry globally with a focus on RAIM (Route and Aerodrome information manual). So far we have concluded agreements with 8 airlines / operators, and we are in

the active process of selling with a dozen other renowned names in the industry.

The aviation industry is specific because the focus is always on safety. On that basis, defined by the international organizations ICAO / IATA, the global aviation industry we know today is built, which is a key factor in the process of globalization, through the physical connection of people, economies and cultures. In that sense, air transport is one of the safest modes of transport (statistically only elevator transport is less risky) and Airport Briefing is just another addition to the whole mix of security protocols, systems and technologies, so it is often difficult to determine accurately the causes of an incident and / or accident in relation to the pilot's readiness. But one thing is certain, none of our clients has registered a more serious incident after using our software, and we hope that it will remain so in the future.

### MACEDONIA HAS A CHANCE TO SHINE GLOBALLY WITH INNOVATION



Strategically speaking, investing in innovation and technological development is a key element for the development of one society, and especially for a small one like ours. Macedonia cannot conquer the world with manual labor in "labor intensive" industries, but certainly has a chance to shine globally with innovation and knowledge, whose power exceeds any mathematical calculation of scale, number and location. Therefore, I welcome all the efforts of the state focused on development of the intellectual power of the population, including concrete financial and logistical support. We learned about the call of the Fund from the media. We already participated in a FITD call in 2016, so this time it was easier for us to prepare the documentation and present our development plan with quality. Unlike our first application, this time "Synapse" had more specific business plan, developed and validated product with real customers and won awards, so the success of the competition seemed logical. The funds are coming at an ideal time for us. It is a time when, going through the real filters on the market, the USP of the product is already clearly crystallized, and the lines of movement of the company are easily recognizable. Simply put, we now know exactly what we need to do, so the only "problematic" resource is time, of course that means finances. The funds from the Fund will enable us to implement our strategy very quickly and with quality, which is especially important in a global industry such as the aviation industry, where competition on the market is strong and long-standing and the sales process is long and uncertain.

## Preparation software for pilots, before and during their flight



The purpose of the product is primarily to provide a fast, easy and effective briefing process, i.e. preparation of pilots, before and during the flight





Macedonia cannot conquer the world with manual labour, but it certainly has a chance to shine globally with innovation and knowledge, whose power, exceeds any mathematical calculation of scale, number and location, says Filip Arsov

## SHORT INTRODUCTION



"Synapse Aviation" LLC is an IT company that offers products and services in the field of aviation industry, in order to increase the safety and efficiency in the airlines operation. Founded in 2016, today the Synapse team consists of ten people, we have experienced IT engineers, 3D artists, active pilots and experts in the field of aviation. The focus is on one area of the aviation industry, which refers to the preparation of pilots before and during their flight, which is briefing on routes and airports, or originally, route and aerodrome briefings, hence the name of the product Airport Briefing.

OUR GOAL IS TO CONQUER THE WORLD OF AVIATION

Our plans are to conquer the world of aviation with our product. We would like Airport Briefing (Synapse Aviation) to become a recognizable brand, such as Jeppesen (Boeing), LIDO (Lufthansa), Garmin, ForeFlight, etc. But, of course, our main goal and mission is to help pilots in their preparation process and ultimately increase safety in the aviation industry. The entrepreneur path is difficult and bumpy. The process of developing an idea, from an idea to a real product / service, is difficult and uncertain and any help is more than welcome. I would summarize my advice for young innovators and entrepreneurs in several messages, which are also my personal guides:

"Use all the help that is available to you ... think less, act more ... Don't give up after first failure, don't give up after the third nor after the tenth ... dedicate yourself to continuous learning and skills development ... (multi) implement the concept "trail-fail-learn" ... persistence, courage, perseverance ... learn to manage your mind, spirit and energies ... take care of your body ... develop awareness ... be disciplined and grateful", says Filip Arsov from "Synapse Aviation"



## STRATUM RID

# ECONOMICS, PSYCHOLOGY, MARKETING = IMPALA

IMPALA is the result of many years of experience in both areas, market research and innovation management (especially design thinking). We came up with the idea, and more importantly the implementation with Tamara Dimitrova and academic Ljupcho Kocarev, with whom we produced through brainstorming, but also eliminated ideas for innovative ICT tools in the field of market research. The team was later joined by prof. Dr. Ognen Spasovski from the Institute of Psychology, who gave his input in testing the feasibility of ideas, as well as proposals for implementation of solutions in the future in areas which are not only financially related. Basically, the algorithms implemented in the platform are based on the revolutionary theories of the late 20th century by Daniel Kahneman, Paul Eckmann and Goleman.

### EYE TRACKING, FACE CODING AND NEUROMARKETING

IMPALA is a DIY platform for neuromarketing, which means that it is based on metrics, which are in the field of medicine (neurology), and are used to detect the unconscious motives and conditions of the respondents, primarily in the decision-making process. By detecting the movement of the eye pupil, recognizing emotions through micro-expressions, measuring reaction time, etc. mental states are de-

tected without requiring a verbal statement from the respondents. These metrics are crucial in testing communication tools, as well as optimizing the communication strategy, which means that the target group is actually all companies, viewed globally.

### WITHOUT THE SUPPORT OF FITD, IMPALA WOULD NOT HAVE BEEN SUCH A SUCCESS STORY

IMPALA is a revolutionary solution, which is based on multidisciplinary in both the theoretical and scientific approach, but also in the applicability. Even though we were enthusiastic and believed in the power of IMPALA, without financial and mentoring support this would not have been such a success story. That is why we are grateful to the Innovation Fund, that supported us financially, but also they provided consulting and mentoring support so we can finalize the platform. As they say: one swallow does not make spring, so a successful start-up on the global stage is not enough to create a stable and sustainable ecosystem of innovation and entrepreneurship. I would like to appeal to all institutions and stakeholders to follow the example of FITD and jointly recognize and support companies with high potential and their entrance on international markets with their innovative products and tools.

## Stratum Reed is recognized for the IMPALA project



IMPALA is a DIY platform for neuromarketing which means that it is based on metrics that are in the field of medicine (neurology), and are used to detect the unconscious motives and conditions of the respondents, primarily in the decision-making process.



### PLANS FOR THE FUTURE ARE RELATED TO GLOBAL DEMAND!

FITD and FITD EC members, as well as other partners, for example MK 2020, help us commercialize IMPALA globally, the first step are the markets in America and Canada. I think that the Macedonian diaspora can also help, especially the successful Macedonians who work in ICT companies around the world such as Oracle, Microsoft, Google and others.

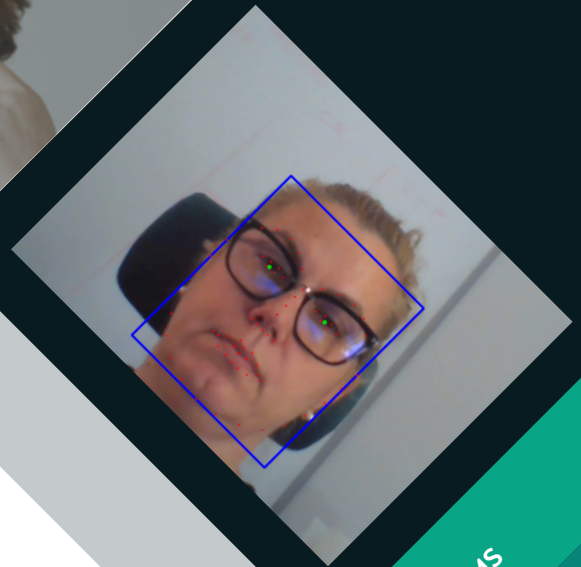


## Eye Tracking

Example of body text. Somehow, I doubt that. You have a good heart, Dexter. Tonight is the night. And it's going to happen again and again. It has to happen. I'm Dexter, and I'm not sure what I am. I am not a killer. I'm really more an apartment person.



The Innovation Fund supported us financially, however, we also received consulting and mentoring support in order to finalize the platform, says Vesna Kuzmanovic, founder of the company "Stratum Reed".



## SHORT INTRODUCTION



STRATUM R&D

"Stratum Reed" is a company registered in 2015, as a consulting company in the field of research and development, i.e. innovation. The founder of the company is Vesna Kuzmanovikj, who has 20 years of experience in the field of market research and the last 5 years in the field of innovation management. Vesna Kuzmanovikj was also the founder of the company STRATUM Research, which after 7 years of work was acquired by GfK Skopje. Currently, the company has 5 employees and over 100 external associates in the territory of N. Macedonia, as well as partner companies throughout Europe, America and Canada. Currently, all services are concentrated on the Macedonian market with a focus on sales in the US and Canadian markets.

WITH THE SUPPORT OF FITD WE FULFILLED OUR DREAMS

Before announcing the call, FITD had organized presentations across the country with various partners, in order to popularize the measure, so we found out about all the details of the presentation organized by FITD and USAID. FITD and its partners are doing a really good job in terms of disseminating important information to end users at the highest level of transparency. After 20 years of operating in this market, the company got something from the state! Do you believe that in the last 20 years, we have never won a tender, or any other cooperation with state authorities. When I discovered that the project was approved, it was more of a shock and disbelief. Of course after a short time we all rejoiced together because we knew that this support was crucial for us to fulfil our dreams, and thus be successful on a global scale!

## URETANI DOOEL

# SUCCESS IS ALWAYS WITHIN REACH

As a polymer engineer, during my master studies I researched about the amounts of waste rubber and where it comes from. I came across the fact that in our country alone there are 100,000 m of conveyor belts, only in the mines. Given that the wipers are used to clean the strips and that they are made of rubber, and their service life is one year, we can only assume how much waste is generated every year. I advocated for the problem and two years later I found the solution. I made polyurethane wipers, with expiry date nearly three times longer than rubber wipers for conveyor belts.

### NEW INNOVATIVE PRODUCTS

We are currently working on development of several new innovative liquid polyurethane products, which, like our debut, will be a replacement for existing products. Their advantage is the long service life and improved physical-mechanical characteristics. We currently place our products on the domestic market, but our target is also foreign markets. Since we are a very young company, first we want to gain the trust of the domestic market, and later with that reference we plan to sell our products on foreign markets.

### EVERY INNOVATION NEEDS SUPPORT

The innovative solution alone cannot be realized and give result. At the beginning I had no idea how to realize my plan, and I did not even think that a plan could grow into a start-up company. Support is a very important factor for development of young, innovative companies, because it is not always the innovator who can take the initiative to fulfil all legal obligations. In our case, the Fund for Innovation and Technological Development helped us a lot in all aspects and that is why today it is part of the company and is present in all phases of the project.

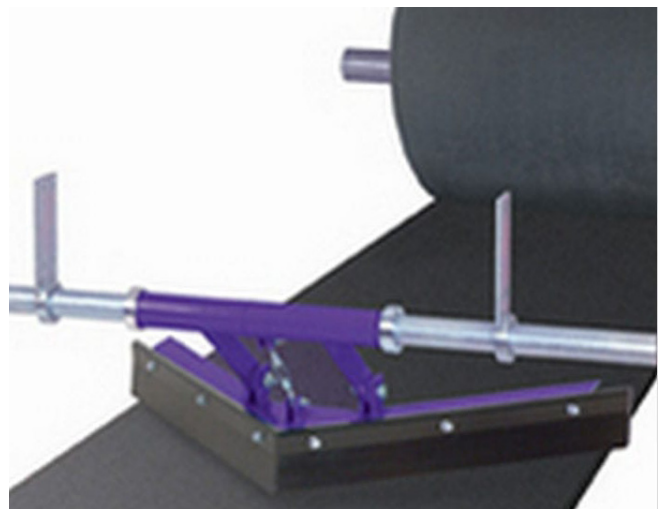
### THE SECRET OF PROGRESS IS TO START SOMETHING NEW

I found out about the call of the Innovation Fund from social networks, I was very sceptical, but I decided to try. Then I thought that if I succeed, I will realize my idea, and if not, I will seek guidance on how to improve from the experts in the Fund. I have prepared the application, which itself was not difficult. The rules and requirements were clearly defined, and only needed to be followed. I really think that if we have an idea, motivation and desire for success, that is the smallest obstacle on our way. I was guided by Mark Twain quote "The secret of progress is to start something new".

## Instead of rubber, polyurethane wipers for conveyor belts



Based on the experience I gained in cooperation with the Fund, I would like to encourage all young innovators who have an idea, that success is always just one step away from us, it is enough just to wish and (get) it



### I HAD A PLAN ON HOW TO ACHIEVE THE GOAL

At the very beginning of the idea I had a plan how to achieve the goal. In fact, this is how the whole business plan started and based on that a budget was made that I had to follow. We use the funds in accordance with the planned budget and currently there are no deviations. I would just say that our goal has been achieved. We are working hard to place our products on foreign markets and we expect realization in the course of next year.

Based on the experience I have gained in cooperation and support of the Innovation Fund; I would like to encourage all young innovators who have an idea that success is always just one step away from us. You just have to wish and grab it. "If you don't give up, you still have a chance. Giving up is the greatest failure." said Jack Ma, founder of Alibaba.





I made polyurethane wipers that have expiry date nearly three times longer than rubber wipers for conveyor belts: says Simona Nikolova, a young innovator and founder of the company Uretani.



## SHORT INTRODUCTION



Simona Nikolova founded the company "Uretani in 2018. It is a start-up company that produces polyurethane wipers for conveyor belts and currently has two employees. Polyurethane wipers are used in every industry that uses conveyor belts in its production process.

THE FUND ANSWERED ALL OF MY 1,001 QUESTIONS

The employees of the Fund were ready and willing to answer all my "1,001 questions" and today I can freely say that without their support and guidance, the project would not have become a reality. I was positively surprised when I received a response from the Fund that my project was accepted and that it would be financially supported. At the beginning, I had a little nervousness, which, fortunately, lasted a short time, so I could go on and commit to making the project a success story. The meetings with the expert, which was offered to me by the Fund, significantly expanded my horizon, especially about what a small start-up business would look like if a person is persistent in realization of the idea. I was even happier when I realized that every successful project can bring a new one, someone next. Therefore, I believe that young people are the ones who should be the incentive and motivation for the Fund to continue to finance many more projects of young and promising entrepreneurs, innovators, who have a desire to succeed.



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