CZECH REPUBLIC

A forward-thinking central European powerhouse committed to innovation

A popular tourist destination, the Czech Republic has unveiled its desire for space exploration and has become known for its economic resilience and willingness to embrace technology

estled in the heart of Europe, the Czech Republic's dynamic and resilient economy has helped the country to achieve regional influence and catapult it onto the global stage. Boasting a GDP of more than \$290 billion and attracting substantial foreign direct investment stock of over \$185 billion, it is now recognized as one of the most prosperous nations in central Europe.

Beyond its strategic location and economic resilience, the Czech Republic has demonstrated a commitment to innovation and advanced manufacturing that has propelled it to the forefront of global industry. Home to forward-thinking entrepreneurs and fast-growing start-ups, the country is leading the way in sectors such as automation, robotics, artificial intelligence and cybersecurity.

There are also ambitious plans in place to become a leading player in the field of space exploration. Earlier this year, Czechia became the 24th country to sign the Artemis Accords — an American-led effort to return humans to the Moon by 2025, with the ultimate goal of expanding space exploration to Mars and beyond — with Minister of Foreign Affairs, Jan Lipavský, stating the importance of the accords.

"I see this as a historic signature, not only because it opens up a new opportunity for cooperation between Czechia and the US but it also marks our dedication to peaceful, transparent and responsible conduct for space exploration," said Lipavský.

Deputy Prime Minister for Digitalization and Minister of Regional Development, Ivan Bartoš, added: "In Prague we have the European Space Agency Centre and there are around 100 companies in the city that are related to that industry. We are definitely pursuing going

"This is just one area where we have cutting-edge technology and where a significant transformation is underway. We also have projects that support the development of quantum computing and we are piloting hydrogen technologies."

Tourism targets

While the Czech Republic is in the midst of an innovation boom, the country also works hard to promote its cultural heritage and breathtaking landscapes. Its capital, Prague, remains one of Europe's most visited cities and provides visitors with the opportunity to immerse themselves in historic castles and medieval monuments.

Away from Prague, beauty can be found throughout the country. Český Krumlov is home to Czechia's only Baroque theatre, Kutna Hora's gothic St. Barbara's Church is a UN-ESCO World Heritage site and Brno boasts a plethora of Baroque and Gothic architecture, tions throughout the country. "The Czech Re-



The famous Charles Bridge in the capital of Prague



Petr Fiala

while Špindlerův Mlýnis is an in-demand ski resort in winter and a hiker's paradise during the rest of the year.

With so much on offer, the government has worked tirelessly to improve transport connec-

public, from the north to the south and the east to the west, varies and is easily accessible. There are incredible monuments across the country and you can easily do day trips from Prague to explore other areas. In fact, that is the main task of the Czech Tourism Agency, to promote the entire country as a tourist destination," explains

"We have UNESCO sites throughout the country and visitors will find everything from hiking and skiing to culture and first-class gastronomy on offer."

In order to make experiences and sites even more accessible, the Czech Republic is pushing ahead with a digital transformation that will benefit numerous sectors, including tourism.

We want e-tourism to be a main platform, as it is in Austria, where business entities in tourism, hospitality companies and the relevant ministries all work together," says Bartoš. "This ensures that visitor numbers and local fees are all registered on the same platform. It also means that tourists could bundle together a special multi-day travelling ticket in Prague, for example, that would include entry to specific monuments and even travel to other parts of

IVAN BARTOŠ DEPUTY PRIME MINISTER FOR DIGITALIZATION AND MINISTER OF REGIONAL DEVELOPMENT

"We also have projects that support the development of quantum computing and we are piloting hydrogen technologies."

"Tourism is an area we are focused on as shown by the Czech Republic succeeding in becoming a member of the executive board of the United Nations World Tourism Organization. This was a significant diplomatic success that will enable us to influence global developments in the tourism industry."

With a diverse economy driven by multiple innovation-driven industries and a thriving tourism sector, the world is beginning to embrace the boundless potential of the Czech Republic. All bodes well for the future of this central European gem with both business and leisure endeavors seemingly destined to reach new heights.

Pro-business policies

A stable economy and legislation changes have boosted direct foreign investment

ore than 20 years ago the Czech Republic introduced a series of incentives that stimulated a massive inflow of foreign direct investment. Since that moment the government has worked tirelessly to ensure the country remains attractive to foreign investors and it is still one of the most successful countries in Europe when it comes to bringing in investment from

US companies. Bolstered by a strong and diverse economy, more than 150,000 Czech firms across all sectors are supported by foreign capital. Much of this success comes down to creating an enticing business environment that appeals to investors.

Playing an important role in this area is the Association for Foreign Investment (AFI), a non-profit organization that was created by the Czech government and by international global service providers to attract foreign investors.

"We were created in the 1990s to help change the legal, regulatory and political environment in a way that is attractive for investors and provides long-term stability," states Kamil Blažek, Chairman of the Steering Committee, AFI.

"The concept of what we do is based on the idea that to have a successful investment you need trust. To build that trust it's helpful to have someone in between who can moderate the communication and help the public side to understand the needs of private investors. That's the role we play."

The ability to attract investment has made a substantial contribution to the country's economic growth and the creation of jobs, as well as fostered innovation and technological advancements. This has led to the Czech Republic earning a deserved reputation as a country where forward-thinking companies are developing cutting-edge technology that is being used on the global stage.

In order to further develop these companies, incentives have been made available for foreign investments in certain sectors such as aerospace, nanotechnology and life sciences, and for those that require R&D activities or create jobs for university graduates.

'We are very future-orientated and are currently supporting numerous areas that are still being developed. This covers industries such as biotechnology, nanotechnology and space-related ventures, which all require investment in order to grow," reveals Blažek.

Ranked in the top quarter of the global Ease of Doing Business index, the AFI is working to further enhance the business environment for foreign investors and is hoping to attract more interest from the US.

"We like to stress that Czech legislation is extremely similar to major players in the rest of Europe such as Germany, Spain and France," adds Blažek.

We find that a lot of investors from the US don't realize this fact so we highlight that we have identical rules and frameworks to those nations. That means you get the same level of protection as other western European jurisdictions. In fact, I am in no way hesitant to compare the Czech Republic to Scandinavia or other powerful European countries."



Prague Astronomical Clock was first installed back in 1410



Ivan Bartoš Deputy Prime Minister for Digitalization and Minister of Regional Development



Kamil Blažek Chairman, AFI

TOP FIVE REASONS TO INVEST IN THE CZECH REPUBLIC



Well-connected gateway to Central and Eastern Europe, with the world's 2nd-best public transport, according to TimeOut



Highly educated population that was ranked 8th worldwide for vocational and technical skills in 2022 by INSEAD



The Czech Republic offers the world's 4th-most attractive FDI regime, according to INSEAD, and its tax system ranks 5th in the OECD



Industry-focused Czech Republic is the EU's 3rdlargest producer of cars, says the European Automobile Manufacturers' Association



The US is the Czech Republic's largest non-EU export destination after the UK, according to US State Department data

A prosperous and industrial nation, Czechia serves as an entry point for US companies looking to expand across Europe

uring the last 20 years, the Czech Republic's economy has become more omplex thanks to a diversity in its industries and capabilities. This has been reflected in the Economic Complexity Index, with the European nation moving from 14th in the list to seventh in the latest rankings.

While the engineering industry has always been the backbone of the economy, there has been significant growth in the last two decades in sectors such as electronics, steel production, pharmaceuticals and transportation equipment especially within the automotive, rail and aerospace industries. This has led to the Czech Republic boasting one of the most well-rounded economies in the world.

"Historically, we have one of the most open economies in the world, with some global figures ranking us in the top five most open when it comes to trade. And while we may not be a rich country in regard to natural resources, our foreign trade GDP share is one of the highest globally," explains Jozef Síkela, Minister of In-

"We have also demonstrated the ability to be flexible and to modernize. We are seeing this in the automotive industry where we are the second biggest producer per capita in the world, with around 1.2 million cars produced each year. But this industry is evolving because we are moving away from gearboxes to electric vehicles which require batteries, microchips and charging cables.

"That means we have to think about investment in the area of chargers, battery production and chips, and we are looking to attract investors both from Europe and in the US."

The ability to pivot and explore new industries has been crucial to the economic success of the Czech Republic. And Síkela believes that going forward, there will be new sectors that emerge and add value.

"We will support small and midsize enterprises in the science research industry, while another major focus is the implementation of new technologies such as cloud computing, artificial intelligence, cybersecurity and autonomous robots," he explains. "We already have the expertise within the country so we hope to attract some global leaders in this field.

"Honeywell already have the biggest R&D center outside of the US here in the Czech Republic and we are now talking to other big tech companies about future investments because we have skilled people who are loyal, hardworking, extremely well-educated and inven-

A free and open market

In the 30 years since Czechia gained its independence, the country has enjoyed an unprecedented level of prosperity and continues to have the lowest unemployment rate across the entire European Union (EU). While it continues to have a strong relationship with Europe's most influential countries, with intra-EU trade currently accounting for 80% of exports, there is a growing relationship with the US.

Thanks to a prosperous and industrialized economy and its position in the very heart of Europe, the Czech Republic has served as an entry point for US companies looking to expand beyond the more traditional markets in Western Europe to ones in the East.

> he manufacturing sector has thrived for more than a century in the Czech

Republic and continues to be of par-

amount importance, with almost 40%

of all working citizens having jobs in the indus-

try and manufacturing comprising around 35%

One of the companies that has enjoyed re-

markable success within this industry is Wikov

Group, which has more than 140 years of ex-

A prominent player within the mechanical

engineering sector, the Czech company pro-

duces state-of-the-art machinery such as gears

and gearboxes for major players in the automo-

tive, energy, heavy machinery, hydro, oil and

gas industries. All of these demand products

are durable and reliable, meaning Wikov Group

must meet stringent standards in order to ex-

"You can't succeed in the gearbox market

without having implemented quality standards,

which are demanded around the globe, because

quality today is not an advantage, it is a neces-

sarv condition," reveals Antonín Růžička, Chief

"We have very robust quality assurance sys-

tems implemented in all of our factories, then

it is about specific application knowledge. We

have quite a wide team of experienced design-

have dedicated engineers for different indus-

ceed customer expectations.

Executive Officer at Wikov Group.

of the economy



Jan Lipavský

This has led to stronger ties between the two nations and Jan Lipavský, Minister of Foreign Affairs, is confident that the burgeoning association between the two nations will continue in

"The US is a strategic partner for us and the Czech-US relationship has never been as strong and collaborative as it is at this very moment," reveals Lipavský. "Transatlantic unity is key and we are always advocating for the most open

"We have a thriving relationship with the US and there are many Czech companies that are extremely successful in America. The US market is very important because it is a market that buys goods with a high added value so they are an important trading partner.

JOZEF SÍKELA MINISTER OF INDUSTRY AND TRADE

"Another major focus is the implementation of new technologies such as cloud computing, artificial intelligence, cybersecurity and autonomous robots.

"I'm travelling to the US to meet with Secretary of State Antony Blinken and I will also be meeting with businesspeople at an event called Connect where I will be speaking about emerging new technologies. One area we are really interested in exploring is the ICT sector and the US has been a global leader in that field

"We want to be a part of that industry's growth, especially within the growing antivirus segment as we have two very successful companies, AVG Technologies and Avast Software, that are based in Prague and have been showing a lot of potential."

Improving connections

A drive to innovate

Wikov Group strives to produce state-of-the-art

machinery for a diverse range of industries

Czechia's plans to attract more investment from the US could well be boosted in the years ahead by the country's commitment to the Trans-European Transport Network (TEN-T) project which aims to develop an efficient and high-quality transport infrastructure across the



The Czech Republic lies at the heart of Central Europe



Jozef Síkela Minister of Industry and Trade

Comprising of railways, inland waterways, short sea shipping routes and roads linking urban nodes, maritime and inland ports, airports and terminals, it will enable trade and economic growth through the efficient transportation of people and goods. It also aims to reduce the environmental impact of transport and to increase the safety and resilience of the transport

"For us and for our transport infrastructure, TEN-T will be like a roadmap for the next investment, especially in relation to roads because we are still developing our motorway infrastructure," states Martin Kupka, Minister of Transport. "We need to build this out to create better connectivity with Poland and Austria.

"It's the same when it comes to railways because we want to create a new modern infrastructure that will create numerous high-speed connections through the Czech Republic and eventually throughout the entire central Euro-

While TEN-T will connect countries throughout the EU, it has highlighted the importance of having a robust transport infrastructure in place within the Czech Republic. This is an area that has had to be greatly improved in recent years and there are plans in motion for a complete overhaul of the country's travel network.

"In 1989 we only had 560 kilometers of motorway. That has been improved today to more than 1,300km and in the next decade we will build the missing part of this essential infrastructure," details Kupka. "We hope to introduce a 10-year plan that will cover the necessary investment in the road and railway

"The big challenge and one of the most important projects will be the introduction of high-speed rail lines that will connect with major European centers such as Berlin with Prague and Vienna with Brno. This is a major project that will include our neighbors Germany and Austria and is part of the larger TEN-T



"This investment in a modern railway infrastructure is vital not just for us as a country but for the whole of the EU. We need to support this kind of transport system because of the incredible connectivity and the more positive impact on the environment, especially when electrified rails are being used."

While plans for the TEN-T project were first adopted in 1996, there has been significant investment in recent months with the Connecting Europe Facility confirming that it would provide financial support to the tune of \$6.6 billion for 107 new projects. The hope is that with this injection of money the core network will now be completed by 2030 and the comprehensive network by 2050.

Not only will the funds be used to create the new transport infrastructure, but it will be in line with the climate objectives set out by the EU. Kupka believes this is especially important as the Czech Republic is determined to do its part to ensure that all new projects take sustainability into consideration.

"Our vision is the same as the EU, which is to make transport greener," he adds. "That is why these new high-speed lines are so important and are one of my main priorities.

"There are missing cross-border connections across Europe such as in Spain and France where there is a missing line between Perpignan and Montpellier. There are also missing connections between Amsterdam and Berlin and Lyon and Turin. We would like to contribute to helping build these new lines.

Another reason why this is so important is for the development of society because better transport systems bring better conditions for people. This is because new opportunities arise for companies as well as entrepreneurs. It is also a great way to share best practices across different nations which is the foundation of a civil society.

"I see the transport system as the basic part of the mosaic of all that is necessary for the improvement and competitiveness of the Europe-

Chemistry expertise fueling sustainability across industries

The chemicals Draslovka research, develop and ultimately produce are used in a wide range of sectors, including agriculture, mining, automotive and pharmaceuticals

ounded in 1906 and initially focusing

on the research, development and pro-

duction of hydrogen cyanide, Draslovka

is now recognized as a pioneering tech-

nology leader that has brought revolutionary

advancements to the mining, automotive and

agricultural industries, further transforming

the way that these sectors operate on an inter-

The CN-based chemicals produced by the

family-owned company are also essential in the

production of numerous items that are used on

a daily basis by people around the world, such

as smartphones and vitamins. This has helped

the company to extend its footprint beyond

the Czech Republic, with business units in sev-

en territories and sales teams in more than 80

bolster its global presence, Draslovka has estab-

lished strategic partnerships, including a string

of acquisitions in the last two years.

In order to expand into new markets and

"Our headquarters are in Prague but we are

"We have a board of directors, with a major-

an international company and we implement

best practices and transparent standards," ex-

ity of independent directors, as well as an advi-

sory board. We are also financially backed by

Oaktree Capital Management, which invested

more than \$150 million, after in-depth due dil-

igence, through a preferred equity instrument

has allowed the company to complete the ac-

quisition of the revolutionary glycine leaching

technology. The most cost-effective and envi-

ronmentally sustainable way to produce pre-

cious metals and critical minerals, glycine is a

An environmentally friendly and stable re-

agent, it is easily metabolized by living organisms and plants and is used as a food additive

for both humans and animals. This ground-

breaking piece of technology highlights the

company's commitment to safely and efficiently

produce the highest-quality products that are

"Our current focus is mining and the fu-

migation of agricultural products, which are

both critical elements of the global economy

and have an enormous environmental impact.

To meet the challenges and maximize the op-

portunities of a green economy, we need new

and much more sustainable chemicals as well

as metals like copper, nickel and cobalt," says

mining these metals one of the dirtiest busi-

nesses. Draslovka is aiming to change this

through the commercialization of our propri-

etary glycine technology. We are the only com-

pany in the world that is able to use glycine for

the mining of metals. Using this process, gold,

nickel, cobalt and copper can be extracted with-

out using any toxic chemicals. Glycine is bio-

degradable and recyclable and it's even more

"The issue is that current practices make

driven by the need to protect the planet.

cost-effective and non-toxic amino acid that is

This investment has been important as it

plains the chairman of Draslovka, Petr Pudil.

national scale.

in 2021."

fully biodegradable.



Petr Pudil

efficient than recent methods

"The value proposition for customers is that the efficiency of their mining operations are greatly increased by using a naturally occurring, non-toxic substance that has no harmful impact on the environment. This is really rev-

Pudil continues: "The speed with which we are commercializing the technology is partly driven by the fact that we are already a major player in the field of specialty chemicals for the mining industry. We achieved that through carefully selected acquisitions globally, such as in 2021 when we acquired a mining solutions business from American company Chemours with a large production capacity in Memphis. We have also acquired sales and marketing operations in many other countries.

"By using glycine as a leaching method, C02 pollution is eliminated from the mining part of

PETR PUDIL CHAIRMAN, DRASLOVKA

"Our fumigants product line is a transformative collection which Draslovka is successfully registering all around the world."

the supply chain. We are already commercializing this technology with many mining companies. This includes Barrick Gold, the world's second-biggest gold mining company, which has announced it is now finalizing the last tests with our technology and will implement it in all its mines globally.

Cutting-edge products

A global leader in the production of sustainable fumigants and biocides, part of Draslovka's expansion plans include developing new biodegradable products that will become essential within the enormous \$6.2 billion fumigation

In order to create these new products, the company has invested heavily in research and development and has acquired fumigation companies based in Europe, South Africa and

Draslovka, Kolin plant

"We have developed various new fumigants and biocides that will make an essential part of the economy more resilient and more efficient. The issue is that the industry currently uses very archaic chemicals which cause significant harm to our ozone layer and pollute the atmosphere with an incredible amount of carbon dioxide." reveals Pudil.

"Most of them are cancerogenic. As these old molecules are banned or being phased out, we are replacing them with biodegradable substitutes which have no negative impact on the ozone layer, have no CO₂ emissions, and can be controlled and used without any substantial hazards to the health of the people who are working with these fumigants.

"Our fumigants product line is a transformative collection of products which Draslovka is successfully registering all around the world. We are working closely with the biggest fumigation companies and we have acquired a company in Belgium, which is the second biggest umigation company in Europe."

This is the latest example of Draslovka's forward-thinking approach that has led the company to produce cutting-edge products and technologies for more than a century. These have been created in the agricultural solutions, mining solutions and specialty chemicals sectors and have ensured that outdated practices and solutions are replaced.

One of the most significant achievements was the development of its proprietary glycine leaching technology that allows companies to substantially enlarge their production capacity at existing mines without having to increase their environmental footprint.

"With glycine leaching technology we addressed two critical global issues. One is the need to make the economy greener while the second is to alleviate a potential shortage of precious and critical metals, which if left unchecked is expected to lead to a sharp price increase due to lack of supply," says Pudil, who also serves as a member of the Board of Directors of GLOBSEC, a leading think-tank in Cen-

"With our technology, we can reopen existing tailings to extract the remaining valuable content in a sustainable way, which is a real revolution, because we are making something that has a negative value on the balance sheet of the mining company into a valuable asset.

"We are also bringing additional value to our value proposition with an AI-driven metallurgical assistant, to help improve the throughput of existing operations. "Our sensors test the quality of customers'

ore, verifying results in 15 seconds instead of 24 hours, which is the standard business practice. There is no other company in the world which has such a highly advanced set of solutions for optimizing mining."

A commitment to sustainability

An intrinsic part of the solutions it provides and within the industry it operates, sustainability has always been a critical consideration for Draslovka. In fact, the company's commitment to the environment has been widely recognized, as evidenced when it won the prestigious Solar Impulse Efficient Solution Award in 2020, which further highlighted its ability to bring innovative and eco-friendly solutions to life.

CZECH REPUBLIC SPECIAL

Further highlighting its efforts to create a positive impact on the environment, the company recently released its first-ever sustainability report which showcases the efforts to integrate ESG considerations into its operations. It also discusses Draslovka's core strategy for the

PETR PUDIL CHAIRMAN, DRASLOVKA

"Draslovka's mission is to harness technology to transform critical industries and at the heart of this mission is sustainability."

"Draslovka's mission is to harness technology to transform critical industries for people and the planet and at the very heart of this mission is sustainability. Our strategy rests on four core pillars guiding our efforts to improve the sustainability of our business. These are innovating for sustainability, preserving the environment, protecting and developing our people, and operating responsibly," states Pudil.

"If we take a step back to look at society and the global community, our sustainability strategy fits seamlessly. We carefully select opportunities that bring our customers economic value and environment-friendly benefits that are also appreciated by the market. "This last point is important because if you

ing structures which are not sustainable. You are also undermining the financial stability of states and creating high inflation and high interest rates." With sustainability a key issue moving for-

are not in sync with the market, you are creat-

ward, Pudil believes that Draslovka's ability to constantly innovate will prove crucial if the company is to achieve its lofty growth and diversification goals.

Discussing where he sees the company growing in the next five years, he concludes: 'Ultimately, our vision is to become the biggest provider of solutions for mining and fumigation and to harness the power of technology to transform critical industries for people and the

"That is why innovation has always been at the center of our activities, because without innovation we would not be able to help humanity overcome the critical issues it faces, such as

Zetor Tractors set for major transformation

A new portfolio of products is set to be unveiled with the agricultural sector set to fully embrace the digital age

prominent player in the agriculture sector, the history of Zetor Tractors can be traced back to 1946 when the Czech government identified a need for low-weight tractors that would be suitable for mass production. This need was fulfilled by the Zbrojovka Brno factory when the Z 25 tractor was created and the Zetor brand was born.

Today, the Czech company exports products to 136 countries and has sold more than 1.3 million tractors. It is also in the midst of a transformation that will see it explore new technologies and innovations that will allow it to expand into even more new markets.

"From the next year, we are completely changing our portfolio, because the leaders in the industry are aggregates and implements manufacturers. So we are developing new products to fit with these new technologies, from the GPS system to autonomous driving tractors," explains Róbert Harman, Managing Director at Zetor Tractors.

"We need to make this transition because the information technology sector is penetrating the agriculture sector. There are a lot of new technologies on the market so we have decided to discontinue old models and produce new tractors. The plan is to produce a completely new product portfolio."

This move comes as the agricultural machinery industry undergoes a significant digitalization, with everything from artificial intelligence and robotics to IoT and 5G now providing invaluable support for farmers and those working

in agribusiness. "We are seeing a lot of startups and established companies now providing technology that farmers can buy and install in the tractor. That's why we are developing a new generation of tractors that will be compatible with all of these new systems," reveals Harman.

"We realized the need to follow this trend and why our product portfolio will completely change by the end of next year. We have seen an opportunity in the market so our engineers can now utilize their creativity to create a tractor that will be able to meets the growing needs of our customer base." This customer base has increased signifi-

cantly in recent years thanks to a push to penetrate the enormous Indian market. Having traditionally enjoyed success in Europe and the US, the decision was made to expand into South Asia and after several years of hard work, Zetor Tractors has established a foothold in the

"Back in 2012 I traveled to India to help establish our office and set up our daughter companies which are now very successful," says Harman. "Last year we signed a joint-venture agreement with one local company and we are now starting the mass production of tractors that are made locally.

"We are starting to penetrate the Indian market, which is one of the biggest in the world. In fact, last year more than one million tractors were sold in India. This is a major milestone and an interesting move for Zetor Tractors in regard to our expansion plans. I believe this will be a big part of our future, especially in relation

to the non-emission markets." However, when it comes to supplying tractors for countries in Europe and to the US, the Czech company recognized the need for vehicles that have less of an impact on the environ-

"Emissions are a big factor for us and it is why we are having to deliver completely different products for the European and US market," adds Harman. "Due to the high standards in safety and emissions, we need to use the very latest technology and this, of course, makes the tractors more expensive.

"In India, as well as in Asia and Africa, they prefer simpler tractors. That is why we opened a company in India as we need to completely divide the old and new technology. It is also why we have a daughter company in the US which delivers more technologically advanced products that the market demands. This has led to us being very successful in America."



Managing Director, Zetor Tractors



work on turbo machinery so they develop gearboxes with high-rotating speeds for all different types of turbo applications. "Application knowledge in combination

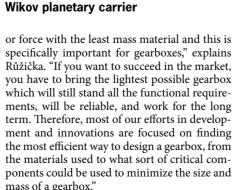


Chief Executive Officer, Wikov Group

with high-quality manufacturing standards is what you have to have in place. We have also invested heavily in the past 18 years in testing facilities so all gearboxes are exposed to difficult operational conditions before we dispatch them. That provides trust and reliability."

Significant investment has also been made research, development and innovation which has led to numerous technological breakthroughs and advancements in technology. In ers that focus on certain applications, so we fact, Wikov Group prides itself on its ability to tries. As an example, we have people who only come up with solutions that make its products even more efficient.

"We have a motto that says Wikov is the essence of engineering. This refers to the ability within engineering to transfer the most power



This drive to innovate has helped Wikov Group to penetrate markets around the globe, with operations now in 80 countries. Already the largest manufacturer of streetcar gearboxes in the world, there is now a focus on turbomachinery applications that are being utilized within the green industry.

"We are part of this new green industry as our high-speed gearboxes are used in turbo

compressors and high-pressure pumps," adds Růžička. "These are used in dealing with different gas transformations for energy storage purposes so instead of natural gas, you can use ammonia and hydrogen. It seems there will be a new wave of investment in natural gas so we want to be part of this industry." On September 13, 2023, Wikov successful-

ly acquired a 100% stake in Wessex Precission Machining Limited in the Canadian province of Ontario. Wessex Precision Machining is a traditional manufacturer of medium and larger precision machined components. For Wikov, it is the perfect service, repair and production base for the development of its own activities in the markets of Canada and the US. Local support for installation, commissioning, service and repair of gearboxes will bring additional high value to local customers, significantly strengthen Wikov's position overseas and help in its fur-

Leading tech firms utilizing local talent

Czech companies are making a splash on the global tech manufacturing sector

he manufacturing industry has long been one of the cornerstones of the Czech economy and remains of paramount importance. The country's central location within Europe makes it an ideal hub for trade and has helped to attract numerous multinational corporations to establish a footprint within the nation.

While major players such as Siemens, ABB, Honeywell and Daikin have all invested in various facilities in the Czech Republic, there has also been a rise in the number of home-grown companies that have enjoyed success within the high-tech manufacturing sector.

This is thanks in part to the country being home to a highly educated and extremely skilled workforce that has allowed companies such as IQS, CertiCon and Hardwario to become pivotal players in the global tech manufacturing sector.

They have been able to capitalize on the fact that the Czech Republic has a stable economic environment and a high level of manufacturing technological maturity. This has allowed them to focus on research and development and remain committed to innovation within their

own areas of specialization. Established in 2012, IQS Group has become a leading supplier of innovative products and technologies that are used on the international stage. Specializing in areas such as 3D printing, counterfeit protection and nanotechnology, much of the company's success comes from harnessing the expert knowledge of individuals within the Czech Republic.

"We started with virtually no money, little



investment and with just two offices. Just over 10 years later we have several thousand square meters of production space and numerous projects in countries around the world. This is because we utilized the potential of people and focused on them," explains the CFO of IQS Group, Martin Jotov.

"In the Czech Republic, there are so many clever people and we are one of the most in dustrious countries in the whole world. There is huge technical expertise and knowledge and one of our major advantages is that we know exactly how to utilize it."

Similarly, HARDWARIO, a developer and manufacturer of unique IoT devices characterized by low power consumption, has drawn upon the knowledge of those in the Czech Republic and is now beginning to enter into new

> MARTIN JOTOV CFO, IQS GROUP

"In the Czech Republic, there are so many clever people and we are one of the most industrious countries in the world."

"We are constantly adapting and learning to make our mark on the global stage," says René Gubančok, CSO at HARDWARIO. "Before entering a new market we deeply research its nuances and ensure our products resonate with the market. The globalized world calls for solutions that transcend borders, and this is what HARDWARIO aims to provide."

Another Czech success story is CertiCon, which develops software and hardware solutions for the healthcare, telecommunications, automotive and aeronautical industries. A hugely innovative company, it collaborates with some of the brightest minds in the country.

"We are in touch with the leading universities in the country such as the Czech Technical University in Prague and the West-Bohemian University in Pilsen," states Vladimír Mařík, Chairman of the Board and Executive Director at CertiCon. "We carry out collaborative research and try to hire alumni so that we can develop software based on the latest achievements in artificial intelligence, cloud computing and machine learning."



MICRORISC/IORF wireless mesh technology

Enabling innovation MICRORISC's IQRF wireless mesh grows worldwide

n the following interview we hear from Dr. Vladimír Šulc, CEO of MICRORISC, a Czech company engaged in the R&D, production, **L**and distribution of electronic components and a pioneer in wireless mesh-based IoT.

How long has IQRF wireless mesh technology been around and how widespread is it?

Awarded IORF wireless mesh technology has been in development since 2004, addressing industrial customers' demands and integrating many unique improvements protected by dozens of patents. Nowadays, the IQRF connects almost one million devices over the whole world.

What is the best application fit of the IQRF? Thanks to the industrial reliability, ultimate se-

curity, perfect coverage of problematic areas, and the IQRF True Low Power® extending sensors' life to tens of years on a battery, the IQRF brings the ideal fit, especially for lighting applications, sanitary technology monitoring, and environmental

How can manufacturers implement IQRF

Nowadays, the easy-to-integrate IQRF transceivers with the operating system and customizable software layer are supplied in several variants covering different customers' needs.

Anyhow, a new chapter of the IQRF will be open on November 17, 2023. Since then, the IQRF technology will be available as the IORF Standard for everybody who needs mature and reliable wireless mesh technology.

Standardization documentation describes technical details to everybody wanting to implement reliable wireless mesh technology directly



CEO, MICRORISC & IQRF Alliance

into products or even manufacture their transceivers. The IQRF Standard documentation is developed and maintained by the IQRF Standards

Will the IQRF Standard be available globally? The IQRF Standard will be available globally and to everyone; a royalty-free license agreement enables implementation. The non-profit organization IQRF Alliance already globally helps its members to keep products fully interoperable. I believe that the reliability, interoperability, and low power of the IQRF wireless mesh and its coming standardization, together with global availability, are precisely what manufacturers expect from

www.microrisc.com

Creating innovative tech solutions

CertiCon is involved in the creation and development of software and hardware solutions for a range of industries

ne of the most cyber-secure countries in the world, the Czech Republic has emerged as a growing tech hub in recent years. Willing to embrace technology, which in turn leads to innovation, the country is rich in talent and is being driven to become a global tech leader by forward-thinking local companies.

Supported and in part funded by the European Union (EU), the tech sector has flourished in recent years thanks to the development of a strong infrastructure for research activities. The Czech government has also proved willing to provide support when it comes to start-up initiatives, licensing and patenting.

One of the companies that has emerged within this fast-growing sector is CertiCon, which is involved in the innovation and development of software and hardware solutions for the healthcare, telecommunication, automotive and aeronautical industries. Established in 1996, it now provides services and solutions throughout the entire EU as well as in the US,

Employing more than 400 people, the company works closely with a string of renowned universities and research laboratories throughout the EU, helping CertiCon to create products and innovative systems solutions that are used

"We are in touch with the leading universities in the country, the Czech Technical University in Prague and the West-Bohemian University in Pilsen. We also cooperate with the Vienna University of Technology in Austria. We try to get the best from these universities, not only in regard to alumni, but also by carrying out collaborative research," explains Vladimír Mařík, Chairman of CertiCon.

"We are trying hard to develop software based on the latest achievements in artificial intelligence, cloud computing and machine learning. We are always looking for innovative approaches which can be provided to our customers, who include Medtronic in the US, Airbus Group in Germany, Frequentis in Austria and Bosch in Germany.

One development that has proved to be particularly helpful for clients is the use of artificial intelligence within its service offerings. This has made a huge impact in relation to the company's ability to provide innovative solutions, with the production scheduling system for multinational aerospace corporation Airbus now utilizing this AI service.

"This system is now running in 42 Airbus workshops as without AI it would have been impossible to accomplish this highly demanding task," says Mařík. "There is also another new product which

utilizes AI, called CertiConVis, which is a platform for complex image processing from various cameras.



"This utilizes neural networks and machine learning for processing and making decisions in different situations, such as tracking and detecting the suspicious movements of people. It is successfully being used by municipal authorities, police departments and within airports and department stores.

"This new AI approach makes image processing and decision-making faster, simpler and more efficient. That's why we are using AI in many of our services and products."

Collaboration is key

One of the ways that CertiCon has been able to create innovative new solutions is through its willingness to collaborate with industry experts and leverage external partnerships. Not only does it work closely with universities and laboratories, but it also partners with experts in

"CertiCon employs people who are not just programmers or software testers, we have people whose background is in electrical engineering, mechanical engineering and cybernetics who understand the area in which a solution will be developed," explains Mařík.

"For instance, we are contributing to some software pieces for the pacemaker business of Medtronic. The engineers who are working on this are taking specific courses, where they gather information about the heart and how the heart operates so they can fully understand what they are working on and why. "This is crucially important as they are not

simply programming to a specification, but rather they understand the core problem. That's the innovation principle, you have to understand what you are doing, and once you fully understand it, you are obliged to think about it and offer an alternative and maybe a better

CertiCon has also demonstrated its commit-



CertiCon Prague headquarters

ment to promoting digital literacy in the Czech Republic, supporting concepts such as the European Computer Driving License (ECDL) an internationally recognized IT qualification designed to give learners the skills to use a computer confidently and effectively — and allowing high school pupils to spend time within

> VLADIMÍR MAŘÍK CHAIRMAN, CERTICON

"The most attractive quality is the innovativeness of Czech engineers who are trained to be open-minded."

"These initiatives are very important and we are dedicating a lot of effort and money to these activities. We need to help educate people in the basic skills and we are also developing additional modules for the ECDL, such as a new module on robotics," reveals Mařík.

"Then there are conferences and panel discussions that promote digitalization and AI that we also like to participate in.

"Elsewhere, we are helping to develop curricula at different universities and we are in touch with several high schools within the country. We enable students from these schools to stay with us for a month or two. This helps the vounger generation to better understand digitalization and how companies such as ours are organized."

This willingness to help cultivate a highly skilled generation of engineers has helped the Czech Republic to earn a reputation as one of the fast-growing technology hubs in Europe. The combination of skilled engineers, government support and EU market access has also made the country highly appealing to investors from the US.

"The most attractive quality is the innovativeness of Czech engineers," explains Mařík. "They are trained and educated to be open-minded and are always trying to find an optimal solution.

"When US companies approached us and built subsidiaries here, they were always appreciative of the quality of education on offer and the capability of engineers to intelligently handle problems of different natures. The Czech government also provides good

are manufacturing or developing the latest technology. This is important because this helps to enhance the knowledge of the local people. "If engineers are working with the latest technology, that means they are receiving additional education that can be passed on.

conditions for companies, especially those that

"Furthermore, once you manufacture something in Czechia then the local market starts to absorb the technology. The products can find customers here locally without any need for

"Once you bring the technology, people will quickly get accustomed to using it and it will also be manufactured in the Czech Republic. This brings additional benefit as it opens up the door to the EU market."

Global pioneers in nanotechnology

IOS Group groundbreaking work includes combating counterfeiting

upplying the international market with und-breaking products and technologies in areas ranging from counterfeit protection and nanostructured optics to 3D printing and medical applications, IQS Group has created billions of finished products and currently has 24 patents under application. Committed to innovation, the Czech company has made a truly global impact.

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AND TESTING

CO-SOURCING

& OUTSOURCING

IN-HOUSE

RESEARCH

DEPARTMENT

Made up of five companies with a technolo-

gy background that are each dedicated to a different sector, the main focus is creating smart nano and microstructures that give materials different qualities and properties.

"The most typical example is that we take a piece of plastic, we put a very tiny nanostructure on top of it, let's say a few microns but with precision in nanometers, and it can create beautiful pictures on banknotes or passports visas that we call holograms," explains Martin Jotov,

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CFO of IQS Group. "Because they are so tiny and complex, they are very difficult, or sometimes even impossible, to counterfeit or indefinitely copy."

Employing sophistically designed nanostructures to enhance materials and products with remarkable new functions and features, IQS Group's nanoworld architecture has unlocked innovative functionalities that were previously unimaginable.

Perhaps one of its most important innovations was the creation of a 3D nano printer that has the ability to create a material that is as hard as iron yet 1,000 times lighter. "When the Massachusetts Institute of Technology calculated if this material was used to build a Boeing plane, they found it would weigh just 20 kilograms, says Jotov. "If you had a plane that weighed almost nothing it would transform the aircraft industry. This is the potential of disruptive innovation. Furthermore, this hard material can be coated by some oxides to make it resistant to heat. Other applications would be in biotechnologies where we can, again, use very simple materials, like special types of plastic to build

scaffolds for cell growth. "That way, it may be possible to one day build new livers, a heart or other organs. And because your own stem cells would be used, it would counter the problem with normal implantations where foreign organs can produce

a strong immune reaction." With more than 25 years of experience in nanoengineering and material science, IQS Group has been able to invest in cutting-edge research to push the boundaries of what is possible within this field. This drive to constantly innovate has allowed IQS Group to stay ahead of the competition, both in relation to rival companies and counterfeiters.

"A major part of all of our activities is always connected to development and we are always



Martin Jotov

reinvesting in research and development," reveals Jotov. "It helps that there are so many talented people in the Czech Republic. It is one of our advantages and we utilize it.

"At least a third of our people are scientists and we employ around 16 people with PhDs, who all have more than 20 years of experience in business. This is what makes us unique: we have a lot of scientists who understand business. We are always looking for what the world needs and we are looking ahead.

"One example was during the COVID-19 pandemic when we were able to develop, within six months, a plastic chip which was able to detect the virus just by using physical forces in the micro and nanoworld. Within six months we laid the ground for a completely new direction as we weren't heavily involved in biochemistry

"We are interested in making things a hundred times more efficient and a hundred times cheaper. So to have a cheap test that can verify whether you have an illness, in your own home, is something we consider a positive revolution for the health care industry."



Delivering robust hardware platforms

HARDWARIO focuses on IoT innovation as well as providing hardware and software solutions across a diverse spectrum of industries

n the following interview we hear from Pavel Hübner, CEO, and René Gubančok, Chief Strategy Officer, of HARDWARIO, about the company's mission to transform today into a digital tomorrow.

Could you elaborate on the company's strategies for building a strong partner network and connecting countless devices to deliver cutting-edge Industrial IoT devices

PH: Our vision with HARDWARIO is not just about connecting devices; it's about weaving a story of transformation. We began our journey in the Internet of Things era with an extensive background in designing power-efficient, battery-operated devices. The cornerstone of our strategy has always been engagement. Our initial steps involved launching an IoT kit to galvanize a passionate community of innovators and thinkers. We then transitioned into providing robust hardware platforms tailored for our

> PAVEL HÜBNER CEO, HARDWARIO

"Every time we develop a product, we imagine its impact on the users, businesses and society."

B2B partners. Operating in key regions such as central Europe, the UK, and the US, we've taken vast strides in collecting data ranging from energy usage metrics to atmospheric conditions.

Could you shed light on some of the most innovative products or technologies that HARDWARIO offers?

PH: Every time we develop a product, we imagine its impact on the users, businesses and society as a whole. Partnering with Vodafone has pushed the boundaries of what's possible in the cellular network arena. Our expertise in low-power devices ensures they can function for years without intervention, even in the most challenging settings. For the developers out there, we offer platforms that are not just tools but springboards to launch their innovations. Our CHESTER platform, for instance, stands as a testament to flexibility, allowing customization according to client requirements. As a company, we pride ourselves on not just selling products but providing a foundation for transformative

Considering the exponential growth in IoT adoption, how does HARDWARIO plan to capitalize on this transformative trend?

RG: The beauty of the IoT landscape is its uncharted potential. Yes, the adoption rates are soaring, but we're just scratching the surface of what's possible. At HARDWARIO, we see this not merely as a trend but as an evolution of how businesses and individuals interact with their

To capitalize on this, we're investing heavily in R&D, scouting for emerging technologies and approaches that can push the boundaries further. In the next two decades, we envision a world where IoT is as ubiquitous as the internet today, and we aim to be at the vanguard of this

How will you leverage HARDWARIO's expertise to continue the successful application of machine control, energy metering, and environmental monitoring? What would be your specific ambitions in the years to come?

PH: When an innovative mind dreams, HARDWARIO provides the canvas and brushes. Let's picture a Canadian firm aiming to optimize grain storage across vast territories. Their vision becomes our mission. We deploy our expertise to craft solutions that not only meet but exceed expectations. As we navigate the future, our primary ambition remains consistent: to stay ahead of the curve, anticipate needs, and deliver unparalleled value to our partners and users. We're more than just a company; we're a movement driving the digital transformation of the industrial landscape.

Through digitalization and wise use of human brain power, we're making life better for everyone on the planet. In connecting and understanding the world, we're paving the way for a brighter tomorrow.



HARDWARIO IoT platform CHESTER helps to understand our forests



CEO & Co-Founder, HARDWARIO



Chief Strategy Officer, HARDWARIO



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The Tancící dum in Přague°is also known as the Dancing House

A leading light in the healthcare sector

LINET Group has become a leading global supplier of advanced care beds and provides inbed patient care solutions to various segments

hen Czech entrepreneur Zbyněk Frolík purchased an abandoned farmhouse in 1990 and invited hundreds of nurses to help address the problem with medical beds, he could never have imagined that 33 years later his company would become one of the world's leading manufacturers of advanced care beds.

It has been a remarkable last three decades for Frolík whose desire to improve the conditions for many caregivers facing hardships at work led to the establishment of LINET. After merging with Wissner-Bosserhoff, a German family business with decades of experience in innovating beds and furniture for nursing homes, LINET Group has become the global leader in developing and manufacturing advanced care beds for any hospital or nursing home ward.

A truly global company with four production facilities, LINET products can be found around the world, with the US being the largest market outside of Europe. This is thanks to the company providing equipment for ICU, emergency and delivery rooms, as well as medical-surgical equip-

LINET now boasts a comprehensive product portfolio of beds, stretchers, chairs, mattresses and accessories, which, in recent years, have become even more in demand. This is due to countries around the world spending more on healthcare after the significant impact of the COVID-19

"The pandemic was a big shock for everybody because most of the industry completely stopped and there was a lack of beds in countries such as Italy, Spain and the United Kingdom," explains Tomáš Kolář, Managing Director, LINET Group.

"If you look at the number of beds per 1,000 inhabitants, Italy has the lowest number: there are only three beds per 10,000 inhabitants. It's a similar number in Spain and in the UK, so they didn't have enough capacity for the extraordinary volume of COVID patients. Therefore they need ed to build up some additional capacities, so it was very important for us to support them with

"To achieve this, we ran three shifts, 24 hours a day, seven days a week. We felt like we were only a small part of the solution but we understood we had to help them, otherwise they would have had no way to treat patients.

"At the same time, we are a global company and we have global sourcing. It became impossible to get steel from Italy and other components from Hungary and the UK because they were locked down. It became a real challenge to get the materials needed to produce beds and to keep people working. Fortunately, we were able to source what was needed and we followed all of the safety measures to make sure everyone working in production was checked and machinery was regularly disinfected."

The COVID-19 pandemic also highlighted the shortage of nurses in some of the world's most



Tomáš Kolář Managing Director, LINET Group

powerful countries. While nations are attempting to address this issue by investing in education, Kolář believes that technology could provide a

"It is a very important issue as in the US and across Europe, there is a shortage of nurses. Many didn't return to their job after the pandemic and it really is a drastic issue," he explains. "However, we believe that technology can reduce the workload for nurses. I'm speaking specifically about the monitoring of a patient whether in a hospital or a

"We have a monitoring system that is built into the room and can raise an alarm if a patient is in need of assistance. We can even measure some bio-signals and alert staff much earlier than if they were simply being visited sporadically on a ward. I'm a strong believer in new technologies being introduced in healthcare and nursing."

Embracing technology

Having successfully navigated the company through the challenges of the pandemic, Kolář, who stepped up to the role of Managing Director in 2016, is now contemplating how to take LINET forward. One issue that he believes needs addressing is the willingness of the healthcare sector to embrace a more technological approach.

LINET invests substantial funds into its R&D activities in order to bring innovative solutions to the market and currently owns approximately 50 patents, 30 industrial models and 100 registered trademarks. This focus on developing new products with the help of the latest technology has been instrumental in the company's success.

"I'm a strong believer in changing healthcare to a more technological sector and bringing new technologies to healthcare," he states. "This is not only about digitalization now; it's about completely new technologies and more efficient healthcare. It's also about the older generation and the transition from traditional nursing care to home care. We have to look at these directions and look at these opportunities because it will be critically important in the years ahead.

"I believe that one day we will recognize the

Draslovka's chemicals are available in 80 countries worldwide

abaility to move with the times and embrace in-

electric-powered vehicles, it is also had to alter

"This is extremely important as the IT sector

north west of the Czech Republic, where LINET

Group first came into existence.

of the agricultural machinery industry.

With the Czech Republic emerging as a technology hub, there has been serious investment coming into the country. The US had 259 active investment projects in 2022 and Kolář is hopeful that LINET will attract some interest from investors in the years ahead. "We know how to produce our products in a modern and efficient way and we have very highly educated and technical staff," he adds. "We are also in the heart of Europe which provides links to the biggest economy in the continent, which is Germany. More than half of our exports go to Germany which is definitely a great

Investing in the future

One of Czechia's biggest success stories, LINET has grown significantly thanks to the ability of its board to recognize the areas in which it can improve. Moving forward, the company has identified two key issues that need to be addressed: one being sustainability and the other being education.

Green investment is rising as the EU gears up to meet its 2050 net zero target, with large investments made in the manufacturing sector. This has led to LINET incorporating new sustainable approaches throughout the business.

TOMÁŠ KOLÁŘ MANAGING DIRECTOR, LINET GROUP

"I'm a strong believer in changing healthcare to a more technological sector and bringing new technologies to healthcare."

"We do everything we can to reduce the material which we have in our products and to produce green energy with solar stations. It comes from small things, which are somehow not very comfortable for people. But only reducing the heating by two Celsius in winter makes a big change as does switching off the air conditioner," states

"It's not only about solutions, it's also about behavior and communication as every little bit helps. We have taken measures such as running electric cars and producing green energy, but we're even looking at design to see if products can be produced in a more sustainable way.

This idea of planning for the future can also be seen in the education programs that are being run within LINET as it aims to fill gaps in the local medical manufacturing sector.

"We have quite a need for highly-educated workers. This is being addressed by the government but the industry itself needs to step up and produce this talent," says Kolář. "That is why we have an education program that trains people in R&D positions and production. We are seeing more and more people interested in this program and it is definitely working."

Providing renewable energy solutions

SOLEK Holding designs, installs and maintains solar power solutions for commercial, industrial and utility clients

stablished in 2010 by Czech entrepreneur Zdeněk Sobotka, SOLEK Holding has experienced rapid growth and nas now become a leading renewable energy company with an impressive track record of successfully developing, building and operating numerous solar energy plants across Europe and Latin America.

It's been a remarkable journey for a company that started with just three employees who all believed that renewable energy was the future. After successfully installing a photovoltaic (PV) park on time and on budget in the Czech Republic, SOLEK has gone from strength to strength and has since undertaken projects in Slovakia, Romania, Cyprus and Chile.

Now the Czech company is beginning to diversify its operations to include floating PV, hydrogen, wind and battery storage in a bid to further propel its growth and impact in the renewable energy industry.

"Solar is our core business, however, to be successful in renewables you need to add other technologies. That's the reason that we acquired a BESS (battery energy storage systems) company last year as it was important for our internal development," reveals Sobotka, the owner and CEO of SOLEK.

"We are now working on numerous wind projects which give us the freedom of delivery during all seasons and even at night. In fact, the future of the energy sector to renewables means being more flexible and utilizing both the sun and wind in order to balance production.

"As well as diversifying our products, we are also entering new markets. We decided to explore possibilities in Colombia and it looks very promising. We should start the construction of our first project in Colombia next year and our ultimate goal is to have 400 delivered megawatts in the country by 2028.

"We also have future projects in Chile, such as a hydrogen project in the Port of San Antonio which is more of a pilot scheme in adjusted profitability ratio. However, we firmly believe that hydrogen will be utilized more in the future and could possibly fill one of the gaps in the renewable energy sector."

Offering a comprehensive range of services, covering the development, construction, operation and maintenance of solar power plants, along with tailored solutions for commercial buildings through rooftop power plants and energy storage options, SOLEK is now begin-



ning to explore a brand new technology that Sobotka fully believes could become more prominent in the future.

"We're working with long-term duration storage providers like Energy Dome and their carbon-dioxide battery, which sees liquid CO, evaporate through turbine. This, in turn, produces electricity and then stores it within the huge dome structure," he explains. "This is very omising when it comes to longer storage because batteries are more focused on the short term. We very much see the CO, dome as the future, as well as pumped hydrogen storage."

The future of renewable energy As a company with a successful track record

in solar power plant development and operations, SOLEK has witnessed firsthand the increasing demand for renewable energy from countries around the world. To date, 196 nations have signed the Paris

Agreement — a legally binding international treaty on climate change — and world leaders have stressed the need to limit global warming to 1.5°C by the end of this century. With an increased focus on renewables by

countries around the world, SOLEK hopes to play a major role in driving the transition toward a more sustainable landscape. "We are in the Spanish market which has a

good penetration of renewables but there is a problem with a lack of connection as the grid is really overloaded. This is why we are now look-



Solar energy is at the core of the business for SOLEK Holding

ing for a solution that will make renewables the king in the supply of electricity," reveals

"Currently conventional sources are needed when there is no wind or sunshine but we need to avoid this for countries to reach their sustainable targets. The goal of Chile is 90% renewables by 2050 which is a huge goal that would require the perfect energy mix matrix of

ZDENĚK SOBOTKA CEO, SOLEK HOLDING

"We have ambitions to double our revenue and megawatts year by year. Our goal is then to become an independent power producer"

solar, wind, hydro and storage.

"This is what we want to help the country achieve by storing the energy produced and then it can be released when the customer needs it. We want to see the future only dependent on renewables.

"Greece is another great example because they started with battery options. They have a great position within Europe with excellent irradiation and wind conditions that would allow them to transmit a lot of energy to the center of the continent. Now it is a matter of

simply promoting the country and putting the right conditions in place to attract serious investors from around the world."

Sobotka has certainly witnessed increased demand from across Europe, with SOLEK currently active in France, Spain, Serbia, Romania, Slovakia, Greece, Cyprus and the Czech Republic. The projects in these countries vary, with the company offering a range of services that include everything from design, procurement and construction to operation and main-

However, with the renewable energy industry being an ever-evolving landscape, Sobotka is always having to look towards the future and now has ambitious plans to take the company to the next level. "It's all about growth as if you want your business to be healthy then you sim-

ply have to grow. That's why we have ambitions

to double our revenue and megawatts year by

year," he states. "Our goal is then to become an

independent power producer. "We are also restructuring our activities where we will have an operational part of the business which is focused on the development of design, operation and maintenance. Meanwhile, a separate arm of the company will concentrate on increasing the long-term value of our assets. Ultimately, we hope that all countries will fully embrace renewable energy in its many forms and that we can continue to contribute not only to the industry, but also to help

A forward-thinking energy company

Pražská Plynárenská plan to transition from a gas supplier to an energy solution supplier

ounded more than 150 years ago, Pražská Plynárenská has gone on to become the second largest gas supplier in the Czech Republic in regard to volume and third largest by customer base. Playing a significant role in the European nation's energy sector, the company has a commendable track record in ensuring the seamless supply of natural gas to nearly 422,000 customers in Prague and its adjoining areas.

Inextricably linked with the capital city of Prague, where the roots of the gas industry can be traced all the way back to 1847, Pražská Plynárenská provides services to customers throughout the Czech Republic and has taken specific measures to ensure an uninterrupted

"Historically gas was not used for heating but for lighting and the first streetlights in Prague used our gas," reveals Martin Pacovský, former chairman of the board of directors of Pražská Plvnárenská.

"That was around 160 years ago and we have had a history of reliable service since then. For us, being reliable and safe is an absolute must and it is embedded in our DNA.

"During the global energy crisis last year we presented different plans to the city of Prague and there were several solutions in place if no gas was available. I think we were able to do quite a good job."

Instrumental to the Pražská Plynárenská's long success has been its willingness to modernize operations and leverage emerging technology to enhance efficiency, elevate customer experiences and integrate sustainable practices.

This is proving to be particularly important as the company looks to transition in the near future from being a gas supplier to an energy solution supplier.

"Historically, all the big utility companies simply sold electricity or gas. Now, we want to understand the complex needs of our customers so it's more about installing photovoltaic panels, advising about the best ways to cut consumption levels and how to operate heaters and boilers," explains Pacovský.

"We want to bring solutions for our customers so that we are not just trying to sell energy but we are helping people to save energy and even potentially offer carbon neutral solutions. We feel that more and more citizens in the country are climate aware and they want green energy. We feel that this is something we can

Pražská Plynárenská certainly has a strong understanding when it comes to its customers. Having existed since the late 1800s, the company has always been committed to working with the community, especially within Prague, to ensure the best possible service is available.

"We are owned by the city of Prague and we have always been here to serve the city and its citizens," adds Pacovský. "This has led to us collaborating closely with schools, nurseries, nursing homes and hospitals to ensure they have the best possible service. "We want to be as connected as possible to

the city of Prague which is why we have developed a joint project with the Ministry of Industry to explore the idea of generating green energy from the sewage system.



"We are also exploring the possibility of utilizing LNG and recently traveled to the US to discuss the idea of signing a long-term contract with one of the many US suppliers." One of the clear goals of Pražská Plynárenská

is to become a more environmentally conscious company that fosters a greener approach to its operations. This has led to the implementation of sustainable practices, which Pacovský believes can bring about significant change not just within the company, but also help with Prague's overall efforts to become a carbon-light "There are several areas that we are trying

to develop. Naturally, one area we are looking at is photovoltaic power plants and where these can be implemented within Prague and its surrounding areas," he states. "Prague is quite an old city so we want to make sure we build our business around providing photovoltaic solutions in protected areas and on heritage-protected buildings. However, we will need special approval from the city itself. "We are also exploring green solutions in

regard to heating. We are operating several cogeneration heating units that help us to generMARTIN PACOVSKÝ. FORMER CHAIRMAN OF THE BOARD OF DIRECTORS

"we are not just trying to sell energy but we are helping people to save energy and even potentially offer carbon neutral solutions."

ate heat and electricity at the same time. This is offered to schools and municipalities.

"Ultimately, I see the future of the company is that we will provide green heating solutions to the citizens of Prague. Whether that is through solar power or by utilizing the capital's biggest natural resource and finding a way to heat the water from the river. We want to find smart and flexible energy solutions.

"We have a track record of moving with the times and I would like to think that we can confidently enter this new era of carbon-neutral business solutions. As a company, it is important that we are flexible and modern."

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Multicare X with Opticare X surface: LINET's Premium ICU in-bed patient care solution

Companies such as LINET, Draslovka and Zetor Tractors are recognized on the global stage

he Czech Republic has a rich history in industry that dates back to when the country served as the industrial center for the Austro-Hungarian Empire. In the 150-plus years that have passed, there are numerous unique stories of industrial enterprises whose products have found success in both domestic and foreign markets.

At the heart of this success is a labor force that has proved to be highly skilled, hard-working and willing to embrace innovation. And it is these workers who have provided the platform for Czech companies to excel on the global stage across a variety of industries.

RÓBERT HARMAN MANAGING DIRECTOR, ZETOR TRACTORS "We have started to develop electric tractors and are producing tractors that meet the most stringent emissions standards as sustainability is an important issue for us."

One such company is Draslovka, which was founded in 1906 and initially focused on research, development and production of hydrogen cyanide. This expertise has been passed down from generation to generation and the Czech firm can now lay claim to having the widest global reach of any global sodium cyanide (NaCN) supplier.

Providing most of the world's gold mining

operations with NaCN for their leaching needs, e company is now expanding into other strategic and critical metals and has made several acquisitions to expand its global footprint within the sector. Now firmly established as an internation-

A hotbed of niche industrial champions

Since that moment more than 1.3 million trac-

al company with sales teams in 80 countries,

tors have been sold and shipped to 136 countries around the world. One of the Czech Republic's greatest exports, the company continues to thrive to this day and is now looking towards the future as it begins to explore the possibility of manufacturing electric tractors.

tractors and have started with the smaller models, like the ones that are used to clean streets or cut grass. These are known as utility tractors and have a maximum horsepower of 60," explains Róbert Harman, Managing Director of Zetor Tractors.

as no battery can provide enough power for 12 hours, which is what farmers need. But we are producing tractors that meet the most stringent emissions standards as sustainability is an important issue for us." Zetor Tractors, like many other companies

in the Czech Republic, has repeatedly shown its

Draslovka's headquarters are still in Prague and it is still owned by four families from the Czech Another Czech company that has enjoyed success on the global stage is Zetor Tractors, which first began production back in 1946.

is now penetrating the agriculture sector," adds We decided to start developing electric Similarly, LINET Group, a leading manufacturer of hospital and nursing beds, has repeatedly demonstrated its ability to pivot and explore new avenues Having initially focused on care beds, the

Czech company now provides products such "The technology is not quite there yet when as stretchers, chairs, mattresses, furniture and it comes to using electricity for bigger tractors smart care systems to more than 100 countries around the globe. Recognized as the number one advanced care bed manufacturer in the world, many of the company's products are still manufactured at the facility in Želevčice, a small village in the

"We are a European company that specialnovation. As well as exploring the possibility of izes in healthcare and equipment in patient and ICU rooms. The company is still relatively its offering to accommodate the digitalization young as we were only established in 2010 but you can find our products in counties around the world," states Tomáš Kolář, Managing Di-"We produce, develop and market all of our

products and we still have three facilities for production in the Czech Republic, as well as one in Germany which concentrates on products for nursing homes." Using the expertise of nurses to help develop new products, LINET Group has also been able

to capitalize on the Czech Republic's booming tech sector to create technologically advanced systems such as SafetyPort, which uses sensors in LINET beds to collect and visualize patient "Digital and IoT technologies are here at

home in the Czech Republic and we run many

of them," adds Kolář. "This has been critically

important to us for many years."

A modern metropolis with a medieval past

Prague is renowned for its architectural beauty but is also home to innovative tech companies

ne of Europe's most popular tourist destinations and regularly attracting more than nine million annual visitors, Prague boasts an enticing blend of history, culture and modern charm. Renowned for its picturesque castles and stunning architecture, the capital of the Czech Republic is also home to innovation-driven industries that have positioned the Central European nation as a regional leader.

By far the most developed tech hub in the country, with numerous startups and IT companies now based in the mediaeval city, Prague has the ability to attract both business and leisure visitors. Due to this, tourism remains one of the cornerstones of its economy.

Now there are plans to further improve the city after Bohuslav Svoboda was named mayor for a second time. Having previously been in the role from 2010 to 2013, the Czech politician and physician has witnessed firsthand the growth of Prague and is keen to expand its already significant offering.

"There are already large transportation projects currently underway, including two major ring roads and a new metro line, so there is a huge amount of work that I can start with in my second term," says Svoboda.

"During my last term in office, I was very much in favor of the construction of a new concert hall in Prague because the Czech Republic is a country that is synonymous with music. Our concert hall is already more than 120 years old and unfortunately it can no longer meet the acoustic demands of modern times.

"Now there is a project underway to create



Bohuslav Svoboda Mayor of Prague

a new concert hall and we had an international architectural competition in which some 18 studios took part.

"The biggest problem I have now is that the three leading projects are all so beautiful that it is truly difficult to select a winner. But I'm delighted that this demanding project has the full support of citizens in Prague, even during these tough economic times."

The stunning capital city is also home to a vibrant hub of prestigious universities and leading research institutions that attract students from across the globe. These academic facilities have helped to fuel advancements in technology and healthcare, and have contributed to the



Prague's stunning Old Town Square dates back to the 12th century

country's intellectual prowess.

"Prague is the most important center of education in the country and we have a variety of top-class universities. We have three medical facilities, that I must mention as I am a medical doctor by profession, and just recently we were chosen to host the International Neurosurgical Congress and the Congress of Orthopedists," states Svoboda.

"Prague has become a favorite destination for international expert conferences, not only because we have beautiful weather and historic monuments to explore, but also because of our advanced scientific programs.

"We find that many foreign medical students want to come and study here in Prague. However, we have to limit these numbers slightly as if we allowed everyone to come here and study then we would have more international students than Czech students.

"Another reason our universities are so popular is because the curriculum of our educational institutions is pretty much identical to the European curriculum. Therefore, whatever degree you obtain will be recognized across Europe so if you are a graduate and move abroad there are no further educational conditions that will need to be met."

An attractive destination for students, startups and international companies alike, Svoboda is confident that Prague will continue to flourish and outlines just why people should consider visiting the city.

> BOHUSLAV SVOBODA MAYOR OF PRAGUE

"There are already large transportation projects underway, including two major ring roads and a new metro line."

"We have the greatest concentration of historical monuments in the whole of Europe, our history dates all the way back to the Middle Ages and you can find beautiful statues from the Baroque and Art Nouveau eras," he adds.

"In addition to all of this history, Prague has developed into a modern metropolis and is one of the safest cities in Europe. Visitors to the city will also discover that we have delicious food as well as fantastic beer and excellent wines."

Moving towards a sustainable future

The Czech Republic is pursuing green policies across a variety of industries

he Czech Republic is in the midst of a remarkable transformation as it embraces sustainability across numerous sectors. The country has managed to reduce its greenhouse gas emissions by 43% over the last three decades by decreasing the share of coal in the energy mix and shifting to-

wards less polluting technologies.

With global disruptions in the energy market, the need for a green transition has been heightened and there is a growing need to decarbonise the economy. While this is already underway, the government plans to ramp up its efforts in the years ahead, with a specific focus

on solar energy.

"We will contribute to the rehabilitation of photovoltaics because we consider it a key renewable in our geographical conditions. We will contribute to the establishment of new photovoltaic installations on at least 100,000 roofs by 2025," the Czech government promised in a policy statement last year.

In addition to solar, the state plans to make greater use of wind, hydro and biogas, providing financial support for the construction of projects and speeding up the process of ob-

taining permits in relation to renewable energy sources.

This transition is also being aided by the support of energy companies such as Pražská Plynárenská whose roots within the gas industry can be traced all the way back to 1847.

"The Czech Republic has a history of using coal to heat properties but we are trying to now move to natural gas," explains Martin Pacovský, former chairman of the board of directors at Pražská Plynárenská. "We want to transition to a fully green economy so these central heating solutions will move away from coal.

"We want to move to a net zero economy in the Czech Republic by 2050 and we want to help the country achieve this goal. We are already playing a major role in Prague and we hope to help the capital reach its own climate targets. We want the city and the surrounding areas to become a carbon-light economy."

Another company heavily involved in the move to a green economy is SOLEK Holding, a leading renewable energy firm with a focus on solar energy. Established in 2010, it builds, operates, owns and maintains numerous power plants throughout Europe and Latin America.



Spanning the River Vltava, Charles Bridge is one of Prague's iconic landmarks

"Across Europe it is appreciated when you deliver green energy because every country is trying to meet their environmental, social and corporate governance goals," explains Zdeněk Sobotka, CEO, SOLEK Holding. "That's the reason why we have direct clients with power purchase agreements (PPAs).

"We use utility-scale projects for those PPAs and in the Czech Republic we like to explore industrial rooftops as they have the ability to accommodate a good size in relation to megawatts."

It is not just in the energy sector that the

government is focused on sustainability, the Czech Tourism Authority has recently launched a campaign to promote sustainable and responsible tourism practices and to raise awareness about the importance of protecting its natural and cultural heritage.

This included the construction of a website that features as range of informative articles, guides and resources on sustainable travel, eco-friendly accommodation, green transportation and more. It also highlights organizations and businesses making a positive impact on the environment and local communities.

