Get Smart

#07

INTERVIEW

Milan Štengl

TOPIC

Biomedicine and Technology in Healthcare

INTERVIEW

Jan Herzig

RESEARCH, DEVELOPMENT, AND INNOVATION IN THE PILSEN REGION
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● **GetSmart #7**

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The colour edited photo shows a close-up of the operating theatre light at the Biomedical Center of the Charles University in Pilsen.
Author: Petr Špánek

Dear readers,
Innovation isn't just a buzzword; it's a field that has a daily, essential impact on the lives of each and every one of us. In the era of rapid technological advancement, innovation is not only a driving force of economic growth, but also its vital precondition. As the Minister for Science, Research, and Innovation, and as a native of Pilsen, I am proud to see the Pilsen Region advancing in this area. I believe that, thanks to the region's rich industrial history and strong technical foundation, it has what it takes to join the leaders in technological progress.

Supporting startups and creating an environment that encourages entrepreneurial activities are essential parts of this development. In fact, startups and young companies are catalysts for change, introducing new technologies, improving existing processes, and creating entirely new industries. Often, they bring innovations that significantly impact not just the economy, but also the quality of life.

The support for young innovative companies and research organizations comes in the form of financial tools, such as grants and investments, as well as the creation of infrastructure that allows their rapid growth and expansion. Incubators and accelerators, such as BIC Pilsen, and initiatives like the Smart Accelerator funded through the Johannes Amos Comenius Programme operational programme, are crucial for this progress, and I'm glad to see them thriving in the Pilsen Region.

It is the state that plays a key role in financing and systematic support, provided it has adequate tools at its disposal. As Minister for Science, Research, and Innovation, I realize how important it is for public administration, the business sector, and educational institutions to co-operate in creating an ecosystem that truly favours startups and innovation. I'm confident that just by connecting these sectors, we can create an environment where innovation is going to emerge and develop naturally.



PhDr. Marek Ženíšek, Ph.D.
Minister for Science, Research, and Innovation

News from the region





01 CNAIP – A Catalyst for Collaboration in the Field of AI in the Czech Republic

Connecting Czech academic, public, private, and non-profit sectors, helping with the formation and development of the community connected with the field of AI, and covering activities to support all of this. These are not the only efforts of the Czech national AI platform (CNAIP). Seven founding members – prg.ai, Association of Industry and Transport of the Czech Republic, Brno.AI, CzechInvest, ICTU, MSIC Ostrava, and BIC Pilsen – confirmed their intention to co-operate, by signing a memorandum on 25th of June 2024. The individual members have been engaged in the development of an innovative ecosystem and AI ecosystem in the Czech Republic for many years. The years of experience and continuous work with all of the relevant players in the field of AI are the key preconditions for successfully achieving the Platform's goals. The main ambition is to strengthen the position of the Czech Republic in the field of AI. To achieve this goal, CNAIP is going to support greater integration of AI in Czech companies, public administration, and education, as well as to promote legal changes, mainly in the field of the regulation and safety of AI, and make public education in the field of AI more widespread. Furthermore, the Platform and its members want to explain how AI is useful. For this reason, the Platform also organizes events called AI Days. Their third annual event took place in all Czech regions this year in June. "*The AI Days concept went well in the four largest Czech cities, so we decided to open up the project to additional partners. We're very happy that all of the Czech regions took part in this with their own organized events. The shared energy and excitement are a great force that drives us forward*", said Tereza Vodičková from BIC Pilsen, which organizes Pilsen's AI Days. In November, CNAIP announced laureates of the only industry award in the field of AI in 5 categories – AI Awards, which '*stayed home*' last year, when the Pilsen AI Days took place for the first time, also thanks to the Faculty of Applied Sciences at the University of West Bohemia, and JALUD Embedded.

02 The Year 2025 Is the Year of Quantum Technologies

The UN announced that 2025 will be the International Year of Quantum Science and Technology (IYQ). The aim of this worldwide initiative is to raise public awareness of the significance of quantum science, along with its practical applications. The selection of the year 2025 wasn't random – it commemorates 100 years since the beginnings of quantum mechanics. In Pilsen, we're actively preparing for this important jubilee as well. Several events have already taken place at the University of West Bohemia this year. For instance, the seminar '*Quantum technology: hope for the 21st century?*' was organized for students and employees of the university in April. The New Technologies Research Centre (NTC) at the University of West Bohemia also introduced this perspective topic at the Office of the Government of the Czech Republic. Since October, there has been a quantum seminar for the public and companies, which will last until 18th December. Participants can choose individual lectures to suit their interests, without any concern of losing continuity. Other events will be organized as part of the Week for A Digital Czech Republic. For the year 2025, other significant events are being organized on an international level, including the Czech-Japanese quantum conference, which is taking place in the last week of May in Prague. Furthermore, we can expect another year of the international Quantum Hackathon, as well as the Quantum Day. More events aimed at supporting and popularizing quantum science and technology to the public are currently being planned. We have plenty to look forward to.

03 Drony SIT Celebrates 10 Years

Ten years ago, Pilsen bought its first unmanned aerial vehicles, becoming the first city in the country with authorization to operate drones. Over the last ten years, Drony SIT have become pioneers in bridge construction inspections, and leaders in co-operation with the Integrated Rescue System (IRS) emergency services. Their participation in the IRS is an inspiration for the whole of the Czech Republic and Europe alike. "*At the beginning, we had a vision of connecting Pilsen and modern technologies. After ten years, we became the first European city using drones in IRS. No other city in Europe uses drones in the same way as Pilsen. It's only here that they save people's lives, protect property, assist at the scenes of major fires, document traffic accidents, help paramedics, and develop their own applications. The 'droners' elevate local secondary school students into new experts in the unmanned aerial industry,*" said Luděk Šantora, the Director of SITMP. Drony SIT have made over 30 drones take off over the course of the last ten years, and have developed more than 10 specialist apps, so the drone serves more than just as a source for nice looking photographs. They have made over 700 flights, amounting to over 850 flight hours. They have inspected locations that are difficult or dangerous to reach. Within the IRS, they have built up a European reputation. "*Our successes are the result of the work of a few individuals, including former colleagues whose work results have always provided a good base for continuation. Currently, our team consists of seven permanent members, and a student of the Secondary School of Transport in Pilsen, who is actively involved in the actual operation in one sector. By passing on gained experience to the new generation within PINE, we have opened another chapter to further develop our sector*", added Josef Navrátil, the Director of Drony SIT.

04 Company of the Year 2024 is from Pilsen

The company of the year 2024 is the young company, Amitia. In the past, Amitia took part in the incubation programme of the Business and Innovation Centre BIC Pilsen, and also used other various forms of support. "*The co-operation with BIC is a considerable part of our success*", said the founder of the company, Milan Legát, who started his career at the Faculty of Applied Sciences at the University of West Bohemia in Pilsen. Already during his PhD. studies at the Department of Cybernetics, where he focused on computer speech synthesis, he started working in the R&D department of a small Swiss company, specializing in speech technology. When the company became a part of a multinational corporation, he climbed through the ranks from an ordinary researcher, up to prominent manager positions, enabling him to experience work environments in several other countries. In 2019, he returned to Pilsen and founded the Amitia company, with the goal of creating unique software solutions for various fields of human activity, based on AI. Now, the company has developed a software tool enabling the effective annotation of data for machine learning purposes, utilizable in computer vision application, audio signals processing, and the processing of natural language, as well as special software for monitoring the movement of people, animals, or means of transport in restricted areas. The tool was developed in co-operation with experts at the Faculty of Applied Sciences at the University of West Bohemia in Pilsen. The faculty has become a significant long-term specialist partner of the company. Within its research activities, university's NTIS Research Centre developed software modules in 2020, designed for the creation of apps for gathering data from business documents for Amitia. In 2021, Amitia enrolled in an incubation programme, which had been prepared and piloted for the Smart Accelerator Project of the Pilsen Region, with the intention of creating a mobile app for oncology patients, Healthiary. Amitia has also already developed an adaptive exercise module for the '*School with Perspective*' website for FRAUS publishing house, and assembly of a twin compressor for ATMOS Chrást. For Doosan Škoda Power, Amitia similarly simulates airflow for the design of turbine blade profiles. Amitia also contributes to transportation projects for Pilsen. For Road Administration and Maintenance of the Pilsen Region, the company is developing a system which, with the help of machine learning, and based on historical records of road maintenance and data from weather stations, efficiently manages the deployment of winter maintenance vehicles, and optimizes winter road maintenance. In the 2022 Visionary of the Year competition, Amitia received an honourable mention for its technological, economical, and social contribution to the field of industrial production, for its planning tool, PLAiN. The company also won first place in the startup competition as part of the 5th Czech-Bavarian Innovation Day. This year, Amitia came out as the winner of the Volkswagen Company of the Year 2024 competition.

05 Two Secondary School Students Score in the 2024 Czech Smart Minds Awards

Jiří Sankot and Adam Křen, students of Secondary School of Electrical Engineering in Pilsen, achieved exceptional success! At the prestigious České hlavičky 2024 (Czech Smart Minds Awards 2024), the two students received an award in the Futura '*Solutions for the Future*' category. This project, which awards young talents and their innovative approaches, praised Jiří and Adam for their extraordinary contribution and innovative solution, which has the potential to affect the future. In their SPBox project, Jiří and Adam dealt with use of medication that can cause significant problems in case of missed or delayed dosing, which is not only a problem for the elderly. "*To prevent such problems, we decided to create this project. Unlike a traditional plastic pill organizer, this project brings functions added by its inner logic. Its key features include monitoring of the presence of medicine in its individual compartments, thanks to capacitive sensors, and light and sound notifications on its removal. The notification happens by backlighting of the compartment where the pill is in. There is a simple web app to control the box. The whole device is powered by a built-in battery, charged by a USB-C port. To secure the longest possible battery life, various sleep modes were used during the development. Thanks to the transferability technology used, there's no need to set the parameters of the box before its first use. We see the use of this project both in care institutions and households, for example, to check on a family member when one's presence is impossible. The device is designed to simplify the life of an individual as well. Before use, it is only necessary to set a dosing plan, and the box will take care of the rest. If it is necessary to take the medication, the box will notify the patient.*" Jiří and Adam explained, who, among other things, took part in the SITPort IoT Academy in co-operation with the company TData. ●

The Director of Techmania, Jiří Královec:

“There are not many institutions that welcome up to 180,000 visitors each year who are interested in science.”



We have five science centres in the Czech Republic. IQLANDIA Liberec, Fort Science in Olomouc, VIDA! Brno, Science and Technology Centre in Ostrava, and Techmania Science Center in Pilsen. Pilsen's Techmania, an experimental centre for the curious which, just like the other centres, provides fun for whole families and school classes, rain or shine, was the first (and for a long time the only one) to boast about a 3D planetarium. Besides a large amount of interactive and traditional exhibits, we can also view the controversial artwork, Entropa, by David Černý. The Pilsen science centre is also interesting in that it's the only site open to the public within the former Škoda complex, located in former factory halls. How is Techmania doing under the leadership of Jiří Královec?

Mr. Královec, we have five science centres in The Czech Republic. Would you say this is too many or too little, considering our country's size? And do you have an overview of how many there are in other countries? I am asking because, for example, the number of public libraries is very high, compared to the rest of the world…
Coincidentally, I have had a benchmark study made on this topic, so today we know that the number of science centres per capita in CZ is around the EU average. There are significantly more of them in the UK and the USA, where there are far more science centres per capita. This is probably influenced by tradition, as the first science centres were founded in Anglo-American countries. The United States is also ahead in methodology for dealing with visitors. Nevertheless, I think Europe is catching up with America, and we're definitely not doing badly. There's still space for improvement. Today, there are five large science centres in the Czech Republic that are well established, and there are other, smaller science centres, being prepared, for example, in Prague.

You say that with five centres, we are at the EU average. I'm curious about how schools and individual visitors perceive this number. What is your practical experience?
There are regions, such as České Budějovice and the South Bohemian Region in general, for which science centres are quite far away, or there is no convenient transportation to them. That's the case for the previously mentioned South Bohemian Region and Techmania. There are some exceptions, but in general, I think the placement of science centres is strategic and accessible for most visitors. Thanks to visitor surveys and other metrics, we know that most of our guests come from Prague, Central Bohemia, Karlovy Vary, and the Ústí Region, and of course from the Pilsen Region itself. It is not unusual to have visitors from other regions, or even from abroad – mostly from Germany. It is important to mention that as science centres, we don't compete with each other. On the contrary, we help each other, meet regularly, and share experience. In some cases, we even lend each other some of the exhibits. For instance, we had visitors here from Germany who were interested in creating a similar science centre format in their country. We later lent them a few exhibits for a smaller event, so that they could try everything in practice themselves. This kind of co-operation works well, and I believe it will work well in the future too.

Which months are the strongest, in terms of visitor numbers? I would guess June, when school ends for the summer…
You're right that June is one of the months that we're visited by school groups in large numbers. However, this year, February has been the strongest for visitor numbers. This might be because of the spring break, and also due to less than ideal weather conditions for outdoor winter activities. Last year, it was August, as the weather was bad at its start. In general, the weather plays a key role in our visitor numbers. When the weather isn't nice, the numbers of visitors to science centres grows. This, however, applies primarily to the public. Then there are school groups, which make up around 30% of our visitors a year. The groups visit throughout the year, with the exception of the summer holidays, whilst the numbers peak in May and June. On the contrary, September has been the weakest month for a long time, as the weather outside is still nice, and the school year is just starting.

Techmania is located in the former production halls, which is the only publicly accessible part of the former Škoda premises. Does this fact lure visitors as well?
As I had spent a significant part of my life working at the Škoda factory, a hall with cranes is nothing special to me. However, for a large number of visitors, this environment is unusual and extraordinary. One of the former members of our supervisory board said that, from his perspective, the building is the largest exhibit of all at Techmania. In the future, we would really like to make our building an exhibit not only by referring to its history, but also by showing modern technologies in the field of smart and sustainable buildings. We would like companies and organizations that deal with modern technologies to take part in this, for example the City of Pilsen's Information Technology Administration. We mustn't forget about the building of our planetarium either. The building has a very rich history, dating back to 1917. The first arched canteen in the Czech lands made of glued wood structures capable of serving up to 1,200 diners was built here. In November 2013, Techmania proudly introduced the first 3D planetarium in the Czech Republic, in this very building.

In Techmania, there is also an exhibit dedicated to the Škoda plant, right?
We have several exhibits that are related to Škoda, or come directly from there. A part of the exhibit is dedicated to its founder, Emil Škoda himself. Moreover, there are many visitors who have a personal connection to the Škoda company, and visit Techmania mainly because of it. That's why it's great that they can also see larger exhibits, such as the Škoda Marx steam engine, a historical trolleybus, and the oldest preserved electric locomotive manufactured there. This is all interesting, but we don't want to become a museum; we still want to be an interactive exhibition. That's why we're thinking of ways to connect everything, and give the exhibition a direction towards technical education and tradition. It's important to look to the future, and that's why we're preparing an exhibition on the theme of smart transportation and the future of transportation. There's history, there's tradition, we have Škoda, there are experts and companies engaged in this, the only thing that remains is to connect it all together.

And smart mobility is one of the five intelligent specializations of the region, so it fits beautifully together!
Exactly. I believe this topic will be discussed more and more in the Pilsen Region. Mobility is very important. The University of West Bohemia has several faculties dealing with this field, and we also have Škoda, as we mentioned before. In my opinion, this is exactly the field we should be developing.

Then visitors will realize that they're in a science centre in Pilsen. Moreover, your edutainers can tell enthusiastic young

visitors that this very field can be studied in Pilsen, that it's not just a theoretical matter, and that they can find jobs in the field later in their lives.
I absolutely agree. We come into contact with gifted children here. This is another topic we would like to work on and develop. At Techmania, we have children's groups that co-operate with Mensa, a Space Academy for children aged 10 to 13, and we run a Club for the Gifted and Forward-thinking Children, with whom we work throughout the entire school year. We have a prepared comprehensive system for how it should work in the future. For secondary school age children, we're also planning on co-operating with other institutions in the city and throughout the region.

Now we come to the Pilsen INnovative Ecosystem, PINE...
Exactly. Other institutions within PINE have somewhat different options on how to draw the attention of secondary school students. We, in co-operation with the Pilsen Region, organize various robotics competitions, for instance. At the same time, we want to help teachers by introducing them to the advantages of informal education. We show them the methods of our education, how we work with gifted children, and try to find fields that might be interesting for them. After all, there are not many institutions that have 180,000 visitors interested in science a year. We, on the other hand, need to find a way to reach children with talent or natural ability, and then start working with them, ideally in co-operation with the region, NPI, and similar institutions, and to develop their potential.

We have also met with Mr. Šantora, the director of the Information Technology Administration of the City of Pilsen, and we talked about the previously mentioned innovative ecosystem, PINE. We agreed that it's all a bit fragmented at the moment, and each institution does something different, and that it's necessary to find a common path. Even The University of West Bohemia, which was one of the founders of Techmania, has the same goal – to raise interest in technical and scientific fields. Pilsen is a city with industrial tradition, and it's something which both the city and the region should build on in the future. However, it will never work without people who want to study in these fields, and that's why I'm very glad that the City of Pilsen is developing an innovative ecosystem that truly supports these efforts.

And how is your institution doing? You took over Techmania a few years ago, in not exactly the best condition.
Covid hurt us a lot, just like it did to all similar institutions. Entrance fees are a significant source of income, but we try to keep it at the same level, and as long as we are able to subsidise it thanks to different sources, we are not going to raise it, even though inflation has reached 30% in the last two years. When we got down from 180,000 to 50,000 visitors during the pandemic, it was a great blow to our funding. Fortunately, the Pilsen Region helped us greatly by donating towards our education activities. Also, our second founder, Škoda Group, helped considerably with the renovation of the roof and catering services. Besides, the Pilsen Region, which became one of the founders of Techmania, signed a contract to support our science centre for another five years. This gives us perspective, and the opportunity to develop, because it's very hard to work when you have funding secured for only one year. I think Techmania Science Center is a unique institution, and one of the things that distinguishes Pilsen from other cities. Pilsen can be rightly proud of it. ●

"Pilsen is a city with industrial tradition, and it's something which both the city and the region should build on in the future. However, it will never work without people who want to study in these fields."





Young Astronomer and Science Popularizer Jan Herzig Helps Build a Community of the Talented:

“I don’t go to the Olympiads to get a certificate of achievement and shake hands with some important adults.”

Jan Herzig, a second year student from the J. Š. Baar Grammar School in the town of Domažlice was captivated by space at the age of 11. Since then, he has devoted a lot of time and attention to it. He engages in theoretical and practical astronomy, and he really enjoys the popularization of astronomy and space exploration. He writes articles, comments on YouTube and on the radio, and manages the Instagram account of the Czech Astronomical Society. When it comes to science competitions, he can boast about successes like no one else in our country. In the last three years, he has placed in winning positions in final rounds of the Astronomical Olympiad. At the XXVI. International Astronomical Olympiad, he won a bronze medal, and a gold medal at the I. and II. International Olympiad on Astronomy and Astrophysics for Juniors, in the latter case also winning the 1st place in Europe. He also finds time to chair informal meetings of secondary school talents, GoHigher Café, which are organized within the Smart Accelerator of the Pilsen Region III project, with the goal of building a community of young talents and inspiring each other. Jan Herzig is indeed inspiring. Besides all this, he also organizes an event called *Zvaž vědu! (Consider Science!)*, and he elaborated (not only) on all of this in our interview.

Jan, you engage in a lot of activities and you are very successful at them. When it comes to astronomical Olympiads, you probably have no competition in the Czech Republic. You attend a grammar school in Domažlice. How active are you, in comparison with your peers or classmates?
Well, of course, especially compared to my classmates in Domažlice, there is quite a difference, as my interests are elsewhere, and I had to quickly come to terms with it. Before I found people that have the same interests as I do, it was a bit of an unpleasant period for me, but I can definitely say that I have found them, so I’m content. I’m used to talking to my classmates in Domažlice about different topics than, for instance, Olympiads and other events. Usually, my day looks like this: I go to school in the morning, I study something in the afternoon or I attend an event or a training camp, or I give lectures somewhere. In short, I’ve come to terms with the fact that not everyone has the same interests as I do, which I think is completely natural. Everyone should do what they enjoy.

There probably aren't many peers, interested in astronomy, right?
I definitely wouldn’t measure it in terms of achievements. I think I can have just as good a conversation with someone who was somewhere at the bottom of the standings in the regional round as with someone who I met at the international round. There are no such big differences there. It doesn’t matter who won which medal. What matters is the interest as well as passion, and the desire to know more, scientific thinking, to have some basic awareness of scientific findings, which I don’t want to say my classmates lack, they just think about the world a bit differently than I do. I deeply admire what they are capable of achieving in music or sports, which I don’t understand at all, and that I’ve never really been very talented at since childhood.

So, it could be said that your classmates are simply successful in other areas.
For instance, I have never been able to understand how they approach music. Domažlice is in the Chodsko region, where the Chod culture is developed a lot, which is something I admire. It’s nice, but I don’t understand the customs and traditions observed there at all. Everyone just has their own interests.

It is important to find one's community, and to talk to peers with similar interests, isn't it? It's important to build such a community.

Definitely, it's absolutely essential, because I actually go to Olympiads to meet these people, and to get some knowledge for the future for what I want to do at university, for my future scientific research. I definitely don't do it just to get a certificate of achievement and to shake hands with some important adults. That kind of life would be very boring. What is important to me is to meet the people, and it's the new GoHigher community-building project, being established under the Pilsen Region and the Regional Development Agency, that helps with it. I actively take part in this project, and I'm very pleased with the direction it's taking.

Would you mind sharing what your role in this project is?
The GoHigher initiative supports active students from the Pilsen Region, for example, by organizing various excursions and project days. But most importantly, it allows peers with a similar focus to meet. By this, I don't mean an astronomical club or such a thing. It's for all students willing to do some more, more than they get to know at school, so people who, like me, are interested in physics, for instance, can meet there. But there are also a lot of biologists, chemists, people interested in medicine and technology, for example smart materials. I could go on and on. The most important thing is that it's not always possible to develop one's interest to its fullest at school. Some schools offer excursions, develop their students. Other schools, on the other hand, neglect their students a bit, and that's exactly why GoHigher is here, to give everyone the same opportunity. Students that show interest are offered excursions to scientific institutions or specialized companies, as well as informal meetups like GoHigher Café, to get to know similar-minded peers. Well, my role is to promote these activities. It's often me who presents the project to people who haven't heard about it. At the moment, I have at least 3–4 lectures on GoHigher scheduled at various events and schools, to introduce the project to other students, so this is the way I popularize the idea. Besides that, I'm also directly involved in organizing some events, mainly because I know most of the people who attend. This is also why I host GoHigher Café. I've chaired three out of six meetups, and it has always been a pleasure to welcome new people, and do my part in helping this awesome thing we're creating.

At every GoHigher Café, two young talented secondary school students are introduced. Let me ask, when you listen to the inspiring stories of your peers, do you ever think, *"Yeah, I'd be interested in that too"*, or do you look at it from more of a pedagogical perspective, even though you are of similar age, since you have quite a bit of experience?

> *"As someone spends their free time playing football, we simply do physics, for instance, but otherwise, we surely experience life's joys very similarly."*

I don't view them from a pedagogical perspective. I would dare to do so maybe only if someone younger and interested in physics or astronomy came along, so I could suggest where they might go next. But otherwise, no, because many people with a lot of experience in fields I don't understand come there. Many people engaged in biology and chemistry go there too. Those are beautiful sciences, but I have no insight into them. So, at their lectures, I always tell myself that it's very nice that someone does something else than I do, because I know nothing about it, and I'm pleased to get to know something new. There are parallels at times. Even though each of us does something different, we face the same problems at school, for instance. We used to have the same problems before we met the peers who think the same way we do. I've got a lot of friends among biologists and chemists, and it's always more about having a similar journey, even though we each do something else, so I use the meetups to meet new people I start talking to more, and, perhaps, start further co-operation. It's happened a couple of times that I arranged with someone invited as a lecturer at GoHigher Café to help us with the *Consider Science!* event.

Let me ask, do you and your friends from this community ever engage in some classic youthful mischief, not just academic matters? You're young, talented secondary school students, you have a bit different interests than your peers, but after all, you're still sixteen…
The interests aren't that different in this regard, because as someone spends their free time playing football, we simply do physics, for instance, but otherwise, we surely experience life's joys very similarly. On the contrary, if someone doesn't have it like this, and sees their whole life in science only, then I think that's quite a problem, and I try to convince the person to reconsider their approach. I recall a funny story. One GoHigher Café took place a week before last year's *Consider Science!*. Mrs. Rojíková, from the Regional Development Agency of the Pilsen Region, who oversees the whole GoHigher project, was petrified when she saw us throwing some sandwiches at each other. She came to us, hugged us, and said: "*Boys, you have to handle this absolutely seriously next week!*" We said, "*Yeah, we know.*", and we did so the following week. But the week before, we surely didn't look like we were capable of organizing anything like that.

Can you introduce us to the *'Consider Science!'* project? What's it about, what is this year's edition going to be like, and what else are you planning?
I came up with the concept of *Consider Science!* last year with my friends at a physics camp, which is also one of the activities organized by the Pilsen Region. There was a really nice group of people, everyone was interested in physics and astronomy. We thought it was a real shame that there are few people in the Pilsen Region to organize Olympiads. Back then, the GoHigher project was still in its infancy; it was just starting, so the community didn't exist yet. Well, we just thought it was a shame, that we would like to captivate and convince our classmates, but in a better way than just saying in the classroom: "*Look, there's this Olympiad happening.*" We thought big, and planned a lecture day called *Consider Science!*, which is a large event for approximately 300 students from all over the Pilsen Region, where everyone meets and listens to lectures given by their peers that already have some experience with scientific research, Olympiads, competitions, seminars, and internships at scientific institutes. They all try to share their experience with others in the most engaging way possible. For us, it's simply important not to have any barrier between the attendees and the lecturers, but that each speaker is actually one of us, which increases the motivation of the participants to be interested in something like that. In addition to that, at the event, which took place for the first time last year, there were booths where some scientific experiments were conducted, to really showcase science. At the same time, it was possible to meet new people and start new friendships, which turned out to initiate many other activities. There were about 300 people, so I dare say that a significant majority of people interested in science from the Pilsen Region were there. The event was complemented by excursions at the Faculty of Applied Sciences at the University of West Bohemia in Pilsen, where the event took place. It was very successful. We received almost a hundred filled-out feedback forms, which were mostly really positive. Nevertheless, we planned some adjustments for this year's event, which took place on 15th November. There were more lectures aimed especially at science. Last year, we talked more about Olympiads; this year focused more on scientific research, so we were looking for people with the most interesting experience. One of the speakers is researching cancer treatment using mathematical methods, another one is doing quantum computer research with which he attends some international competitions and scientific conferences, which I think is very interesting. Among the speakers was also a successful secondary school team, LASAR. There were also stands representing various institutions and competitions so that everyone could find what interests them within science. Of course, we didn't forget to secure good refreshments, and excursions at the Faculty of Applied Sciences, which were planned for the afternoon, which slightly extended our programme. Last year, we finished at around 2PM; this year it was at around 4PM.

Was all of this your idea?
The original idea came from my best friend, Matyáš Matt, who, along with me, is the other main organizer of the event. I convinced him that it really makes sense to organize this event. We jumped in together, and we're in this together for this year's edition too. I should also add that another change is that we managed to expand the event, and it took place at the Observatory and Planetarium in Brno. Our friends from Brno, who had come just to borrow the concept, organized it. We have control over it, but fortunately, given our time limitations, they handle the event themselves. ●



PechaKucha Night Pilsen Science III



Friday 11th October, 2024, Techmania Science Center, Pilsen
Pavel Novotný, Šárka Houdková, Miloš Kačer, Anna Krebsová, Miroslav Holeček, Miroslav and Ivana Zetek, Stanislav Kuznetsov, Jakub Štěpánek, Karel Jedlička, Markéta Jedličková



















On Friday 11th October, 2024, the third PechaKucha Night Pilsen dedicated to science and innovation took place at Techmania Science Center. At this inspiring evening, held by the organizations k světu., the Pilsen Region, and Techmania, eleven speakers (including one duo) from the region and beyond appeared on stage. The line-up also offered an interesting accompanying programme – scientific busking, a science show, and a guided tour of the planetarium. The main reason to meet up in the former halls of the Škoda factory, which were transformed into one of The Czech Republic's five science centres, was clear: to use the popular PechaKucha Night format to connect figures from the fields of science, and research and innovation in the region, to build an innovative ecosystem, which is greatly needed, and to enable the start of innovative projects that move the region forward.



Not Only Is Research in Biomedicine Advancing Very Dynamically, the Field of Healthcare Technology Is Constantly Bringing Innovations.



The specialization of Biomedicine and Healthcare Technology through the eyes of Jana Klementová, Strategic Project Developer for the Regional Innovation Strategy of the Pilsen Region (RIS3).

Jana, what can we understand by the term *"Biomedicine and Healthcare Technology" (BHT)*?
Biomedicine is a medical science that uses natural science principles, mainly from physiology and biology, in clinical practice. It investigates the causes of diseases, prevention, and treatments. Within biomedicine, there are fields such as molecular biology, biochemistry, bioinformatics, biostatistics, genetics, and many others. Biomedicine is often associated with e.g. regenerative and reproductive medicine, which are studied at the Biomedical Center of the Faculty of Medicine, Charles University in Pilsen. Biomedical research is a multidisciplinary process that requires scientists from various fields to experiment. The findings of biomedical research can then be applied in healthcare. The term healthcare technology can be understood quite broadly. It includes, for example, medical materials used in treatment, medical devices, electronic equipment, preparations, etc. – basically everything we know from doctors' visits or from hospitals. Hence, it includes both relatively simple tools and technologically advanced equipment. Not only is research in biomedicine advancing very dynamically, the field of healthcare technology is constantly bringing innovations.

Would we find a region in the Czech Republic with a similar strong focus on biomedicine and healthcare technology, or is the Pilsen Region unique in this regard?
Within the national RIS3 strategy, each region has selected its so-called domains of specialization. In the Pilsen Region, we have chosen Biomedicine and Healthcare Technology as one of our domains. Similarly focused domains are to be found in other regions as well, especially in regions with medical faculties. For example, Prague focuses on the so-called life sciences, the Hradec Králové Region focuses on the prevention and treatment of serious lifestyle diseases and bioinformatics, and the Liberec Region has, among other selected science directions and application areas, medical and biomedical applications of nanomaterials, nanotechnology, and so on.

At the national level, there is a domain called *"Advanced Medicine and Pharmaceuticals"*, which aims to contribute to the improvement of the quality of life for residents of the Czech Republic through research and innovation. It is intended to help implement new practices and technologies into healthcare and to ensure effective medical care. From some regions, we contribute to achieving these goals of the national domain by selecting strategic research topics or research in so-called *"key technologies"* which, in the case of medicine, include advanced materials and nanotechnology, artificial intelligence, digital security and connectivity, and so on.

In Pilsen, we have a unique fusion of education and research through the activities of the Faculty of Medicine, the Biomedical Center, the University of West Bohemia, and in research organizations such as COMTES FHT a.s. At the same time, we have application potential, for example, at the university hospital, which forms a modern campus, along with the Faculty of Medicine and the Biomedical Center. We can be very proud of this, at least within the context of the Czech Republic.

It seems we have good conditions for co-operation in different fields in the region. Biomedical research is actually a multidisciplinary process that involves researchers from various fields, isn't it?
We definitely have very good prerequisites for this in our region, and that is why biomedicine was chosen as one of the domains of specialization for our region. In the Biomedical Center of the Faculty of Medicine, there are researchers from various fields. Research activities related to biomedicine are carried out at the University of West Bohemia. For example, at the university's NTIS Research Centre, there is a synthetic biology laboratory focusing on engineering methods for rapid prototyping and validation of biotechnologies with applications in medicine. The biomechanics group focuses on creating complex computer models and simulations of perfusion of tissues and organs. The group of biomedical informatics deals with developing methods for processing and organizing large heterogeneous biological data sets. Research activities at the University of West Bohemia in the field of haematology and oncology are conducted in co-operation with the Haematology and Oncology Department of the University Hospital in Pilsen, as well as with the Biomedical Center. Therefore, we have very successful examples of teamwork among various institutions. Moreover, these teams co-operate with other researchers, not only from the Czech Republic, but also from abroad.

So, is the potential and top-notch equipment of the research centres being successfully utilized for international co-operation, or more generally, for internationalization?
It's well known that the ability to co-operate with foreign institutions, create international teams, internationalize education, among other things, leads to an increase in the quality of educational and research institutions. Therefore, the internationalization of education and research at universities and research organizations is among their priorities. It's definitely one of the conditions for development and long-term competitiveness. This is why we included the strengthening of internationalization in the specific goals for both education and research when creating the innovation strategy for the Pilsen Region. To support the arrival of more foreign researchers, we've prepared a functional support scheme in the region, the so-called *"Academic Career Programme"*, which helps facilitate the arrival of experts from abroad to academic institutions in the region.

The fact that a top expert can significantly enhance the quality and reputation of a research organization can be seen, for instance, in the impact of the renowned foreign researcher, Professor Kari Hemminki, at the Biomedical Center of the Faculty of Medicine. In the five-year project, CHAPERON-ERA Chair Position for Excellent Research in Oncology, which ended in 2024, he founded and led the Laboratory of Translational Cancer Genomics at the Biomedical Center of the Faculty of Medicine. The aim of this project was to bring world-class know-how to the centre, and to significantly supplement the already existing high-quality research teams.

Evidence of successful international co-operation in research projects among academic institutions, research organizations,

and companies is not only found in the CHAPERON project, but also in a number of successful co-operative projects with neighbouring Bavaria, as well as increasing interest in participating in the Horizon Europe programme, which is the EU's framework programme for research and innovation for the period from 2021 to 2027, with the aim of strengthening the scientific and technological base of the EU.

How does the support for the development of the BHT specialization work?
The task of our Smart Accelerator team for the Pilsen Region is, among other things, to ensure two-way communication of priority topics of research, development, and innovation between the regional and national levels. Therefore, we have created expert groups in the region, so-called "*regional innovative platforms*" (RIPs) for each individual specialization, including Biomedicine and Technology in Healthcare. We invited representatives of universities, research centres, companies, and support organizations there, the same as we did with other RIPs, to inform each other about future topics of research and development, needs, and capacities of various teams and subjects in the region. This year, we started to support the mutual co-operation of entities, especially on projects that are multidisciplinary and require greater co-ordination during project preparation, through the 'Assistance' programme, as part of the SA III. The Pilsen Region partially contributes from the SA III funds to cover costs associated with complex project preparation, such as application for the Horizon Europe programme, the cross-border Interreg programme, the Johannes Amos Comenius Programme operational programme for the growth of research and development, and other programmes. Even here, the support for the preparation of biomedicine-related projects is anticipated. It's important to mention that, thanks to the multidisciplinary nature of biomedicine, co-operation with the regional innovative platform, New Materials and Technology, takes place, for instance. It's excellent that the collaboration with the experts from the University of West Bohemia, and from the research centre COMTES FHT a.s., can advance research in the field of biomedicine as well.

> *"One of the goals of biomedical research is to ensure the best possible quality of life, even at an advanced age"*

Among the collaborating entities within this domain there are also application entities - the University Hospital and private companies. Can we find any in the region that benefit from what we can do within the BHT, and from the fact that we have quality education here?
Naturally, the greatest and most direct potential for the application of R&D results is at the University Hospital in Pilsen. However, new technologies and R&D results can also be used in companies. Commercialization in the field of biomedicine is a very complex, and often long, process. For example, a start-up that has ambitions to become a service provider, even on global markets, has embarked on it. This is a company called Sampling Human, which has its roots at the University of West Bohemia, and combines biotechnology with cybernetics. An example of a medical technology start-up that uses VR in medical practice is VR medical s.r.o. It uses virtual reality to transform medical rehabilitation. Its employees collaborated with the University Hospital Pilsen, and together with the doctors, decided to focus on the field of physiotherapy and medical rehabilitation. Their VR helps in the treatment of post-operative and post-traumatic conditions, for example in orthopaedic patients. Again, this is the work of a multi-disciplinary team, consisting of programmers, developers, engineers, designers, graphic designers, and healthcare professionals.

How do you see the further development of the domain in the coming years?
In terms of global megatrends, one of the topics discussed is the aging of the population. Thanks to medical research, life expectancy is also increasing steadily. Ensuring the best possible quality of life, even in old age, is generally one of the goals of biomedical research. I see a lot of scope there. Research, and the application of results in the topics we have defined in our region, can facilitate this. I see ample space for innovation there. Research, and the application of results in the topics we have defined in our region, can facilitate this. There is enormous room for the use of new technologies. Thanks to new devices, equipment, and methods, we can afford interventions that our grandparents would never even have dreamed of. Technology in health care is moving forward at a fast pace, and with the effective application of R&D results and new technologies, it's possible to advance the quality of life. Biomedicine and healthcare is an area that is of interest to all of us. We have all used the services of these sectors at some point, and we certainly wish we didn't have to use them in the future. This is why I also see great potential in the topic of preventive medicine, which is one of the preferred future directions of R&D in the region. The commercialization of the results of R&D is a long journey. I hope that we will be increasingly successful here, not only at the regional, but also at the national level. After all, this is a topic discussed at the European level as well. ●





The Competition for High-Quality Scientists Is Global

The specialization *"Biomedicine and Healthcare Technology"* through the eyes of its guarantor, Prof. Dr. Milan Štengl, M.D., Ph.D., Scientific Director of the Biomedical Center of the Faculty of Medicine, Charles University in Pilsen and the Laboratory of Experimental Cardiology at the Biomedical Center.

Professor Štengl, Biomedicine and Healthcare Technology is one of the five specializations of the Pilsen Region. Could we find another region in the Czech Republic that is so focused on biomedicine and healthcare technology, or is the Pilsen Region unique in this respect? The key partner is the University Hospital Pilsen, which is located in close proximity. This gives us a major advantage over other regions, doesn't it?
Generally speaking, we can say that biomedical orientation of various forms can be found in all regions where there is a faculty of medicine (the Prague and Hradec Králové faculties of Charles University, the Olomouc faculty of Palacký University, the Brno faculty of Masaryk University, and the Ostrava faculty of the University of Ostrava). In all of the above-mentioned regions, there is also a university hospital, which is a necessary partner of each medical faculty. The other regions generally have no major biomedical specialization, because of a lack of infrastructure, and highly specialized human resources. Within the biomedically oriented regions, there are differences, but also overlaps, in terms of the dominant research focus. One of our unique directions is the comprehensive approach to the research of infectious diseases, including sepsis (blood poisoning), and antibiotic resistance.

The Biomedical Center of the Faculty of Medicine, Charles University in Pilsen focuses on R&D in the field of organ replacement and regeneration. Why did it take this particular course?
This is a traditional field of the Faculty of Medicine and the University Hospital, with a long history of excellent results, both in terms of publications and diagnostics-therapy. The issues include, e.g., the comprehensive issue of renal function replacement, from biocompatibility of dialysis techniques to kidney transplants, including the reduction of infectious post-transplant complications. Sepsis (blood poisoning) induces organ dysfunctions (so-called "*multiple organ dysfunction*"), however, the mechanisms, significance, and possibilities of modulating inter-organ communication in the pathogenesis of multiple organ dysfunction remain unclear, nor do we know the relative contribution of individual organ systems to the development of sepsis. Promoting the regeneration of tissues in the context of oncological diseases and their (surgical) treatment is another significant problem. In general, to achieve research excellence requires long-term work with gradual development, deepening, and broadening of the given issue, with the application of modern methodological approaches, and building research teams, including international co-operation.

The BHT specialization is also linked to the New Materials domain, and involves fields such as the treatment of infectious diseases, oncology, multidisciplinary and personalized medicine, reproductive and preventive medicine, organ replacement, use of new materials for medicine in practice, materials in healthcare, and assistive technologies. It also covers infection and antibiotic resistance, medical diagnostics, new forms of public social and health services, the use of computer simulations and computer modelling in medicine, and advanced medical technologies. These medical disciplines are increasing technological competencies based on the successful collaboration between the Biomedical Center and technically oriented faculties and research institutes of the University of West Bohemia in Pilsen, namely the Faculty of Applied Sciences, the Faculty of Mechanical Engineering, the Faculty of Health Care Studies, and the university New

Technologies Research Centre, and also offer potential for other research institutes and the commercial sector. What is your co-operation like and where has it been successful?
The co-operation is definitely good, the key broader co-operation project is probably the recently completed project of the UWB and the Faculty of Medicine, "*The Application of Modern Technologies in Medicine and Industry*" (AMTMI, 2018–2022), within the Operational Programme Research, Development, Education. There are 177 registered results for the project, one of them, the LISA (Liver Surgery Analyser) application, which enables preoperative estimation of the size of the liver after tumour removal, based on the so-called "*liver vascular tree*" from computed tomography scans. The principal author, Dr. Miroslav Jiřík, Ph.D., received the Roche Czech DIGI@MED Award 2019 for an innovative idea using digital technologies in healthcare for this application. Overall, the AMTMI project was rated as one with outstanding project results, with international significance, etc.

The future prospects of the above-mentioned fields are mostly linked to global megatrends of aging populations and improving healthcare standards. I assume that, as the Scientific Director of the Laboratory of Experimental Cardiology at the Biomedical Center, you spend a lot of time following megatrends and scientific research in the world. Can you tell us what lies ahead of us in this field?
The key biomedical megatrends can probably be summed up as "*prediction, prevention, personalization*". The development of genomics and related sciences (epigenetics, proteomics, and other -omics) will allow for better stratification of the population, more effective diagnostics, and personalized, tailored prevention, and treatment. Improved knowledge of the individual genome will increase pressure for quality nutrition, lifestyle, and prevention. On the other hand, ethical questions will arise as to the degree of invasion of privacy, or how the statistical risk established should affect treatment, including financial coverage and insurance. Artificial intelligence, which is already making significant inroads in imaging technologies, and microscopic diagnostics, will become ever more important. Regenerative medicine will move towards growing individualized tissues, or even whole organs. Manifestations of these key trends and sub-trends can be seen in every medical field, but a thorough analysis of these is beyond the scope of this text.

The Biomedical Center is equipped with first-class facilities and teams of internationally renowned experts. What is it that enables you to bring these experts here? Am I right to assume that it is a combination of the Biomedical Center's excellent reputation and European projects?
Exactly. It's a combination of good research infrastructure and reputation, together with acceptable financial conditions. We must understand that the competition for top quality scientists is global, and if we don't provide comparable conditions in any respect, they will leave for a better opportunity. Thanks to operational programmes, our current infrastructure is above the European average, but meeting the salary expectations of excellent scientists requires massive project support.

The Chaperon project has taken cancer research at the Biomedical Center to a world-class level. Can you introduce it?
The ChaPEROn project (ERA Chair Position for Excellent Research in Oncology) under the European Horizon 2020 programme (ERA Chairs call) has made it possible to engage an outstanding international expert to support the Biomedical Center's oncology research. In 2019, Prof. Hemminki (formerly of Deutsches Krebsforschungszentrum, Heidelberg, Germany, then author of more than 1,250 papers, with 29,000 citations, and an H-index of 79), was recruited through a competitive process. Prof. Hemminki founded a research group of the Laboratory of Translational Genomics in Cancer, succeeded in several grant competitions, and has published more than 100 impacted papers dedicated to the project. The group continues after the end of the ChaPEROn project, and its financial needs are completely covered by projects. In addition to his own research programme, thanks to his experience, Prof. Hemminki has contributed to improving the process setups of the entire Biomedical Center.

The Biomedical Center and its teams have had a number of major achievements in recent times. Can you present some of them?
It is difficult to single out a few main results; the Center publishes around 150 articles a year in impacted international peer-reviewed journals. In clinical research, I can mention, e.g., a series of papers on prophylaxis of viral complications of kidney transplantation (Prof. Reischig's group), including worldwide priority results in the world's most prestigious journal in the field of organ transplant (American Journal of Transplantation), showing that CMV prophylaxis with valganciclovir is an independent risk factor for polyomavirus nephropathy or for viremia, compared to prophylaxis with valacyclovir or pre-emptive therapy. The results have become part of international clinical recommendations for the management of cytomegalovirus infection in transplantation. In experimental research, a study of sepsis and septic shock in a pig model with a worldwide priority demonstration of the therapeutic effects of the cholinergic anti-inflammatory pathway in a large animal model. The publication received the Czech Physiological Society Award and the Czech Society of Intensive Care Medicine Award for the best scientific paper published in a journal with IF in 2019. Thanks to the long-term collaboration of Prof. Tonar (Laboratory of Quantitative Histology) and Prof. Mouton (CEO of Stereology Resource Center, Inc., SRC Biosciences), the Laboratory of Quantitative Histology has become a contractual partner of a global company using quantitative histology for advanced evaluation of experiments, Stereology Resource Center, Inc., Tampa, Florida, USA, for the region of "*southern*" Europe (from the Czech Republic, France, Ukraine to Spain, Italy, Greece). One of the patents is e.g. the patent on the microbial culture sample preparation process (Prof. Hrabák), which helped significantly increase the accuracy of microbial identification by MALDI-TOF mass spectrometry in diagnostic laboratories. The patent protection was achieved as part of contractual research with the company, BioVendor Instruments, a.s.. The patent was valued using the cost method and, based on the contract price, the patent rights were transferred to BioVendor Instruments, Inc.

There are plenty of entities within this field in the Pilsen region, apart from hospitals, including a number of companies (AbCheck s.r.o., Bioptická laboratoř s.r.o., Embitron s.r.o., Genetika Plzeň s.r.o., Cheirón a.s., NATALART s.r.o., Ofta s.r.o., Otto Bock ČR s.r.o., Protetika Plzeň s.r.o.). Do you co-operate with them?
Yes, we try to. We collaborate with most of these entities, whether in the form of joint research projects, contractual research, or preparing joint grant applications. Closer integration of biomedical research and health care in the Pilsen metropolitan area, with the optimal transfer of research findings to the clinical level, and eventually improved health care, is also the objective of the project we are preparing at the moment (currently in the evaluation process), in which the strategic partners are the Faculty of Medicine of Charles University in Pilsen (Biomedical Center), with expert support from the University of West Bohemia on the research part, and the University Hospital Pilsen with Bioptická laboratoř, s.r.o, as the primary workplace for application. The intense co-operation, along with the application of relevant knowledge in clinical and diagnostic practice, is expected to synergically enhance the performance of the key institutions, and the entire biomedical innovation platform of the Pilsen Region. ●



Making the Most of LinkedIn



Every year, the Smart Accelerator team of the Pilsen Region III organizes regular events for communication and marketing specialists who are part of the region's innovation ecosystem. They always try to bring up a topic that will move everyone involved forward. After the previous meetings, which were dedicated to science communication, branding, and visual identity, it returned to the topic of social networks again. The September meeting focused on the professional social network, LinkedIn. The speaker was B2B marketer, lecturer, and copywriter, Radka Legerská, who is *"simply the best at LinkedIn"*. What were the most important things discussed at the meet-up, and what should you keep in mind if you want to succeed on LinkedIn? Read Radka Legerská's guide.

How to build your personal brand on LinkedIn, and make money from it
Did you know that globally, 80% of leads from B2B social networks come from LinkedIn? The unassuming social network is no longer a mere professional bulletin board, it's a space where business is carried out in a big way, every day. A space where you can make interesting contacts, and boost your enterprise. Whether you are a company, or a freelancer.

LinkedIn is not working for us
"*We have a company profile, and we do content on it, but it's poor. It doesn't work at all.*" This comes up a lot from companies. Forget about playing the big game with your company profile the way you're used to from other social media sites. A company profile is a company diary. Yes, you should keep one, and you should also keep it up to date. Purely to appear credible as a company, if someone visits your profile. However, the real thing happens on personal profiles. While you can reach dozens, or even hundreds of views organically on business profiles, we're talking hundreds, thousands, and even tens of thousands on personal ones. Organically.

Ambassadoring as an effective path to success
A strategy that works really well on LinkedIn is called ambassadorship. You assign someone from your management team, or yourself, and start posting content on LinkedIn. On your personal profile. Why? Because people trust people. Not companies. As an ambassador, you foster relationships with existing and potential new customers through content on your personal profile. You're building your audience that consumes your content, and gets to know you as a person. Your followers see you. And they also see what you do, and who you do it for. The moment they need your services, you become their first choice. Because they kind of already know you.

How to start a successful personal branding
To be successful on LinkedIn, you need to work strategically and continuously on your personal brand = do personal branding. Through your personal brand, you will then also spread awareness of your company.

But how to get started?
In the beginning, you just need to address these 4 things:

01

Fine-tune your personal profile.
Your profile is a powerful sales tool. Think carefully about the header you choose. It should make a compelling case for working specifically with you.

Another focal point is the profile photo. Distinctive and likeable. Two-thirds of the photo should be your head. Look straight on. No sunglasses, straw hats, visors, or hands in front of your face. Be easy to see.

Fill in the Professional Motto well. State clearly and concisely what you do in your job. You have 220 characters. Don't use any quotes or anything obscure. This introduction goes all over the network with you, and is visible in many places. Introduce yourself so that people know what you do, and what they can ask of you.

Also, fill in the About Me and Professional Experience sections. Write everything with what you bring to your potential customer in mind, and speak for yourself. You are not WE, the company, here, you are ME, the person. You can also collect references in the Recommendations section. References are a strong element of trust.

02

Expand your network of connections
There are 3 levels of connections on LinkedIn: the 1st degree ones are your "*friends*", the 2nd degree ones are "*friends of friends*", and the 3rd degree ones are very distant "*friends of friends*".

It's short-sighted to only add people you know personally to your network. If you build your contacts in this way, you are seriously missing out on the potential this network has to offer.

Your audience is made up of both those who follow you regularly, and those you are newly connecting with. Each new connection sees your content prioritized in their feed for a few weeks. If you're not adding new people, you're losing a large part of your reach. You can invite up to 100 people a week to your network. That's 400 a month. Roughly half of them will accept your invitation and become a new contact. Publishing content is efficient from a network of 500+ connections, from a thousand it becomes an interesting game.

03

Publish regularly
You've fine-tuned your profile. Your network of connections is growing. It's time to publish regularly. Ideally, post regularly, and over a long period of time. Set your publishing schedule so that you don't get tired early, and so that too many scheduled posts don't frustrate you unnecessarily. Less is more in this case too.

Always write as ME, just like on your profile. Show what you do. Bring solutions to your customers' problems in your posts. Write for your people, no one is for everyone, but everyone is for someone. You'll attract your audience, too.

I recommend posting at a frequency of 2-3 posts per week. However, if that already seems like too much to you, make it 1–2 posts a week. Test, experiment, see what works for your audience. Alternate between different formats, different visuals, experiment with post length.

If no one reads you for a few weeks, you need to reflect on the content, or reach out to an expert who can help you see where the problem is, and recommend a more suitable strategy or approach.

04

Get engaged in the community
But just posting isn't enough. You should actively participate in discussions. Here, even a comment is content. If you're struggling to write a post at the moment, browse the network, read a few posts, and add your comments. You'll be nicely visible that way too.

The LinkedIn community is friendly and very lively. Find your favourite active authors, and engage in discussions under their posts. Based on your activity, an algorithm will show you similar authors or similar types of posts, and you'll gradually build a circle of people you'll enjoy debating and developing a relationship with.

What's the most important? Get started!
The previous 4 steps can jumpstart your successful LinkedIn strategy. You don't have to wait until you have a perfect plan or a huge audience. Over time, your personal brand will develop, as will your LinkedIn skills. You just need to persevere and learn from audience reactions.

The sooner you start, the sooner you can become a recognized professional or company in your industry, and the sooner LinkedIn will meet your goals and generate leads. And that's what it's all about in the first place.

Let the writing come easy to you! And if it doesn't work out as you'd like, contact Radka Legerská. ●

The World Is Open to Entrepreneurs and Managers, and Their Thinking Knows No Limits



"In my professional and personal life, I lay great emphasis on ethics, sustainability, and supporting the underprivileged and socially vulnerable. I consider it natural to share experience and pass on knowledge to other business people and managers. I directly support their education and activities through my own projects, personal consultations, mentoring, and active participation in a number of organizations and associations." **This is the mindset of the President of the Czech Management Association, an inspiring entrepreneur, mentor, and business consultant in the field of strategy and management, Olga Girstlová, Ph.D., who spoke at our June conference, Smart Specialization of the Region 2024. Before her lecture, she had a chance to meet with representatives of the region, and talk about her project of Regional Entrepreneurship Camps for young people from children's homes, which she would like to expand to the Pilsen Region. In her rich professional career, what is she most proud of, why is it difficult to take over a family business, and how do women or underprivileged young people do in business?**

Ms. Girstl, you have truly admirable experience, and an outstanding CV. In addition to your successful business, you're involved in many charitable activities. Can you recall one moment in business and one moment in non-profit that you're really proud of?
I'm probably most proud of the fact that we had a great company culture at GiTy, a company we owned and sold, built on the principles of Tomáš and Jan Antonín Baťa. Tomáš Baťa used to visit us in the company. What I'm proud of, or very happy about, is that last week we had an informal get-together with 85 people from GiTy, where we all wanted to see each other. And that's a testament to the company culture, it speaks volumes.

And what makes you happy in your non-profit projects?
For a long time, I've been involved in entrepreneurship camps for children from children's homes, and I'm very happy that we've brought together the best entrepreneurs and managers who pass on their experience and knowledge to these young people who are starting their professional life with a disadvantage. We teach them, we show them everything, and we train them at the same time. They're trained to create a personal model for their profession, to embrace their dream, and not be afraid to voice it. When they write down their professional model, their mindset changes. They can change that model later in life. They come from a less than happy background, and the fact that you change their mindset and they start looking at the world through the lens of opportunities instead of obstacles, and they don't just see the negative things around them, that's what makes me the happiest. We then mentor them for 3 more years, and we keep in touch with them. We already have 180 young people in the programme. Today, I opened a debate with the Governor of the Pilsen Region, Rudolf Špoták. The Pilsen Region could be the eighth region in the Czech Republic to host the programme. We've already covered seven regions, so we'd like to set up a programme here too, but for that we need the co-operation of the university, the municipality, and local businesses, because the programme will engage young people from the Pilsen Region, so it would be good to have the help of local business people and managers.

There are a lot of young people who have gone through this programme. When you meet them before they enter the programme, what are they like? Do they lack motivation, or do they have it, but maybe don't know about all of the possibilities?
They have their wings clipped. They can't even afford to have a dream. They're scared, they've had bad experiences. They don't trust themselves, they don't know how to go about it, they don't see the possibilities. I have information that they're happy with the children's homes or foster care. They are happy to have a home, order, facilities, but they don't always get support for their dreams. We have one boy in the programme now from the Central Bohemian Region who's very talented, and we want to help him. He's going to train as a chef, to have a profession, but his dream is to be a sports journalist. The fact that we've opened up the possibility for him to even consider becoming one is the example that makes us the happiest. That's what mentoring and collaboration from adults with contacts in the world of management and business and know what advice to give is really for.

I'm sure, as an experienced mentor and businesswoman, you also meet young entrepreneurs. Is it a rule, in your experience, that children from entrepreneurial families take over the business from their parents and continue it? Can we say that they have it easier in many ways, that they have experience, and that they are not afraid of running a business?
I think it's a mix. Some want to, they take over the business and they're not afraid to run it. But some people see the negative aspects of entrepreneurship, what it entails, and they make a conscious decision not to be entrepreneurs, but to be experts in some different field, to enter some other profession, so the business background leads them to all sorts of options.

Do you think they might be afraid that they won't be able to match their parents' success?
That's one thing, another is responsibility. Running a business is a big responsibility, it means you're taking over a business in a certain condition. And if you don't maintain that condition, or you don't grow, that's a big responsibility, in many ways. I think that's really a challenge for strong individuals.

Would you say business is tougher for women? At an educational workshop recently, I heard a woman with a good idea, who wanted to launch a start-up, say that as a woman and a mother, she wouldn't get anyone to invest in her start-up, which was very surprising to me.
I think a start-up should mainly have an economic framework, which means that it should bring to its customer a service or a product that they are willing to pay for, and it doesn't matter if it's a woman or a man. I think a lot of women start businesses also because they want to have flexible working hours. They need to reconcile a career with motherhood. There are a lot of nice new start-up projects coming up, and often I'm really very pleasantly surprised by how incredibly creative women are. I'm happy to see that. Young Czech women who want to take up the challenge, they do. But on the other hand, I also understand those women who don't want to because it's more important for them to have a stable job in a corporation, and not take on the challenges of business, because running your own business is always a roller coaster.

Of course, it depends on the idea and the skills. Would you say then that women in general have it harder in some ways, when it comes to entrepreneurship?
It will always be harder for them in childcare. Maternal responsibility, that's something that always falls on women. If she has a partner who understands and supports her, the responsibility is shared. But not every mother has a partner. There are a lot of women who started businesses out of necessity, because they just couldn't find work, they had sick children, and then the employer often doesn't want to keep them, unless they're in public administration, for example... Some of them just had to start a business and be creative. And just look at

how many beautiful new businesses there are, tiny ones, but that's enough for the regional economy.

Would you say that sometimes a much better idea or a more viable business actually comes *"out of necessity"*?
I don't know. It's always about opportunity but when you have a strong drive to do something, you go for it, if you have the passion and the will to make it happen and find your customers... It's always about having a customer. A good idea that someone is willing to pay for.

You've been supporting women in business for almost 30 years. How has the business environment, or business in general, changed in that time?
There's certainly a lot more competition, a lot more pressure for the quality of service, for greater customer satisfaction, pressure on price, on speed, on creativity, there are a lot of new solutions. There are always opportunities around us, but you need to seize that opportunity and that's why it's good to follow trends.

In the 1990s, there were a lot of big new opportunities in the Czech Republic. There wasn't as much competition among businesses. There was foreign competition, but we're talking about the small and medium-sized business segment, not large companies like Škoda Pilsen. There was not as much competition in the SME segment as there is now.

If we look back, to the days of the first Czechoslovak state (1918–1938), when there were a lot of small, family-run businesses, family businesses, light industry, we were self-sufficient in some respects. Do you think that it would be possible to get close to that state, at least to some extent? It occurred to me, after the lecture on deglobalization, by the economist, Mojmír Hampl, at the conference *(this interview was taken after his presentation)*.
I'd answer that a little differently. As the Czech Republic, we have options. New types of enterprises will be formed, not the type that existed in the "*First Republic*". Family businesses will emerge. There's great strength in family businesses which must not be underestimated. Artificial intelligence is coming, digital factories, but these are digital factories the size of SMEs, owned by individual families. So, I think the opportunity is there, if we grasp the technology trend. We mustn't fall behind. The important thing is that we have high-quality educated people, practical minds for those technology trends and opportunities. We currently lack them.

Can we keep up with technological trends in the Czech Republic?
I don't know. I'm surrounded by people who always look forward, I can't quantify how much the Czech Republic is falling behind. I think it is in many aspects, for example, with various political decisions, but not with the mentality of people, entrepreneurs, and managers, because their world is open, and their thinking knows no limits.

You've been involved in a lot of industries, telecommunications, construction...
I haven't been involved in quite so many industries. I've only been in two fields in my life, basically. I have worked in IT and telecommunications, which I graduated in. We started a company called GiTy. And then I got into the green business, sustainability and recycling, so that was kind of my second focus.

You are also the President of the Czech Management Association...
Yes, I represented the CMA here today, with my colleague, Hana Šmejkalová, who is the Vice-President. The CMA forms a platform to connect leaders, business people, and managers. We should learn to collaborate increasingly. We would be very happy for the CMA in the Pilsen region to network with these entities so that we can work together in this space, because it will be to everyone's benefit. I think that regional strength is always really important, because that's what makes up the whole Czech Republic in the end.

You're also the co-author and co-ordinator of the Women 50 Plus/Minus project, which focuses on self-education and professional and personal development of women over 50. I sometimes hear from women of this age that they're discriminated against in interviews because of their age. At the same time, I read that employers are happy to have such experienced workers, and not only women, because they can be relied upon, they clearly value the job opportunity, and are an asset. What is your experience?
If it was like you say, it would be great, because the young can benefit from the experience of the older ones, and it brings intergenerational co-operation and a good mix. But unfortunately, I have the opposite experience, namely that young recruiters often don't want to take on women 55+, even though we know that the retirement age is increasing. Such people are highly qualified, speak, say, 3 languages, have experience, are professionally qualified, but they think that they are too expensive, so they hire, say, two younger employees, but at the same time they could achieve more with a combination of a young person and a senior one. The other thing is that the company culture may not match, because young people have a different company culture than the 55+ age group, but again it's about mutual tolerance and understanding, because we usually have children, and they also have a different culture, they like different things than our generation. I think they are missing out on the knowledge that the senior can contribute, and by senior, I don't mean a retiree, I mean a senior consultant or a senior expert.

You're based in Brno, so let me ask you about the JIC Brno (South Moravian innovation Centre), which is incredibly efficient and successful. Dr David Uhlíř, the Deputy Director for Strategy at JIC, spoke at our conference last year. I assume you collaborate with JIC?
I worked with JIC earlier, but I'm more based in Prague now, I have a kind of nationwide presence though. I was involved when the JIC was being established, so I know the background. Today, JIC is a great example of an ecosystem that helps the region. I'm in contact with other such incubators and innovation centres where I can again contribute my experience, and help them move forward. We must go where it's needed.

Last year at the conference, Mr. Uhlíř spoke about how Brno had to decide, due to relatively high unemployment, what direction to take in order to reverse this unfavourable development. And so began the story of Brno as a successful IT and technology-oriented city.
That's true. Brno saw a decline in industry. In the 1990s, there was a working group, with people from the business community, a group of people from academia, and from the municipality. And there they discussed what to do about it. That's where all these initiatives to support the establishment of research institutes came about. Masaryk University and the Brno University of Technology invested in the creation of the Central European Institute of Technology, and a new technology centre was founded for existing and new companies. That was a series of right decisions, and it was about co-operation across political parties, it wasn't about who represented which party, it was about the prosperity of the region. I remember that time, and I think it was wonderful.

Do you think it's possible to replicate that success today and somewhere else?
Of course. In any region where there is mutual co-operation, where there is a concentration of knowledge and business.

Now, we might need a nationwide concentration.
Every region has the opportunity. The question is how they will approach it and which fields they will focus on, because it's not possible or useful to focus on the same ones. I was positively surprised that Pilsen's focus is on the engineering industry, on transport systems, nuclear energy, but at the same time, also biotechnology, which is absolutely great.

So, you find the mix to be good?
Absolutely. There can't be just one specialty.

The already mentioned David Uhlíř said that our region's five intelligent specializations seem to him to be quite a lot. Brno's focus was more narrow.
Yes, Brno took the direction of IT. There was still space research, although that was largely overtaken by IT. But we're also in a different time now. You need to find the development trends for a given region, where the greatest potential is, and that's for the local experts to say. Maybe two or three directions, it will eventually become clear which one is better.

I really like a quote by economist David Navrátil, who also spoke at our conference today: *"We could grow by 6 percent a year, but the Czech Republic is not built for Czechs."* You have a very positive mindset, so I wonder what you think about that.
Then we have to change it! I'm really looking forward to his talk. *(the interview was written just before it).* ●



In India, even research is hurried, and work-life balance isn't very good. This can be challenging for women.



Jyoti Kaswan is a physicist who completed her Ph.D. at the National Physical Laboratory in New Delhi. Driven by a passion for research and personal growth, she joined the team at New Technologies – Research Center (NTC) at the University of West Bohemia in Pilsen over a year ago. Her research focuses on fundamental physics and the exploration of new materials, including groundbreaking alter-magnetic materials. She values the calm and orderly pace of life in the Czech Republic, contrasting it with the fast-paced environment of her native India.

Can you tell me a little about your background? What brought you to Pilsen and NTC?
I completed my Ph.D. in physics in India at the well known institute National Physical Laboratory in New Delhi. That marks a significant part of my background, as I aimed to pursue a research career. I've always been interested in going abroad because it provides numerous opportunities. Beyond work, it offers the chance to navigate various aspects of life, both research-related and personal. After my Ph.D., I began seeking a postdoc position. Prof. Ján Minár, a well-known figure in the scientific community, caught my attention. I knew of his theoretical work and his efforts to develop a SARPES (spin and angle resolved photoemission spectroscopy) lab for experimentalists, which aligned perfectly with my research career goals. So, I reached out to Ján, we discussed potential projects, and that led me here.

What is your research focused on?
As a group, we work on fundamental physics and the exploration of new materials with emerging properties. My group recently contributed to the confirmation of a newly discovered type of magnetism, called alter-magnetism. Our group integrates both theoretical and experimental approaches in research. On the theoretical side, we use quite an advanced approach of green function based SPR-KKR code, and experimentally we use the SARPES system, which allows us to get the band structure of materials, describing their electronic and magnetic properties.

How does your team here at NTC look?
The team consists of about 25 or 26 people. In our experimental lab, we have almost 6 people at the moment (one new Ph.D. student is joining). The team is quite diverse, with people from India, France, Tunisia, Vietnam, Finland, and Czechs. NTC is focused on gender equality. We currently have about 35 women in NTC, which is not that many compared to the total number of approximately 120 people, but that number is slowly and steadily growing. Our team values collaboration, recognizes individual contributions, and drives collective success through shared goals and mutual encouragement.

How was it for you to move to Pilsen? What are some of the biggest challenges you have faced as a foreigner in the Czech Republic?
The biggest challenge was definitely finding a flat. If you want a reasonable price, it is really difficult. Of course, if you are willing to pay 30,000 Czech crowns, you will find it easily, but for a reasonable price? No. The Czech language was also a problem. I often asked my colleagues to talk to landlords for me, and many times they accompanied me to meetings. Unfortunately, the answer was often no because I am not Czech. They wanted Czech or Slovak people. It took me almost three months to find a flat. But I know most foreigners struggle with this. NTC is very helpful in this case, they have a flat available until you find your own accommodation. They take good care of foreigners.

And how did you adapt to life in Pilsen?
It was not difficult, my experience was good. I haven't seen any kind of racism or something like that so far. I heard about it from people but I have never encountered such a situation. For me, it was quite nice. My colleagues definitely helped me a lot. Like initially, wherever you have to go, to the doctor, bank... they accompany you. Pilsen itself is not very crowded, so I really like it here. My colleagues make fun of me when I talk about crowds because I am from India but I have always been like this, trying to avoid crowds. So for me, it's a calm city and I find it really nice.

What are the biggest differences if you compare your life in India to life in the Czech Republic?
The first thing is people are not in a hurry, they are calm, and everything is calm here. In India, people always run like they are about to lose something. It doesn't matter if they drive or walk, they always rush. People here are not like this and I like it.

Are there any Indian traditions or customs that you continue to practice while living here?
Not really. The only thing that comes to my mind is that I wear this Mangalsutra necklace, which is a substitute for a wedding ring for Hindu women. We got it from our husband at our wedding. People have engagement rings but that's up to you whether you keep them or not.

Did your husband move with you to Pilsen?
I came alone initially, but my husband joined me in January. He went back to India for two months and then returned. He kind of commutes between India and the Czech Republic.

Have you met any other people from India here? Is there an Indian community here?
Yes, there is an Indian community here, but I am not really part of it. We have four Indians in our group, and through them, I met other people. But for me, it's not important to be with Indians only. Sometimes I go on small trips or hikes with my Czech colleagues. We have been to Český Krumlov and Orlík. It's more interesting and enriching for me because they can explain more about the places we visit and the culture of the Czech Republic.

You mentioned that your NTC team pays attention to gender equality. How was it back in India? Was it difficult for you as a woman to study physics? Is it common for women to study this field?
Yes, it's common. I wouldn't say it was difficult, but of course, everyone has a different working environment. If we compare the USA and Europe, it's quite different, and the same goes for Europe and India. Here, I feel the environment is more motivating, progressive, and calm. In India, even research is hurried, and work-life balance isn't very good. This can be challenging for women. In the previous generation, the ratio of working women was very low, but it has increased drastically. Society is still changing. In Europe, household work is shared between men and women, but in India, it's still primarily the task of women. This makes it challenging for women because they need to manage both work and household duties. It's definitely improving but still not at the pace it should be. I think it will take at least one more generation to change.

If we go back to your work, what opportunities do you see for growth and development in Pilsen's technology and innovation sector?
It's a good question. Sometimes I think about it and discuss it with colleagues, but I haven't come to any conclusions yet. Compared to Prague or other big cities, Pilsen still lacks many things. There is always room for improvement, even in science and technology, but I can´t think of specific areas to focus on right now.

Maybe if you compare it with your experience abroad, are there any differences that you see?
To give a specific example, we needed sample holders here. We could have bought them from a specialized company for an outrageous amount of money. We would have had to conduct market research, and even then, it would not have been the most economical option. Because we didn't want to spend too much, we came up with the idea to buy special sheet metal and have them made. This turned out to be more cost-effective, but we still had to select companies to customize it for us. There was a lot of paperwork involved, and it took about two months. In India, we had access to a service workshop that handles laboratory equipment. They would have bought the material, made the holders for us, and delivered them within 15 days. I think that sometimes you unnecessarily complicate your lives here with excessive bureaucracy, even for smaller things.

What are your future goals and aspirations for your research?
As I mentioned before, we are exploring different kinds of properties of new materials specially in magnetism, including alter-magnetism. I will also start a new project, the Marie Curie fellowship, but the Czech version, that involves my research titled "*Dynamics of Topological Spin Textures in Quantum Materials*" and it should take two years. So for the next two years, I will stay here and then see what happens.

If you look back at your journey, what have been some of the most rewarding experiences in Pilsen?
I think I'm really developing as a person. I meet many people from different backgrounds, with different customs and perceptions. For me, it's about personal development. What is normal for me is not normal for someone else, and I think it's important to realize that. I enjoy getting to know Czech culture, it's interesting to me.

Do you have any advice for other foreign researchers or entrepreneurs looking to establish themselves in Pilsen?
I think they should come, there are many opportunities here. Our team has big projects and many mobility funds, and we are looking for Ph.D. and postdoc candidates. I don't see any negative aspects. If it matches your field, you should definitely come.

Thank you and good luck. ●



The Sixth Round of the Incubation Programme Has Been Launched

This summer, consultants from the Business and Innovation Centre (BIC Pilsen) opened the sixth round of the Pilsen Incubation Programme. In total, they consulted the plans of thirty candidates. In the end, a dozen innovative start-ups, with their bases or operation in the City of Pilsen, applied for incubation. Most of the remaining bidders are preparing applications for the next regional call, which allows companies from the entire Pilsen Region to participate. *"Half of the applying companies were at the stage of formation. These are start-up companies that want to validate their business idea, develop their product, and get their first paying customers during incubation. The other six applicants were growth stage companies with established products. Their goal is to increase their valuation for future investors, or to achieve successful foreign expansion, with the support of the programme,"* Lenka Palánová, who is in charge of incubation at the BIC Pilsen, described those interested in the successful programme, which was piloted several years ago as part of the Smart Accelerator of the Pilsen Region II project.

The participants were selected by the Incubation Programme Board in mid-September 2024. This year, for the first time, the evaluation of the presented projects was influenced by the investors' perspective, presented by Tomáš Cironis, the man behind Ilavska Vuillermoz Capital and Start-up Kitchen, as well as by the point of view of an AI expert, the Dean of the Faculty of Applied Sciences of the University of West Bohemia, Dr. Miloš Železný, Ph.D. Seven candidates were finally selected for incubation, who, according to Lenka Palánová, *"we will hear a lot more about in the future"*.

● KiloMayo s.r.o. – Solutions for Gastro Operations

KiloMayo is a young company of two experienced founders. They have the ambition to expand soon, and offer their platform worldwide. The KiloMayo platform solves the problems of restaurant, cafés, and bar owners who want to try new concepts, open new businesses and online sales channels, and turn their customers into communities. Their comprehensive solution replaces sub-applications for managing gastro operations and orders, staff administration, including shifts, and customer and benefit programmes. It provides users with a comprehensible and data-driven guide to managing and scaling their brand. In the incubation programme, the founders of KiloMayo also want to adapt their tool to the needs of business owners in smaller cities like Pilsen, adding AI elements that make it easier to analyse the collected data, and tailor solution proposals to individual operations. Last but not least, they also want to get involved in the activities offered by the European innovation ecosystem.

● TechInn s.r.o. – Protecting Passengers Against Respiratory Diseases

TechInn specializes in innovations for rolling stock and public transport. Their devices can change operating fluids, handle heavy loads and, newly, continuously disinfect the air in the air conditioning system while driving. As part of the incubation programme, the company founders would like to achieve international expansion and related marketing activities. Thanks to TechInn's solution, cities and their transport companies will start to protect passengers against respiratory diseases, not only in Europe and Africa, but also in Pilsen. Any passengers will be able to check whether the air is disinfected when getting into the vehicle. They can find out by their sense of smell. What scent will our city choose?

● Kuchyně Plug In, s.r.o. – Kitchens with Integrated Electricity and Water Systems

The Pilsen-based start-up, Kuchyně Plug In, focuses on innovative solutions to the problems associated with the installation or renovation of kitchens. Lucie Klimentová has been designing and realizing custom interiors for many years. She and her customers have encountered numerous complications during the installation of kitchens and the co-ordination of the various trades necessary to get the kitchen running, so she founded a company to design and manufacture kitchens with built-in wiring and construction for easy installation in any space. The self-supporting structure solves the problem of non-load bearing or uneven walls, making installation much easier and faster. With electrical and water distribution integrated into the main body of the kitchen, there's no need for renovations, wiring projects, calls to tradesmen, and more. Kuchyně Plug In's solutions need only to be fitted and connected to the existing mains. Lucie Klimentová's company is just getting started. Therefore, during the incubation programme, the start-up is going to work on its marketing strategy, education of the market, setting up the company's terms and conditions and, most importantly, establishing business relationships with strategic partners in the construction industry. The goal is to get a product to people that is both high quality

and beautiful, and also saves time, money, and the hassle of installing or renovating a kitchen. Thanks to this solution, customers can move in or rent quickly and easily.

● PROMOTON s.r.o. – Device for the Administration of Injectable Drugs in the Home Environment – TUGI

TUGI by PROMOTON s.r.o. is a globally unique medical device that allows people to administer injectable drugs at home safely, without stress, and without bruising. The European-certified medical device, designed in Pilsen, is manufactured entirely in the Czech Republic, but has the potential to help patients all over the world, especially those who have to self-administer injectable blood thinners. Most often, TUGI is used by pregnant women, as well as by the elderly. Failure to adhere to the prescribed treatment is dangerous. Thrombosis doesn't hurt, but can have even fatal consequences. Still, fear of the application, or mere trembling of the hands often makes the patient skip a dose. TUGI minimizes these concerns and obstacles, and helps to safely follow the prescribed treatment. It's compatible with more than twenty different medications, and is already helping hundreds of patients, not only in the Czech Republic. The company's goal is to make TUGI available to anyone who fears for themselves or their loved ones, and wants to safely adhere to their prescribed therapy.

● CTF Technology s.r.o. – Pyrolytic Recycling of Composites

The company CTF Technology was founded by Václav Marek, a graduate of the Faculty of Mechanical Engineering of the University of West Bohemia. In his business, he draws on more than ten years of experience in R&D of engineering technologies. The young start-up tackles the problem of recycling waste generated during the manufacture of products made of composite material, specifically polyester resin reinforced with glass fabric (e.g. water tanks, boats, children's slides, etc.). The ReCompo device, which the company will continue to develop, will make it possible to pyrolytically recover intact fibreglass suitable for further use from scrap or rejected parts. The customer part of the market is represented by manufacturers of products made of the above-mentioned composite materials, of which there are hundreds in the Czech Republic and other European countries. The reason why they're interested in recycling waste from composite materials may be, besides the reduction of costs for material and the disposal of waste, the tightening legislation in this area. In the incubation programme, the company intends to continue defining the business plan and refining the business model, including the preparation of legal documents and other documentation for the planned commercial use of the ReCompo device, currently under development, for the recycling of composites.

● Pegasus – A Virtual Assistant for Technology Start-ups

Most founders of technology start-ups consider getting their first customers to be the biggest challenge in the initial stages of growth. The Pegasus project enables them to overcome this challenge with a proprietary methodology and a set of tools for sales and product management. However, it's not just another "*stack of spreadsheets*" for founders to learn how to work with. Pegasus is a virtual assistant that team members can interact with, just as they would with each other through existing channels (Slack, MS Teams, etc.). Pegasus automates the entire process of acquiring the first customers – from the correct definition of the customer segment, through the preparation of documents, identifying and reaching out to leads, to the analysis and adjustment of the sales strategy itself. Within the incubation, its founder, Štěpán Fau, wants primarily to analyse the market, and to iterate the monetization model.

● FirstBucks, s.r.o. – Online Marketplace for Part-time Jobs at Smaller Companies

According to the founders of FirstBucks, it's almost impossible to find a part-time job online nowadays, and when you are lucky enough to land one, it's usually behind a checkout counter or fryer at one of the big companies that everyone knows only too well. Students of the Faculty of Applied Sciences of the University of West Bohemia in Pilsen, the fathers of the FirstBucks company, Rastislav Lipták and Radek Stropnický, had the same problem, and decided to solve it. In August this year, they founded the company, and applied to the incubation programme with the aim of approaching as many people as possible, and finalizing their project. They decided to create a web portal to advertise part-time jobs and internships, with a focus on students and SMEs at the same time. The portal aims to bring even smaller businesses to the online jobs market, ones which can hardly gain visibility on the existing portals, and, thanks to its modern and simple format, make the search for part-time jobs more convenient for students, who spend more and more time online. ●

Applications for the spring round of incubation, which is financially supported by the Pilsen Region, will be accepted in February 2025. This round has already succeeded in attracting entrepreneurs from all over the Pilsen Region. *"Eleven consulted incubation candidates were based outside Pilsen. They're preparing their applications for the next regional round of the programme"*, said Lenka Palánová from the Business and Innovation Center BIC Plzeň, who is in charge of the incubation program. More information not only about the incubation program at www.bicplzen.cz.

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