

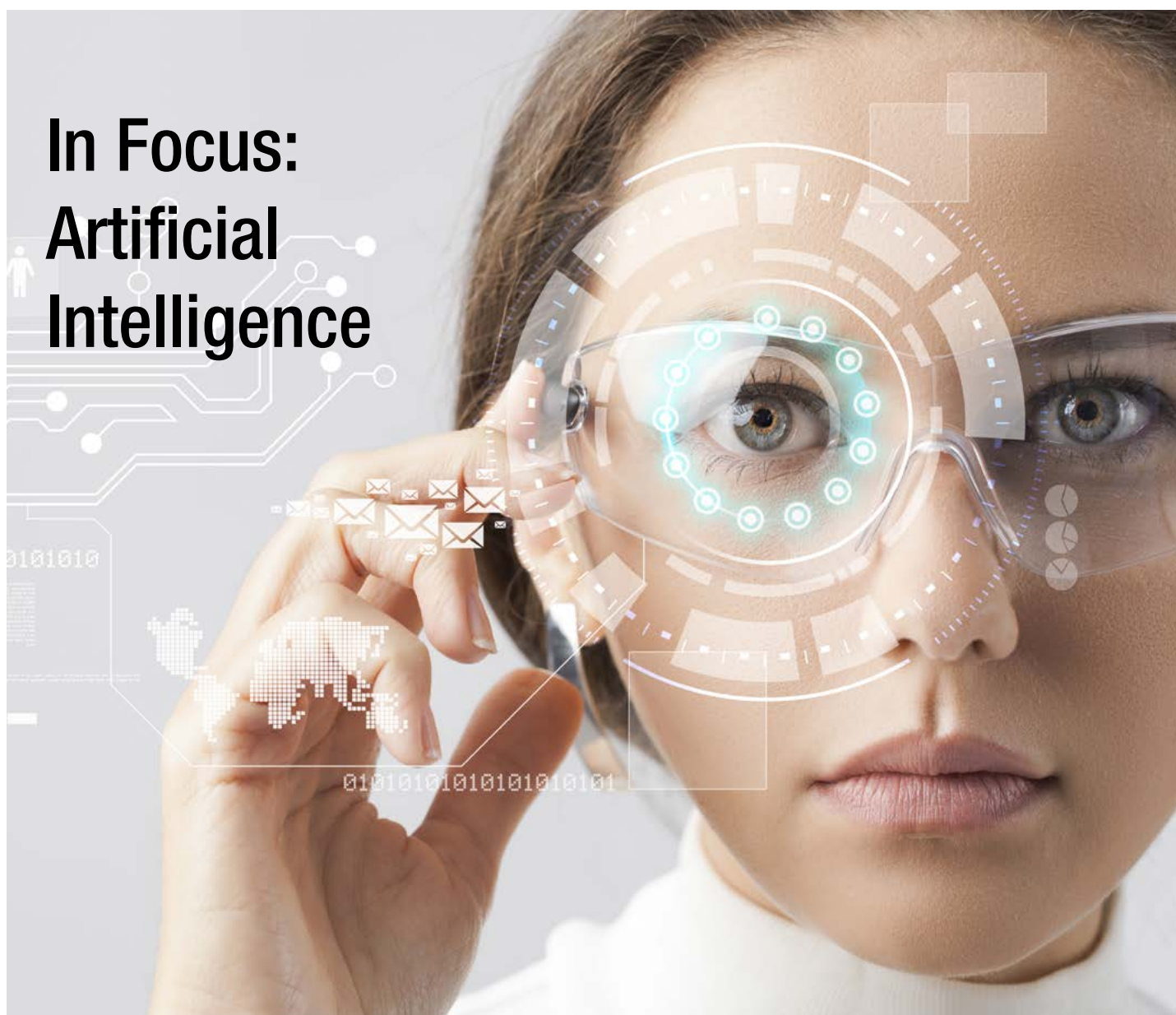
Journal

Fit for Partnership with Germany

ISSUE 14
ENGLISH

MANAGER TRAINING PROGRAMME OF THE GERMAN FEDERAL MINISTRY FOR ECONOMIC AFFAIRS AND ENERGY

In Focus: Artificial Intelligence



Impetus from German SMEs

Egyptian manager optimises
her enterprise
Page 40



10 Years of the MP in India

Bridge builders between India
and Germany celebrate positive
business development
Page 18



IN FOCUS IN THIS ISSUE:

„AI Made in Germany“

Developing Artificial Intelligence (AI) and utilising it effectively is becoming more and more the key issue for prosperity and growth. The German Federal Government has adopted its own strategy with the aim of establishing Germany and Europe world-wide as the leading location for the development and application of AI technologies. [READ MORE FROM PAGE 25.](#)

EDITORIAL 3

► NEWS 4-6

Cooperation with Uzbekistan Extended	4
Belarus is Continuing the Manager Training Programme until 2021	4
Cooperation with China Intensifying	5
New Partner in Azerbaijan	5
Partnership with Kazakhstan Extended	6
New African MP Partners	6
New MoU with Vietnam Signed	6



► GERMANY 7-12

A Look at Tomorrow's Industry	7
Professional. Connected. International.	8
Man and Machine in Interaction	10
German SMEs on the Russian Market	12



New African MP Partners

► PARTNER COUNTRIES 13-24

China: "A Door Has Opened"	13
Chile's SMEs Go Digital	14
A Premiere for Turkmenistan	16
India: "You are Bridge Builders"	18
Georgia: A Location with Great Potential	20
Kyrgyzstan: "We Offer Investors Favourable Conditions"	22
Ukraine: Flipping the Switch	23
Moldova: "We Want to Get Fit for Business with the EU"	24



A Premiere for Turkmenistan



Siberian Entrepreneurs Take Stock

► IN FOCUS 25-33

In Focus: „AI Made in Germany“	25
The Next Step in Digital Transformation	29
"We Integrate Artificial Intelligence into Automation"	32

► ALUMNI 34-37

Siberian Entrepreneurs Take Stock	34
Industry 4.0 at the MP Meeting in Vietnam	35
Iran: Let's Network!	36



► SUCCESSFUL PARTICIPANTS 38-51

Belarus: From Zero to 300,000	38
Egypt: Strong in Steel	40
Mongolia: Securing Health Care Services	42
Kazakhstan: A Programme with a Long-Term Effect	44
Natural Remedies for Uzbekistan	46
Mexico: Taking Off for Europe	48
Ukraine: Ice-Cold Innovations	50

► SPECIALISED TOPICS 52-58

Leadership Skills in the Digital Age	52
Agile Working in Enterprises	56

IMPRINT 59

Dear Reader,



Has Artificial Intelligence already arrived in your enterprise? Are you considering using it in future to optimise business processes or develop new task fields? Analyses show that Artificial Intelligence offers immense potential for increasing efficiency in almost all economic areas, notably in logistics, customer service

and product innovations. For Germany, growth opportunities through AI are already estimated at 50 billion euros a year. Our focal topic "Artificial Intelligence", which starts on page 25, includes information on the steps the German Federal Government is taking to promote the use of Artificial Intelligence. An example from a medium-sized electronics manufacturer shows how the firm successfully uses AI and the challenges it faces in doing so. We also examine what leadership skills entrepreneurs need in this era of human-machine interaction.

This year several of our partner countries are celebrating the tenth anniversary of their cooperation in the Manager Training Programme. We have therefore included articles in this issue describing the results that have been achieved in India and Moldova since the Programme started there and how the countries want to help shape the MP in the years to come. Iranian MP alumni also took stock at a recent meeting in Tehran and, at our request, shared their personal impressions from their stay in Germany (page 36).

As usual, we are introducing Programme alumni in this issue who gained a decisive boost for their businesses through the Manager Training Programme. And you will get to know two entrepreneurs who are successfully contributing to the improvement of health care in rural areas in their home countries (pages 42 and 46).

Do you have any comments or questions regarding the contributions? I would be glad to hear them, so please feel free to drop me a line.

We hope you enjoy reading this issue of the Journal.

Reimut Düring
Head of the Manager Training Programme



Claudia Dörr-Voß and Sukhrob Kholmuradov signed the Joint Declaration on the continuation of the MP with Uzbekistan.

Cooperation with Uzbekistan Extended

Germany and Uzbekistan have renewed their cooperation through the Manager Training Programme. The State Secretary at the Federal Ministry for Economic Affairs and Energy (BMWi), Claudia Dörr-Voß, and the Deputy Prime Minister of the Republic of Uzbekistan, Sukhrob Kholmuradov, signed a corresponding declaration on 21 January 2019 in Berlin as part of discussions on bilateral economic relations. The two partners also signed a further joint declaration concerning advisory services to

the government on economic policy for Uzbekistan.

State Secretary Dörr-Voß said “Uzbekistan has already become our second most important economic partner in Central Asia, after Kazakhstan, and our bilateral economic ties still have great potential. To strengthen trade and investment, we are making our full range of instruments for promoting foreign trade available. With today’s signing of the joint declaration on advisory services to the govern-

ment on economic policy in Uzbekistan and the continuation of our cooperation in the Manager Training Programme, we will be supporting Uzbekistan even more”.

Uzbekistan has been a partner of the Manager Training Programme since 2006. Since then more than 400 Uzbek managers have attended the Programme. The joint declaration agrees to continue the Programme until 2021.

Belarus is Continuing the Manager Training Programme until 2021

Germany and Belarus have agreed to continue their partnership within the framework of the Manager Training Programme until 2021. Dr Heinz Hetmeier, Deputy-Director General for European Policy at the German Federal Ministry for Economic Affairs and Energy (BMWi), and Dmitry Matusevich, Deputy Minister for Economic Affairs for the Republic of Belarus, signed a corresponding Memorandum of Understanding (MoU) in Minsk on 21 February 2019. Belarus has been a partner of the Manager Training Programme since 2006 and has sent 482 executives from middle and upper management levels to Germany since then. In Belarus, the Programme is coordinated by the School of Business at the Belarusian State University.



From left to right: Dr Heinz Hetmeier and Dmitry Matusevich

Cooperation with China Intensifying

The Manager Training Programme (MP) with China has been extended and the partners agreed to intensify the cooperation. The Programme’s German-Chinese steering committee agreed on the way forward at a meeting in Kunshan, eastern China, on 19 March 2019. Both sides expressed their satisfaction with the results so far and were in favour of expanding cooperation. Activities in the follow-up phase are a particular focus of the new agreement with dual goals of increasing the MP alumni’s participation in events and strengthening networking among alumni. Additionally, it is intended that even more participants will be recruited in the future for the “Fit for Partnership with China” programme, which sends German entrepreneurs to China for practical training.

The German Co-Chairman of the Steering Committee, Karl Wendling, Head of the directorate on Foreign Trade Legislation at the Federal Ministry for Economic Affairs and Energy (BMWi), was also very satisfied with

the Programme’s output: “China continues to be one of Germany’s most important trading partners, and the Manager Training Programme contributes to the continuing success of exchange between the two countries”.

A Memorandum of Understanding extending the partnership beyond 2019 will be signed later this year. China has been a Manager Training Programme

partner since 2007 and has sent 540 managers to Germany for advanced training. The steering committee meeting in Kunshan was attended by representatives of the German and Chinese ministries of economics, the Chinese ProSME business development initiative, the German private sector, the German embassy in Beijing, the GIZ and MP alumni.



Participants in the steering committee.

New Partner in Azerbaijan



Small and Medium Business
Development Agency of
the Republic of Azerbaijan

As of the start of this year, the SMB Azerbaijan (Small and Medium Business Development Agency of the Republic of Azerbaijan) has become a new implementation partner for the Manager Training Programme (MP). It thereby takes on the tasks of participant recruitment and the promotion of the Programme and is responsible for the preparation and review of the group trips, which includes selection discussions, introductory workshops and follow-up seminars. The SMB Azerbaijan’s chairman, Orhan Mammadov, praised the cooperation during the MP: “We are convinced that working together in the Programme will help our busi-

nesses to compete on the international market and at the same time win over German investors for Azerbaijan”. The agency, which was founded in 2018, is dedicated to developing and promoting SMEs and strengthening public-private-partnership initiatives and industrial clusters. Azerbaijan’s Ministry of Economic Development has been a partner at a political level since the Programme started in 2009.

DID YOU KNOW?

Approximately

1,000

executives participate
in the MP every year.



Partnership with Kazakhstan Extended



Yermek Alpysov and Dr Ulrich Nussbaum

Germany and Kazakhstan will be continuing their cooperation in the future within the framework of the Manager Training Programme. Dr Ulrich Nussbaum, State Secretary at the German Federal Ministry for Economic Affairs and Energy (BMWi), and Yermek Alpysov, Vice Minister for Regional Development at the Ministry of National Economy of the Republic of Kazakhstan, signed a Joint Declaration on 4th July 2019 concerning the continuation of the Programme up to 2022. Kazakhstan is one of the countries in the world with the most natural resources and, as the strongest Central Asian economy, Germany's most important economic partner in Central Asia. Kazakhstan has been a partner country of the Manager Training Programme since 2004. Up to now, 700 Kazakh executives from the middle and upper management levels have received training in Germany.



New African MP Partners

The Manager Training Programme is expanding its cooperation with Africa. Ethiopia, Morocco and South Africa are set to become new programme partners. Following successful talks with government representatives, South Africa and Ethiopia are getting ready to select their programme participants. The first groups of entrepreneurs are expected to arrive in Germany by the end of this year.

19 countries

from all over the world are currently participating in the Manager Training Programme.

New MoU with Vietnam Signed

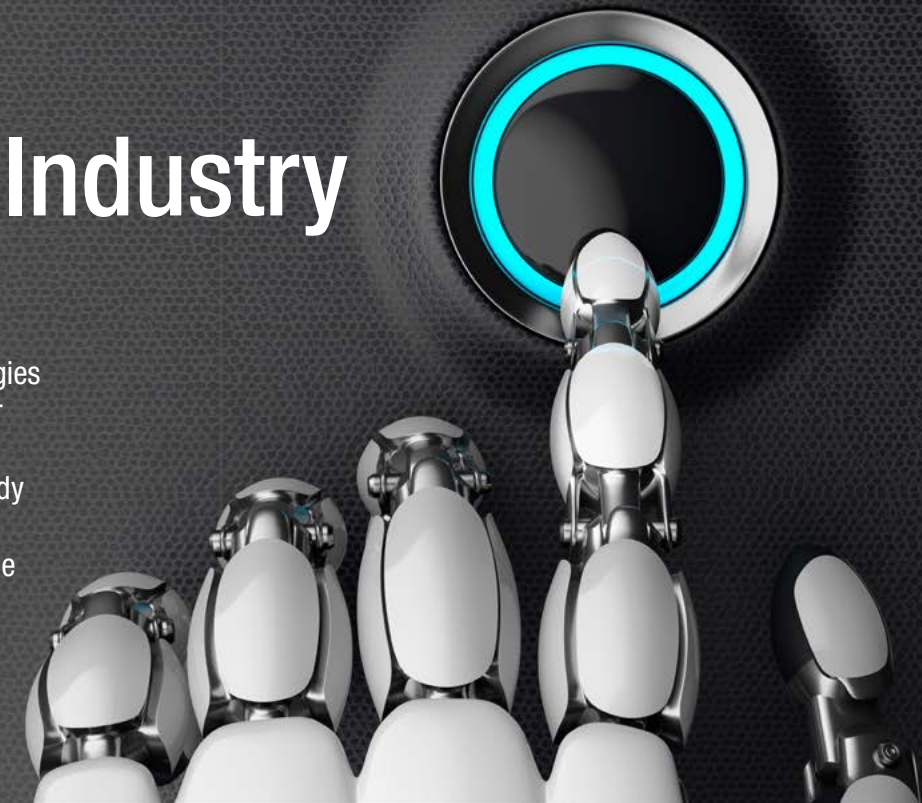
Germany and Vietnam have extended their partnership through the Manager Training Programme until 2021. A joint declaration of intent to that effect was signed by the Federal Minister for Economic Affairs and Energy, Peter Altmaier, and Nguyen Chi Dung, the Minister for Planning and Investment, on 25 March 2019 in Hanoi. Vietnam has been a partner of the Manager Training Programme since 2008. Since then more than 500 Vietnamese managers have attended. The Programme is coordinated locally by the Vietnamese Chamber of Commerce and Industry (VCCI).



Peter Altmaier and Nguyen Chi Dung

A Look at Tomorrow's Industry

Robots, machinery, artificial intelligence, automation and numerous further technologies serve to give us some insight into the major changes ahead in the industrial sector. Mechanical engineering and software already go hand in hand. At Hannover Messe 2019, 14 Tunisian executives were won over by the possibilities for industry and technology.



Hannover Messe is the leading trade fair for industry and technology and has become a showcase for industrial transformation. With 6,500 exhibitors, more than 215,000 visitors, 80 forums, lectures and conferences – these figures speak for themselves. Here the world comes together and provides insights into the technological solutions of tomorrow. Every year, businesses and experts from all over the world meet in Hanover to present their products and exchange information and views on the latest developments. The regular presence of German Chancellor Angela Merkel as guest and speaker, who this year will once again open the trade fair, shows how important this exhibition is for Germany as an industrial location.

The group of Tunisian entrepreneurs from the Manager Training Programme certainly did not want to miss the special opportunity for an exchange with businesses and for experiencing the latest technologies. To keep an overview of the technologies, innovative solutions and enterprises, the executives drew up their own programme in advance and used the matchmaking tools provided by Hannover Messe to make appointments with representatives of other firms.

After the MP participants had completed their own programme, they had a guided tour on the topic of innovative logistics.



your hands at all, just with your eyes. That is like having a third arm", Anouar M'Saad said in astonishment about the eye tracking system, with which input can be given to a terminal using one's eyes. These commands are then carried out by the robot arm.

After a further trade fair event within the scope of "Made in Berlin. Digitally Inspired" (#Berlinproduziert. digital inspiriert), which was about connecting traditional industry and the future of digitalisation, the Tunisian executives were clearly exhausted. Nevertheless, they were all enthusiastic about their experiences: "An incredible trade fair! It was an explosion of the latest innovations; artificial intelligence, automation and enterprise resource planning, just to mention a few", was Wissem Smiri's description of his impressions. Hannover Messe will remain a memorable experience for the Tunisian MP participants, some of whom will most probably be back.

”

An incredible trade fair! It was an explosion of the latest innovations; artificial intelligence, automation and enterprise resource planning, just to mention a few.

At the stands of the firms Bossard, Endress+Hauser Messtechnik, Phoenix Contact, SAP Deutschland and SSI Schäfer, the respective representatives demonstrated their products, answered the Tunisian executives' questions and provided information. Many of the entrepreneurs were particularly impressed by the SAP stand. "You can operate the robot without using



About the author
Henrik Pfeiffer has been with Commit Project Partners GmbH since 2016 and acts as a tutor within the framework of the MP.



Professional. Connected. International.

The BMWi Manager Training Programme (MP) is implementing eighteen training centres across Germany for GIZ. Since the beginning of this year, new training partners have come on board – three of whom introduce themselves here.

Baden-Württemberg International (bw-i) and ICUnet Group work in a consortium, and this year they will be in charge of three groups from Vietnam, Russia and Chile for the MP. As the competency centre of the State of Baden-Württemberg, bw-i advises domestic and international enterprises, research institutes and universities, clusters and networks, as well as regions and municipalities regarding different aspects of internationalisation. For foreign investors, it is the main point of contact in the south-west of Germany. bw-i supports firms from Baden-Württemberg in entering international markets. In addition to delegation trips abroad, trade fair appearances,



The businesses in Baden-Württemberg benefit from the on-site visits, because through the Programme they gain contact to potential business partners and thus access to new international markets.

Bettina Klammt, Head of the Department for International Projects, bw-i

informational events and contact and cooperation exchange, bw-i offers their clients international expertise and global networking.

The Manager Training Programme as a classical instrument for foreign trade promotion is thus within the core focus of bw-i. "In implementing the Programme we can draw on all of our strengths", says Bettina Klammt, Head of the Department for International Projects. "Of course, the businesses in Baden-Württemberg also benefit from the on-site visits, because through the Programme they gain contact to potential business partners and thus access

to new international markets. Through our work in the MP, we as bw-i can also expand our network here and internationally, and continuously stay abreast of economic developments in the MP partner countries and the needs of the Germany economy", explains Klammt.

The scope of participating partner countries, and thus Programme participants is especially appealing for ICUnet. "Contact with international executives is valuable to us on many levels: personally, professionally and culturally. In addition, contact with the German enterprises that we visit as part of the Programme, represents an important connection to



Contact with international executives is valuable to us on many levels: personally, professionally and culturally.

Thilo Beyer, Project Director, ICUnet

the domestic economy here", explains project director Thilo Beyer, adding "The insights into the economies of the partner countries, as well as those of the German firms, expands our global mindset." The ICUnet Group also advises businesses and organisations globally as part of their daily business on intercultural matters concerning all aspects of internationalisation processes and supports them in their global activities. Agility and new forms of working are their focus there.

Both consortium partners are very positive about the MP: "From our perspective, this combination of offering user-oriented competence for working together with German firms and the immediate initiation of business activities is unique", says Bettina Klammt. Thilo Beyer also mentions the combination of theory and practice, and the compact design of the MP. "In only four weeks the foreign executives get to know Germany through training sessions, on-site visits and a cultural programme, and also have enough time for their own individual project".

Founded in 2001 as a medium-sized consultancy, Berlin-based **Commit Project Partners GmbH** helps international firms from Germany and other countries to enter new foreign markets. One focus is on executing events for the promotion of foreign trade. Commit has a broad network in business, politics and professional associations, especially in Russia and other states from the former Soviet Union. That is also reflected in their staff: nearly everyone speaks Russian.

But it does not stop there, as Commit is active globally many employees are very comfortable doing business in Spanish, French, Polish and Swedish. –

In 2019, Commit is in charge of three groups in the MP. Managing Director Gerrit Schmitter is looking forward to welcoming the international guests: "The managers benefit from our comprehensive network and the Germany-wide contacts, the cross-industry expertise and the years of experience in carrying out foreign trade events. We are very happy to now be a part of this exciting project for international cooperation, and hope to be a perfect addition to the MP's work so far and for the participating foreign managers", explains Schmitter adding, "At the same time, the Programme offers us the opportunity to come into contact with new cultures and countries beyond our previous circle of influence, which is extremely enriching".



The managers benefit from our comprehensive network and the Germany-wide contacts, the cross-industry expertise and the years of experience in carrying out foreign trade events.

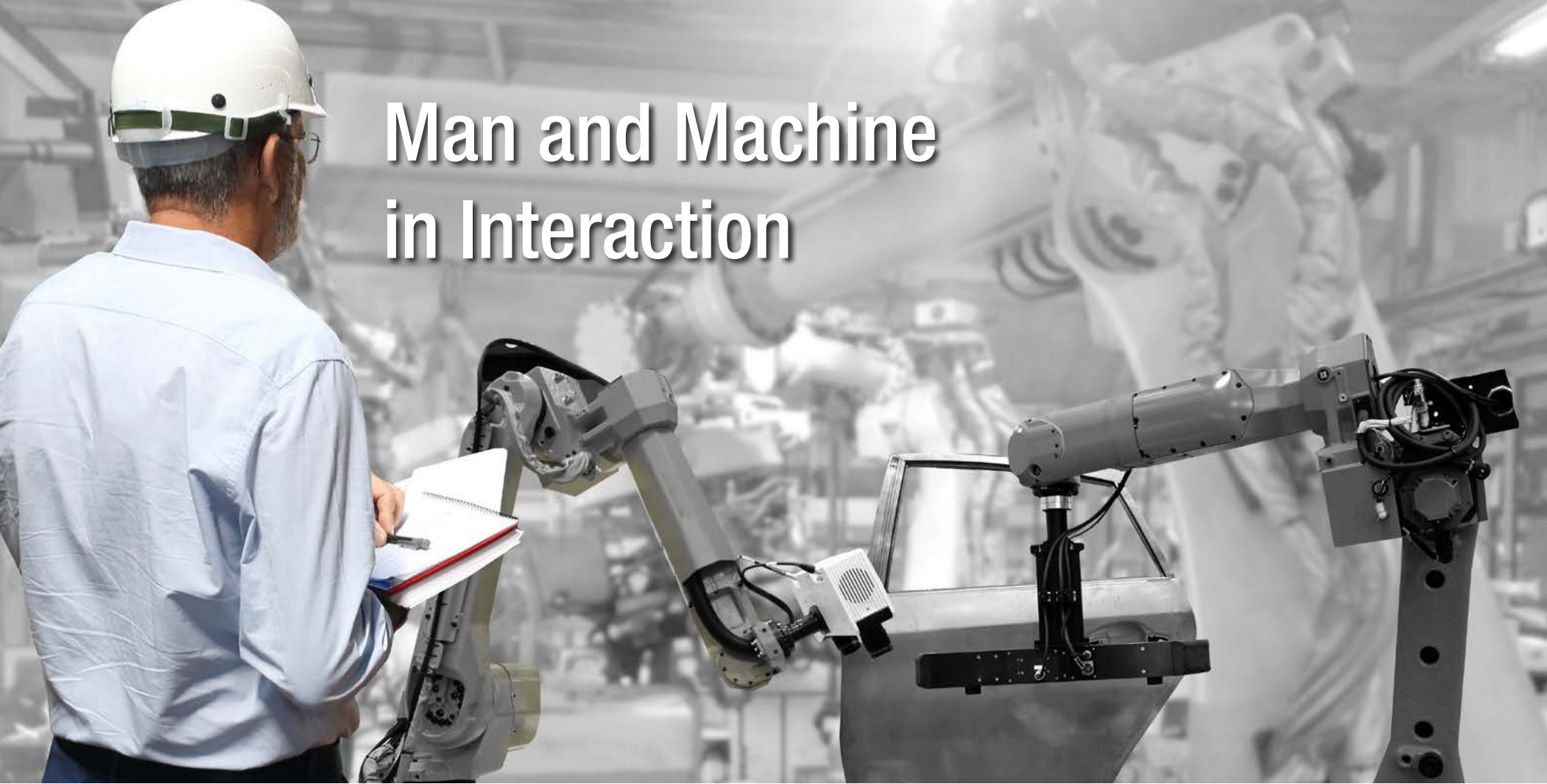
Gerrit Schmitter, Managing Director, Commit

You can find more information about the training centres on the following websites:



www.bw-i.de
www.icunet.group
www.commit-group.com

Man and Machine in Interaction



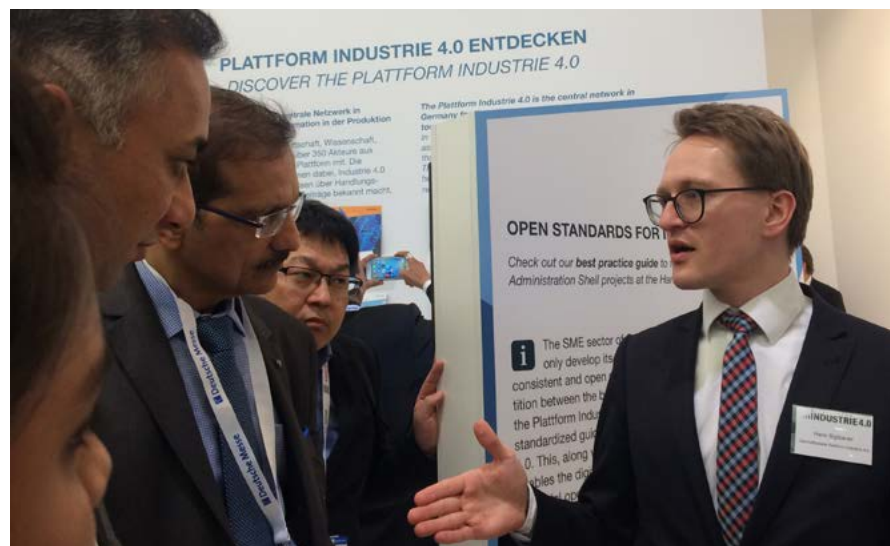
Digitalisation is already impacting our existence today. Humans, machines and products are directly linked – whether in the economy, politics or society. In industry, digital transformation is considered to be the key to success for long-term strategic positioning – one reason why the Manager Training Programme is offering its participants special training sessions on Industry 4.0.

In the first half of 2019, two groups of foreign executives were able to take advantage of this offer: one Eastern European group from Belarus, Moldova and Ukraine, and an international group from India, Mexico and Mongolia. The

entrepreneurs represented the sectors of IT, software development, communications, EDP services, data storage and management and consultancy. In theory-based training sessions, they learned about the latest developments in Industry

4.0, and about German technologies and solutions from the areas of automation and digitalisation. The range of topics was large, from Industry 4.0 in SMEs in general to smart logistics, the internet of things and digitalisation in production, and even clusters in Industry 4.0.

On-site visits to VW's "car city" or to "Hidden Champions" like Trumpf GmbH + Co. KG, Alfred Kärcher Vertriebs-GmbH and SEW Eurodrive GmbH then offered practical insights into the implementation and realisation of Industry 4.0, into the automation and digitalisation in production processes, as well as the application of artificial intelligence in the industrial sector. Here the MP participants held a series of discussions with potential German partners concerning joint projects. The visit to Phoenix Contact GmbH was a highlight for the group from Eastern Europe. This international company provides con-



Hannover Messe provided an opportunity for an exchange with experts.

Industrial Transformation

was the central theme at Hannover Messe and led to profitable and inspiring encounters.

as the potential of these developments. One platform with six showcases offered the entire cross-section of technical innovations for the complete supply chain – from automation to supplier solutions. Through pre-arranged visits to the stands of renowned businesses, the groups could experience the central theme, Industry 4.0, and its significance in Germany first-hand. In addition to the joint stand presented by the Federal Ministry for Economic Affairs and Energy (BMWi), at which technologies and innovations in the areas of "think tank", "assembly line", and "marketplace" were exhibited, BMWi's platform Industry 4.0 platform and meetings with representatives of German firms from the automation sector provided an opportunity to exchange expertise. At the Industrial Pioneer Summit the executives took a look into the future. The question of "What will come after Industry 4.0?" was examined in lectures and workshops, proffering concrete approaches and preliminary answers. Visionaries and innovators from various fields, including industry, politics, economics and research, gathered at the summit and shared ideas, innovations, technologies and theories.

The MP participants were very satisfied with the trade fair visit, and were then invited to numerous individual follow-up meetings at the trade fair stands or the firms' sites following the talks. The businessman Sergiy Yarenenko from the Ukrainian city of Kharkiv used the opportunity to meet with SAP's top management.

The opportunity to get to know new technologies and innovations, analyse competitors, meet potential German business partners and speak with experts on future-related topics was taken by all of the executives during their stay in Germany. Andriy Gumennyi from Ukraine, whose enterprise is concerned with the integration of industrial control systems, said at the end of his training programme: "Participating in the MP changes my perspective on a lot of things in our firm. I recognised how important it is to look at the big picture. And I got some very new ideas here." Many of his colleagues agreed.

nection and automation technology for transport infrastructure, electromobility, for clean water, renewable energies and intelligent power grids, as well as for the construction of energy-efficient machines and systems.

Industry 4.0 at First Hand

Profitable and inspiring encounters were also on offer at the visit to the Hannover Trade Fair, where the central theme of 2019 was "Industrial Transformation". The world's largest industrial trade fair exhibited all of the technologies related to the industrial transformation as well

About the authors



Franziska Wegerich has been working at AHP International since autumn 2015 as a specialised tutor for the MP. In addition, she is responsible for organising and implementing individual market access programmes for BMWi and supports American firms in establishing business relations with Europe.



Dr Ronald Pschierer is Programme Director at DMAN and responsible for designing and implementing qualification programmes within the framework of the MP for executives from Eastern Europe, Asia, North Africa and Latin America.



Company visits (here at Phoenix Contact) provided insights behind the scenes of successful medium-sized German enterprises.

German SMEs on the Russian Market

On 28 June 2019, representatives from business and politics met for the eleventh time for the German-Russian Entrepreneur Talks in Bonn. Attendees at the well-established conference discussed new opportunities for German SMEs on the Russian market.

“We are delighted that German and Russian entrepreneurs have come together here again this year,” Vladimir Sedykh, Russian Consul General in Bonn said as he welcomed the approximately 150 guests, who included numerous entrepreneurs, representatives from the Federal Ministry for Economic Affairs and Energy (BMWi), the GIZ, Manager Training Programme (MP) partners from Russia as well as MP and “Fit for Partnership with Russia” programme alumni and current participants.



In her welcoming address, Dr Angelique Weikum-Groß from the BMWi praised the valuable role the Entrepreneur Talks played in bolstering bilateral relations. “Russia is an important partner for German entrepreneurs. The Federal Government is committed to dialogue and we see the deepening of the bilateral economic policy dialogue between the two countries as a very positive development”, she said, stressing that the event format has contributed to linking firms from both countries for many years. “The enterprises involved have made this fruitful dialogue that brings us together possible”, Weikum-Groß said. In his address, Alexei Bunkin, Director of MP Russian partner organisation the Federal Resource Centre in Moscow, praised the more than 20 years of excellent cooperation through the MP.

The Russian experts invited to speak addressed practical entrepreneurial issues. Aaron Röschke, Head of the Russian Competence Centre in Düsseldorf, outlined the current situation for German firms in Russia. Falk Tischendorf, who heads the Beiten Burkhardt law office in Moscow, spoke about the challenges posed by localisation and sanctions. Andreas Steinborn of Delcreda Moscow presented financing options, consulting instruments and credit insurance for exports. The attractive investment options available in the Ulyanovsk region were presented by its First Vice Governor Anatoly Ozernov.

In a subsequent panel discussion, German entrepreneurs reviewed the past twelve months and described their experience in dealing with the difficult political and economic situation between Germany and Russia, including sanctions, export controls, new certification requirements and slumps in sales. Various Russian regions, including the Leningrad, Voronezh, Kaluga regions and the Republic of Bashkortostan, competed for the favour of German SMEs in a location competition. Many conference participants also took advantage of the popular German-Russian networking event to initiate bilateral conversations.

The German-Russian Entrepreneur Talks are jointly organised by the BMWi, the Consulate General of the Russian Federation and the GIZ, and foster exchange among business leaders from both countries. This event has been held annually since 2009.

The German-Russian Entrepreneur Talks enable a direct exchange. Photo on the left: Angelique Weikum-Groß, photo on the right: Reimut Düring



“A Door Has Opened”

For the third year in a row, China is Germany's most important trade partner and currently the third most important export market. More than 5,000 German firms have already established operations in the country. Hence, interest in the “Fit for Business with China” Programme remains strong among German entrepreneurs. In May, for the eighth time, a group of German businesspeople travelled to China.



The focus of “Fit for Partnership with China” is on establishing initial business contacts.

The Programme began in Peking with a welcome by representatives of the Chinese Ministry of Industry and Information Technology (MIIT), the Centre for Promotion of SME Development (ProSME), the China International Cooperation Association of Small and Medium Enterprises, the Chamber of Commerce Abroad in China (AHK) and the German Embassy. All speakers emphasised how important it was to continue to strengthen the cooperation between China and Germany.

Qingdao, Jinan, Yantai and Weihai were further destinations as part of the two-week trip, during which the German entrepreneurs gained insights into the current political, but also economic developments, in particular those relating to Chinese SMEs. In addition to visits to industrial estates, the itinerary included two B2B matchmaking

events. Here the strong interest on the part of Chinese SMEs was noticeable: more than 100 enterprises took part. During the bilateral talks, a number of individual on-site visits were arranged, and the foundations laid for future business relations. “China is well on the way to becoming the leading industrial nation in the world”, one participant said. This became clear during a visit to BOE, a leading electronics group in Peking, for example: within just 20 years, the enterprise has developed into one of the leading manufacturers of LCD and TFT displays – partly thanks to cooperation agreements with international partners – and has become a globally operating supplier of technologies, products and services for the Internet of Things (IoT).

Ahead of the trip, the participants attended a preparatory seminar held by GIZ in

Bonn, at which they dealt intensively with trends in business with China, the current economic situation and the drafting of contracts, but also with the special characteristics of communication and intercultural subtleties.

“The stay in China was an unforgettable positive and emotional experience”, one participant said after returning home. “The hospitality, friendly conversations, the progressiveness and the quick implementation of projects really impressed me.” “Work has just begun, but a door has definitely opened”, said another participant at the end of the trip.



Since 2012, “Fit for Business with China” has been enabling German entrepreneurs to rid themselves of existing stereotypes regarding China and gain a better understanding of the country and its economic mechanisms. This makes it possible to actively take advantage of the opportunities the Chinese market offers, to the benefit of both sides.



www.managerprogramm.de/FFA

Chile's SMEs Go Digital

The Chilean government is supporting small and medium sized enterprises in taking the digital leap to make them more productive and competitive. More than 25,000 SMEs are expected to benefit from the digitisation offensive launched in January 2019.

The Chilean Ministry of Economic Affairs is the driving force behind the nationwide digitisation offensive which is being implemented in cooperation with the private sector and public institutions. Public private partnerships are in place with firms such as Facebook, Google, Amazon and Entel. The Chilean business development initiatives CORFO and Sercotec are also involved in the implementation. CORFO

acts as the Manager Training Programme's implementing organisation on the ground in Chile. CORFO's Executive Director Sebastián Sichel sees Digitiza tu Pyme as an important building block in expanding Chilean MP participants' management skills: "The digitisation initiative complements the technological know-how that our entrepreneurs acquire during their stay in Germany. Both programmes can

thus help Chilean SMEs take a significant leap forward in development".

The "Digitaliza tu Pyme" (Digitise your SME) initiative aims to empower small and medium sized enterprises to use digital technologies to increase sales, lower costs and optimise customer relationship management. The Chilean government has earmarked around US\$ 6.5 million for



The Chilean digitisation initiative comprises five instrument packages.

Facts & Figures

While **90%** of all small businesses in Chile have internet access, many use it primarily only for email. Only **40%** operate a website and just **16%** sell their services via the internet.

SMEs that are not digitalised cannot take advantage of the business opportunities offered by growing e-commerce. The market volume in Chile is more than US\$ 4 billion and is set to double by 2020. E-commerce is growing by **30%** every year and accounts for more than **60%** of total turnover in some sectors, including tourism.

Many Chilean SMEs are concerned that digitisation is complicated and expensive. More than **70%** of micro-entrepreneurs who had no IT equipment reported no incentive to purchase any, as they were too small to need it.

A large percentage of entrepreneurs understand that integrating the new technologies is inevitable. **58%** of SMEs estimate that they will acquire digital technology over the short or medium term, for example.

Sources: Chilean Ministry of Economy, AVLA 2018, CCS 2018



the programme dedicated to three values, "understanding, learning and applying" and comprising five instruments.

The action plan began with "Atrévete Digital", a series of events to encourage enterprises to embark on digital transfor-

mation. The events started in March 2019 and will continue in all 16 regions of the country throughout the year. In technical discussions and workshops, 300 small and medium sized businesses will have the opportunity to learn all about the importance of technology for their enterprise's growth

and about the various public funding options.

Tourism Ripe for Digitisation

Businesses can take a free online test to determine their degree of digitisation and digitisation potential. Chilean SMEs can also attend workshops on digitisation, which will be conducted both live and virtually. The "SME online" programme will offer 1,500 firms advice and training in online marketing and e-commerce to enable them to adapt to changing customer needs and new forms of consumption through new business models. The Digitiza tu Pyme initiative places particular emphasis on digitising the tourism industry. The proportion of small and medium sized enterprises in this sector is exceptionally high at 90 per cent, and the risk of losing out to the competition due to a lack of extensive online services is equally high. Targeted training has been designed as a countermeasure.





Entrepreneur Shasanem Garliyeva (on the left in the photo) aroused considerable interest with her booth at the Frankfurt Trade Fair.

A Premiere for Turkmenistan

Shasenem Garliyeva runs a French cafe and a bakery in Ashgabat. Turkmenistan The Manager Training Programme (MP) gave the dynamic entrepreneur the idea of presenting her country at the Frankfurt Trade Fair for the first time – with success.

Journal: What motivated you to participate in the Frankfurt Trade Fair?

Garliyeva: As part of the MP I visited a trade fair in Hanover last year. That really impressed me, and I started thinking about having a booth at the Frankfurt Trade Fair in order to better acquaint European consumers Turkmenistan and its culture. Back in Ashgabat I presented my idea to the economic development agency, Dalchyn. They supported me together with the MP training centre in applying for the international consumer goods trade fair Ambiente and helped to connect me with trade fair contacts in Frankfurt.

But when you received confirmation, did you have any doubts about participating...

At first, I wasn't sure whether I was up to the challenge of participating in such a big international trade fair. What persuaded



I can only advise every programme participant to be brave, decisive and active!

me then – despite some language barriers – was the fact that the business is being done by people who basically all speak the same language in a way. Today I'm happy that my concerns disappeared very quickly thanks to the support of the organisers in Frankfurt. The manager responsible for Turkmenistan presented us with several specialist advisers who analysed our exhibition booth and provided us with a professional consultation.

What kind of feedback did you get at the trade fair?

At that time, there hadn't been any exhibitors from Turkmenistan in the entire history of the Frankfurt Trade Fair. So I

was the first to present our country there. I was pleased by the visitors' sincere interest in the culture of Turkmenistan. At my stand, I displayed traditional crafts from Turkmenistan: clothing and carpets made of natural materials, and also silver jewellery.

How did your enterprise benefit from its appearance at the trade fair and from the MP?

Participating in Frankfurt was an invaluable experience for me. On the one hand, many of the visitors to our booth confirmed that the things we presented were unique. And on the other hand, we were interested in finding customers for our products. We are now in negotiations with some possible clients and hope to develop sustainable business relationships from there. Without the MP I certainly wouldn't have got that far.

In conclusion, what do you recommend to other MP participants?

I can only advise every programme participant to be brave, decisive and active!

Trade fair appearance as a stepping-stone to international success

Jürgen Werz, Area Sales Manager at the Frankfurt Trade Fair, supported Shasenem Garliyeva within the context of "Ambiente 2019". In his opinion, a trade fair offers many opportunities for small and medium sized enterprises.

Journal: What can a trade fair appearance do for a SME?

Wertz: Examples from various countries show that participating in a trade fair is, in general, a good way to gain market entry, establish a name in an international environment, and set up joint ventures and networks. That is how international business relationships are created. Support from our sales partner helps the exhibitor to exploit new market potential and succeed with their product or service beyond their usual regional boundaries. And there's also a little bit of pride in being part of the global "Frankfurt Trade Fair Family".

You have worked with various projects on-site, focusing on capacity building. You particularly support female entrepreneurs, young people and regional development. Ms Garliyeva also mentioned targeted expert coaching sessions during the trade fair. What specifically do you offer?

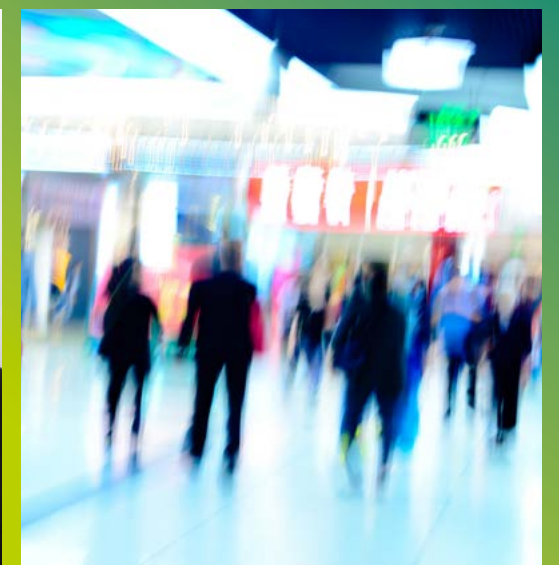
Through the responsibility of each area sales manager for specific countries, we are very familiar with the expectations and challenges of the respective regions and the firms that are based there. The selection and training of local sales partners is thus individually tailored, just like the training sessions we offer to teams, their exhibitors and visitors. Depending on the stage of development, we offer training in Frankfurt or locally in multiple steps about how to present as an international exhibitor in Frankfurt or globally, or how to attend a trade fair as a visitor to make the most out of the event for your own purposes and networking.

One focus of the Frankfurt Trade Fair is the sustainable growth of robust structures and partnerships. What are your experiences so far with Turkmenistan?

We had been searching for a suitable sales partner in Turkmenistan for over four years. Because we are interested in long-term partnerships for our global network of sales partners, the applicants must fulfil a number of criteria. Our sales partner responsible for Turkmenistan and her team succeeded in getting Ms Garliyeva, with her products representing the country, to "Ambiente" as the first exhibitor from Turkmenistan. A very high level of interest on the part of the exhibitors and visitors can be seen, but the usual administrative framework currently remains a challenge.



Jürgen Werz





“You are Bridge Builders”

Roughly 100 guests from India and Germany met in the Indian city of Pune in June 2019 to take stock and look ahead into the future. The special occasion was the tenth anniversary of the Manager Training Programme (MP) with India.

The participants in the two-day event included a large number of MP alumni, but also representatives from the German Embassy in New Delhi, the German Consulate General in Mumbai, the German Chamber of Commerce Abroad in Pune, the Federation of Indian Chambers of Commerce and Industry (FICCI), the Confederation of Indian Industry (CII),

InVest India, GIZ and IGBDA, the Indian alumni organisation.

Monika Stienecker from the German Federal Ministry for Economic Affairs and Energy (BMWi) assessed the cooperation between the two countries after the first ten years as being very successful: “The nomination of the CII and FICCI, the

largest Indian employers’ organisations with excellent networks into the business sector, to implement the Programme laid the foundation for the smooth functioning of the Programme”, said Steinecker. She emphasised that the MP with India was highly regarded in political circles and, addressing the alumni present, continued: “The participants are one of the Programme’s strengths. You are bridge builders between India and Germany because you know how business functions in both countries”.

In a lively plenary discussion, four Indian entrepreneurs described examples of how taking part in the MP had subsequently influenced their work and business development in a positive way. These examples included distribution partnerships for German products such as lighting systems or special part-turn actuators to complement their own product range, which had led to improved competitiveness in the Indian market for the firms involved. The development of new products in co-

operation with a German firm for developing soundproofing walls had resulted in considerable increases in turnover for one entrepreneur in Mumbai. The export of Indian tractor components to Germany was a further success story from India.

Topics such as agile project management, participation in trade fairs, but also online marketing or change processes in enterprises were on the agenda for workshops. In addition, alumni work was the subject of animated debate. Mritunjay Kumar, who coordinates the MP in India for the FICCI, stressed that the Indian alumni organisation was an outstanding platform for Indian Programme alumni to keep in touch with one another. “Exchanging experiences and demonstrating examples of best practice enables our alumni to enter partnerships for growth in a holistic way”, said Kumar, adding that the IGBDA wanted to become more results-oriented in order to improve its support for the MP alumni. Concrete plans for alumni work include the expansion of cooperation with other alumni organisations throughout the world and joint trade fair presentations of Indian enterprises. All participants said they would like the Programme to be implemented in an even more agile manner with regard to content, naming innovation management and Industry 4.0 as key topics. The participants in the event



Monika Stienecker



Mritunjay Kumar



The participants are one of the Programme’s strengths. You are bridge builders between India and Germany because you know how business functions in both countries.

also all agreed that more focus should be given to the area of quality management in view of cooperation with German businesses.

India has been a partner country of the Manager Training Programme since 2009. About 780 Indian executives from the middle and upper management levels have completed the MP in the meantime, many of them from family businesses run by the second or third generation. The majority of the Indian participants come from the manufacturing industry.



Up to now, approximately 780 Indian executives from the middle and upper management levels have participated in the MP.



Support for the Indian MP alumni is to be improved in the future.

A Location with Great Potential

In the past ten years, Georgia has introduced numerous reforms. Located at the crossroads between Asia and Europe, the country is currently gaining economic importance on the world market as trade flows between Europe, the Caspian region, Central Asia and China increase. **Nika Pertakhia** from Enterprise Georgia, an economic development agency and a Manager Training Programme implementing partner in Georgia, cites four factors crucial for doing business in the country.

1 Efficient and business-oriented state structures

Thanks to far-reaching reforms, current taxation in Georgia is efficient, fair and easy to understand. Georgia offers investors a liberal tax system with six flat tax rates. On the World Economic Forum's Global Competitiveness Index, Georgia ranked eighth for the lowest tax burdens in the world. Companies enjoy simplified administrative and licensing services and can access all the necessary documents via one-stop shop organizations. The Enterprise Georgia business development agency advises companies from the market entry phase through to investment follow-up, mediating with the authorities if necessary, creating investment incentives and working according to the single window principle. The Georgian Agency for Innovation and Technology (GITA) coordinates innovation and research at the national level and promotes the development of start-ups.



Nika Pertakhia is Entrepreneurship Department Programme Manager at Enterprise Georgia. His activities include project implementation, SME needs assessment, providing needs-based consulting services, and communicating with stakeholders such as government institutions, businesses and NGOs involved in the development and implementation of SME policies.

 www.enterprisegeorgia.gov.ge



2 Open market access

The liberal trade regime in Georgia gives potential investors and companies access to a market of 3.7 million people, while also facilitating access to other markets, such as in Central Asia. No (import) tariffs also make market access easier. To date, Georgia has signed free trade agreements with some CIS and EFTA countries as well as Ukraine and Turkey. The free trade zones created by association agreements with the EU and China also make Georgia an attractive location for trade and investment.



3 Good transport and logistics conditions

Georgia has four seaports in Batumi, Poti, Kulevi and Supsa and another deep-sea port is currently under construction. Three international airports in Tbilisi, Kutaisi and Batumi, a 2,084 kilometre rail network and a rapidly improving road network provide good transport and logistics conditions.



4 Low operating costs

Well-trained staff and moderate wages are already attracting foreign companies. The energy sector is particularly attractive for investors: with 26,000 rivers, Georgia has one of the largest freshwater resources per capita, which enables clean and comparable low-cost energy production and roughly 80 percent of all electricity comes from hydropower. Opportunities for generating wind and solar energy are currently being investigated. The country's financial sector is stable and growing steadily. 16 commercial banks are currently active on the Georgian market. The two largest – the Bank of Georgia and TBC Bank – are listed on the London Stock Exchange. All major financial institutions are represented on the Georgian market, including EBRD, IFC, ADB, EIB and OPIC. In addition, the state-owned JSC Partnership Fund provides equity for financially viable projects and participates in new investment projects to reduce country risk for foreign investors.

Georgia in Figures

Area: **69,700 km²**
 Population: **3.7 million**
 GDP/nom.: **17.2 billion USD***
 GDP per capita: **4,661 billion USD***
 Economic growth: **4.6 %**
 Foreign trade quota (Export & Import/GDP): **2018: 76.5 %**
 Export quota (Export/GDP): **2018: 20.6 %**
 Ease of doing business 2019:
Ranking 6th out of 190 countries
 Global Competitiveness Index 4.0 2018:
Ranking 66th out of 140 countries

Source: *Estimation/Forecast, Source: Germany Trade & Invest (GTAI) 2019



Erines Otorbaev

“We Offer Investors Favourable Conditions”

The *Journal* spoke with Erines Otorbaev, Ambassador of the Kyrgyz Republic in Germany, about the economic development of the Central Asian country and the significance of the Manager Training Programme.

Journal: Mr Otorbaev, what characterises the Kyrgyz economy?

Erines Otorbaev: Hydropower and mining, light industry, agriculture, the manufacturing and processing industry as well as transport and tourism are the most important sectors of our economy. Last year, our government adopted a national development strategy for the period up to 2040, which serves as a yardstick for sustainable economic development in the medium and long term. A distinguishing characteristic of our country is that it has one of the most liberal tax systems in the region. The income tax rates and the income tax are each only 10 per cent; value-added tax is 12 per cent. Access to inexpensive resources, such as energy, but also the comparatively low labour costs give us a competitive advantage for es-

tablishing joint ventures. Our country with its mountainous terrain and unique countryside is very attractive for various types of tourism. Kyrgyzstan was also one of the first countries in the region to introduce a one-sided visa-free regime for citizens from 52 industrial countries. In the Kyrgyz Republic, all economic sectors are open to foreign investors, and we actively promote the instruments of public-private partnerships.

The country has had its own agency for investment promotion for some years now. What role does this agency play in the country's economic development?

The Investment Promotion and Protection Agency of the Kyrgyz Republic is a specialised government agency. Its primary objectives are to attract and promote

foreign investments, promote and develop export trade, promote public-private partnerships and develop free economic zones in our country. The agency supports investors on a single-window basis by providing information and advice. But it also provides support in obtaining permits. Extensive, useful information on the investment climate and a number of promising investment projects can be found on the agency's website. In addition, there is an online platform especially for the promotion of export trade, which contains the latest data on export-oriented products of Kyrgyz enterprises.

How important is the cooperation with Germany for the Kyrgyz economy?

We place particular importance on this cooperation. Our President Sooronbai Dscheenbekow was in Germany in the spring of this year, and this visit created further important impetus for strengthening the political dialogue and expanding German-Kyrgyz relations. Furthermore, within the framework of the Kyrgyz-German business forum on 15 April 2019 in Munich, representatives of more than 30 Kyrgyz and over 50 German businesses discussed the possibilities of developing cooperation for trade, business and investment between the two countries, and several agreements and memorandums were signed. I would like to emphasise that Kyrgyzstan offers favourable conditions for German investors, but also other foreign investors.

Kyrgyzstan has been a partner country of the Manager Training Programme since 2008. How do you evaluate the cooperation?

The significance of the Programme cannot be measured quantitatively; it is invaluable for us. We consider the insights gained by the already more than 250 programme participants, but also the direct contact with German partners, as an intellectual investment on the part of Germany in the development of our economy. And we are very grateful to the BMWi for that. We are very interested in further cooperation within the framework of the Manager Training Programme.

Further information at:

 Website for the Investment Promotion and Protection Agency of the Kyrgyz Republic: www.invest.gov.kg/en/

Website for export promotion: www.export.gov.kg/en/for-partners/exporters

Flipping the Switch

To understand current trends, change their mindset, become more creative and gain fresh impetus for work within the framework of the Manager Training Programme (MP) – that is what the representatives from the Ukrainian partner platforms wanted to achieve, when they came together at a conference in Pushcha-Vodytsia near Kiev in March.



MP partners from 18 Ukrainian regions shared information and ideas at the conference.

Under the theme of “The Fourth Industrial Revolution: The Unavoidable Reality”, the MP partners dealt with the possible effects of Industry 4.0 on the global and national economy, business processes and public life. The topic met with keen interest. “I always thought there was still plenty of time to deal with the fourth industrial revolution, but that is not the case; Industry 4.0 is no longer our future, but our present. I am therefore grateful to the organisers for this practice-oriented conference, which took place just in time for me,” said Svetlana Rogova from Odessa. Oleksiy Nazarenko was also very positive about the event. “Having a better understanding of Industry 4.0 puts us in a much better position when cooperating with Ukrainian production firms”, the representative from Sumy added.

The conference was organised as a disruptive session for the first time. “We want to give our partners instruments that enable them to take a new approach to interaction with enterprises and Programme participants. To do so, they have to leave their comfort zone, move away from stereotypes and become inventive”, Irina

marketing session, the Ukrainian partners familiarised themselves with new event formats and presentation ideas.



In the cooperation with Fit for Partnership with Germany, we have gained extensive skills and valuable knowledge.

The conferences for the Ukrainian partner platforms, which are held on an annual basis in different places, are always very well accepted by the participants. “In the cooperation with Fit for Partnership with Germany, we have gained extensive skills and valuable knowledge. The partner meetings are also always very well organised”, summarised Olena Sahaydachnaya from Kherson. Her colleague Svetlana Rogova agreed: “I am very grateful to the organisers for this opportunity to exchange information with representatives from partner platforms from other regions”.



Best in a team: sharing knowledge, increasing creativity, finding new solutions.



“We Want to Get Fit for Business with the EU”

Moldova has been a partner country of the Manager Training Programme for ten years now. During this time, more than 300 Moldovan executives from the middle and upper management levels have participated in the Programme. The vocational training centre at the Chamber of Commerce and Industry in Chisinau is responsible for the Programme. The head of the centre and programme coordinator, Inesa Iordatii, takes stock in an interview with the *Journal*.

Journal: Ms Iordatii, how would you describe the development after ten years of the MP?

Inesa Iordatii: The Programme is a success for us in two respects: on the one hand, it contributes decisively to strengthening the bilateral economic cooperation between Germany and Moldova. For example, we have concluded numerous contracts for the import of machinery and other technical equipment, medicines, food, additives for bakery products and ready-to-eat meals, pesticides, lighting products and building materials. In addition, exports of Moldovan goods such as wiring harnesses for motor vehicles and agricultural products, including fresh fruit and juices, have increased. However, bilateral projects concerning the transfer of knowledge on production processes or product development have the best prospects of

succeeding. On the other hand, the training in Germany has led to many positive changes in Moldovan firms, particularly with regard to organisation structure, corporate management and employee motivation. And, last but not least, I would like to mention the stable, trusting and successful co-operation with GIZ, which we are very proud of!

What will the Programme be like ten years from now; how do you think it should develop?

Moldova is seeking further integration into the EU market. And the Manager Training Programme is supporting us in this respect by giving Moldovan executives the opportunity to expand

their skills. In my opinion, the Programme should not only make our participants fit for exchange with Germany in the future, but also for economic cooperation with the entire EU. In the long term, we want to place more importance on certain branches of industry, including green energy, the export of technological services, new production methods, Industry 4.0 and sustainable tourism. Moreover, we aim to have a higher proportion of women in the Programme and to include more enterprises from all parts of the country. Currently, over 50 per cent of the participants come from the capital and surrounding areas.

What are your recommendations for future MP participants?

First and foremost, that they prepare themselves thoroughly for their stay in Germany. The Programme offers a lot, but, in the end, everything depends on the participants' personal commitment. Everyone must have a clearly defined goal, embedded in an overall framework, which is known as a cooperation project within the Programme. In accordance with this goal, they should contact potential German partners and arrange individual appointments – in fact this must be done in advance of their stay in Germany. As the Chamber of Commerce and Industry, we are glad to be of assistance and provide advice for the Programme participants.



Inesa Iordatii



„AI Made in Germany“

How Germany Can Unleash the Economic Potential Offered by Artificial Intelligence

Developing Artificial Intelligence (AI) and utilising it effectively is becoming more and more the key issue for prosperity and growth. The German Federal Government has adopted its own strategy with the aim of establishing Germany and Europe worldwide as the leading location for the development and application of AI technologies.

Artificial Intelligence will fundamentally change the economic landscape, from industrial applications through the production, processing and finishing of goods to services as well as the cultural, social and private environment. AI technologies have enormous economic potential as AI systems will be significant for almost all sectors and industries and the range of their fields of application is almost unlimited. According to current estimates by the management consultants McKinsey, AI could contribute an additional 1.3 percentage points in GDP growth each year in Germany until 2030. This means Artificial Intelligence would considerably exceed the annual growth effect achieved through the steam engine (0.3 percentage points), industrial robots (0.4 percentage points) and the diffusion of information and communication technologies (0.6 percentage points).

Fields of Application Offer Opportunities for German Business

What exactly is Artificial Intelligence and how can German businesses seize this opportunity and develop the technology's potential to its full capacity? Generally, Artificial Intelligence is a sub-division

of computer science dealing with the reproduction of skills attributed to human intelligence. It is capable of recognising patterns and drawing conclusions from them, enabling systems to learn from these conclusions. This makes it possible, for instance, to strategically forecast problems and solve them more quickly. Everyday applications of Artificial Intelligence include technologies for image, speech and face recognition as well as recommendation algorithms, for example, for trading and media platforms, or search algorithms and their ranking methodology. AI can search through millions of images for signs of cancer in an extremely short time and thus provide valuable support for doctors in the early detection of cancer.

Robotics and autonomous vehicles are further important fields of application for a future based on AI. AI can recognise objects in road traffic, predict vehicle motion and reduce the likelihood of collisions. This makes it possible to make reliable driving decisions and improve traffic flows. And AI can predict faults in machinery, equipment and systems, so that maintenance work is carried out before malfunctions or complete system failures occur.

This prognostic capacity facilitates the development of complex systems and that provides a major opportunity for the German economy because many of the application scenarios mentioned are in areas in which particularly small and medium sized German enterprises are strong: logistics, mechanical engineering, production, vehicle construction. Germany is already a forerunner in Industry 4.0 – with considerable overlaps with AI. And Germany holds a leading position with regard to patent applications in the area of autonomous driving. As one of the most successful economies in the world, Germany has no reason to fear change; however, it needs to answer the question of how to reinvent itself in the change process.

“AI Made in Germany” to Become a Hallmark of Quality

The Federal Government has positioned itself with the Artificial Intelligence Strategy it adopted in November 2018. “AI Made in Germany” is both the title and intention of this strategy. With this reference to its geographic origin, the Federal Government intends to make “AI made in Germany” a hallmark of quality, with worldwide recognition, for this

key technology. According to the latest analysis by the World Economic Forum (Global Competitiveness Report by the WEF, October 2018), Germany is already in first place worldwide with regard to innovation capabilities. And so far customers have been placing their trust in suppliers from Germany and the EU when it comes to AI. This trust must be turned into a competitive advantage, and the Federal Government's AI Strategy pursues three fundamental objectives. Germany and Europe are to become a leading location for the development and application of AI technologies; this serves international competitiveness. In doing so, it is to be ensured that AI is used in a way that takes the public interest into consideration. And finally, within the framework of a broad social dialogue, AI is to be ethically, legally, culturally and institutionally embedded in society. The Federal Government intends to provide roughly 3 billion euros by 2025 for this purpose. The federal states (Länder) and the business sector is also to invest at least the same amount. Germany will be able to increase its competitive advantage even more if this targeted use of taxpayers' money creates a substantial leverage effect for investments from industry.

According to current estimates by the management consultants McKinsey, AI could contribute an additional 1.3 percentage points in GDP growth each year in Germany until 2030.

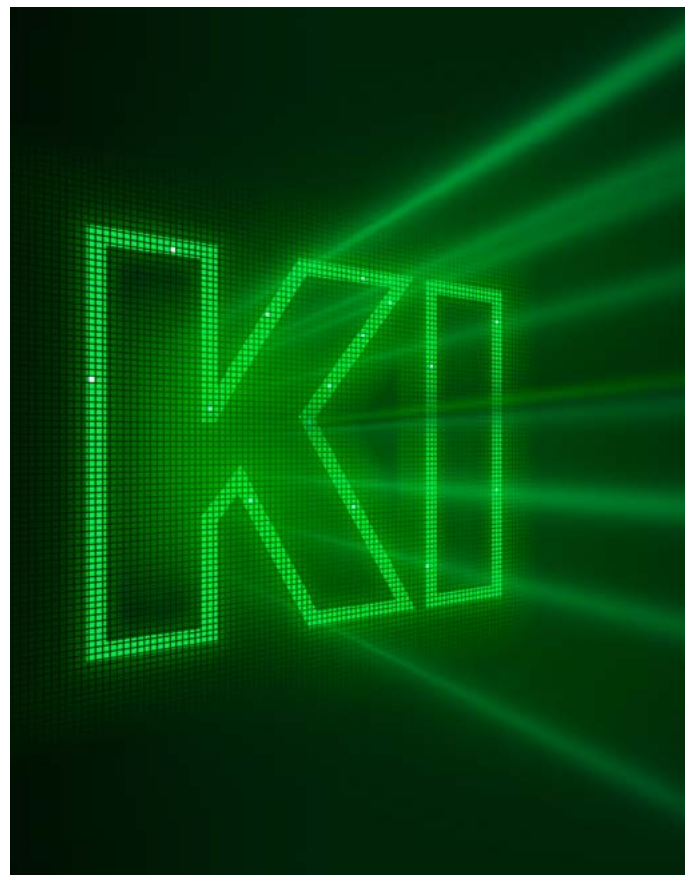


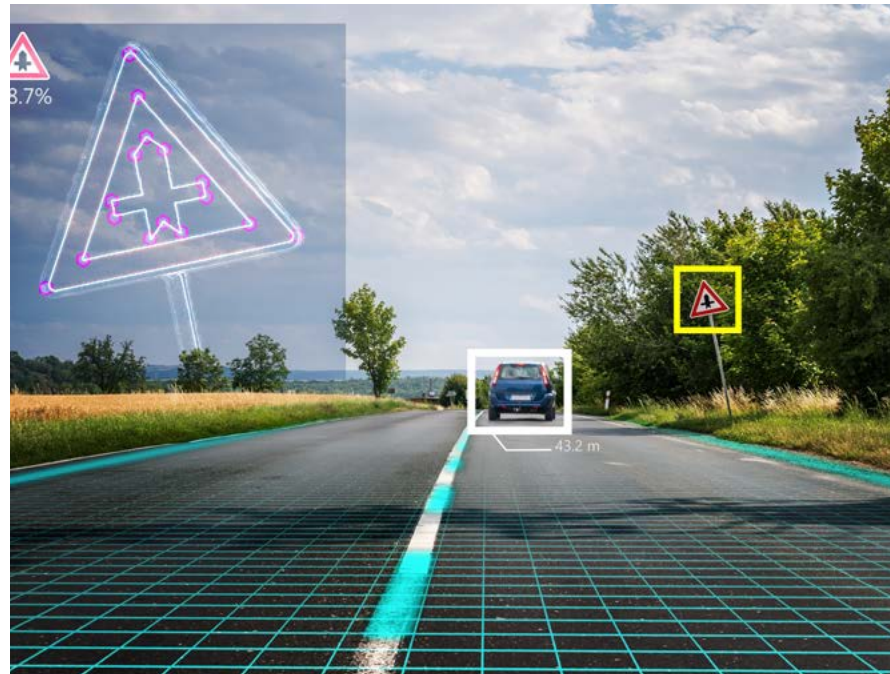
The research landscape is already in good shape. Thanks to the German Research Center for Artificial Intelligence (DFKI), which was founded in 1988, Germany has the largest and oldest research centre in the world in this field of expertise. Furthermore, there are also numerous other institutions of global repute. To make the most of the already existing potential, it is crucial to make the transition from an idea to a product. And it is equally vital to ensure that ideas developed in research are successfully put into practice in enterprises. This is a core interest of the AI Strategy. SMEs in particular need support

when access to data, experts and know-how is difficult.

Special Support for the “Mittelstand”

The German Federal Ministry for Economic Affairs and Energy has already launched initial measures for this purpose to support the “Mittelstand” (SMEs). In January 2019, for example, an AI innovation competition titled “AI as a driver of economically relevant ecosystems” (“KI als Treiber für volkswirtschaftlich relevante Ökosysteme”) began, in which more than 130 consortiums submitted





35

ideas will enter the competition stage. The best concepts will be realised from the end of 2019 onwards.

KI Nationale Strategie für Künstliche Intelligenz
AI Made in Germany

ideas. This means that flagship AI projects can be realised in key fields such as industry and mobility etc.. Thirty-five of these ideas will enter the competition stage and the best concepts will be realised from the end of 2019 onwards.

Moreover, the “Mittelstand 4.0 Centres of Excellence” are to develop additional knowledge transfer mechanisms in the field of AI. A competitive bidding process has therefore been started to select suitable centres of excellence for AI trainers: at least 20 trainers are to reach a minimum of 1,000 small and medium sized enterprises each year via the “Mittelstand 4.0 Centres of Excellence”. The intention is to provide SMEs in particular, who are much more cautious than large firms regarding the use of AI technologies, with an instrument to help them identify and implement existing AI potential. The online map (www.ki-landkarte.de) introduced by Peter Altmaier, Minister for Economic Affairs, in December 2018 illustrates the possible uses of AI in enterprises. This map currently shows over 330 examples of AI which are or will soon be in use in Germany – across all industries, fields of application and business sizes.

Budgetary funds allocated to the “EXIST” start-up programme were doubled in 2019 compared to the previous year in order to boost the number of start-ups, particularly in the field of science.

Roundtable discussions including data protection authorities and business associations are to be organised in order to ensure that the application of the General Data Protection Regulation does not pose an obstacle to the development of AI. As part of this roundtable, guidelines are to be mutually drawn up for the data protection compliant use of AI technologies



and best practice examples prepared. The amendment of competition legislation can also provide another opportunity for more extensive (data) cooperation as well as data pooling between enterprises, within certain bounds. The Federal Government has therefore already set up a Competition Law 4.0 Commission.

A European AI Ecosystem

In order to be internationally competitive, we need an AI ecosystem in which different players cooperate more closely with one another, with an open exchange of knowledge and information: established businesses, including small and medium sized enterprises, together with start-ups, research institutes and political bodies. If this succeeds across borders, a European AI ecosystem can also ensure the international competitiveness of German AI technologies. As a first step, the Federal Government has concluded cooperation agreements with France and Sweden and is working closely with the European Commission.

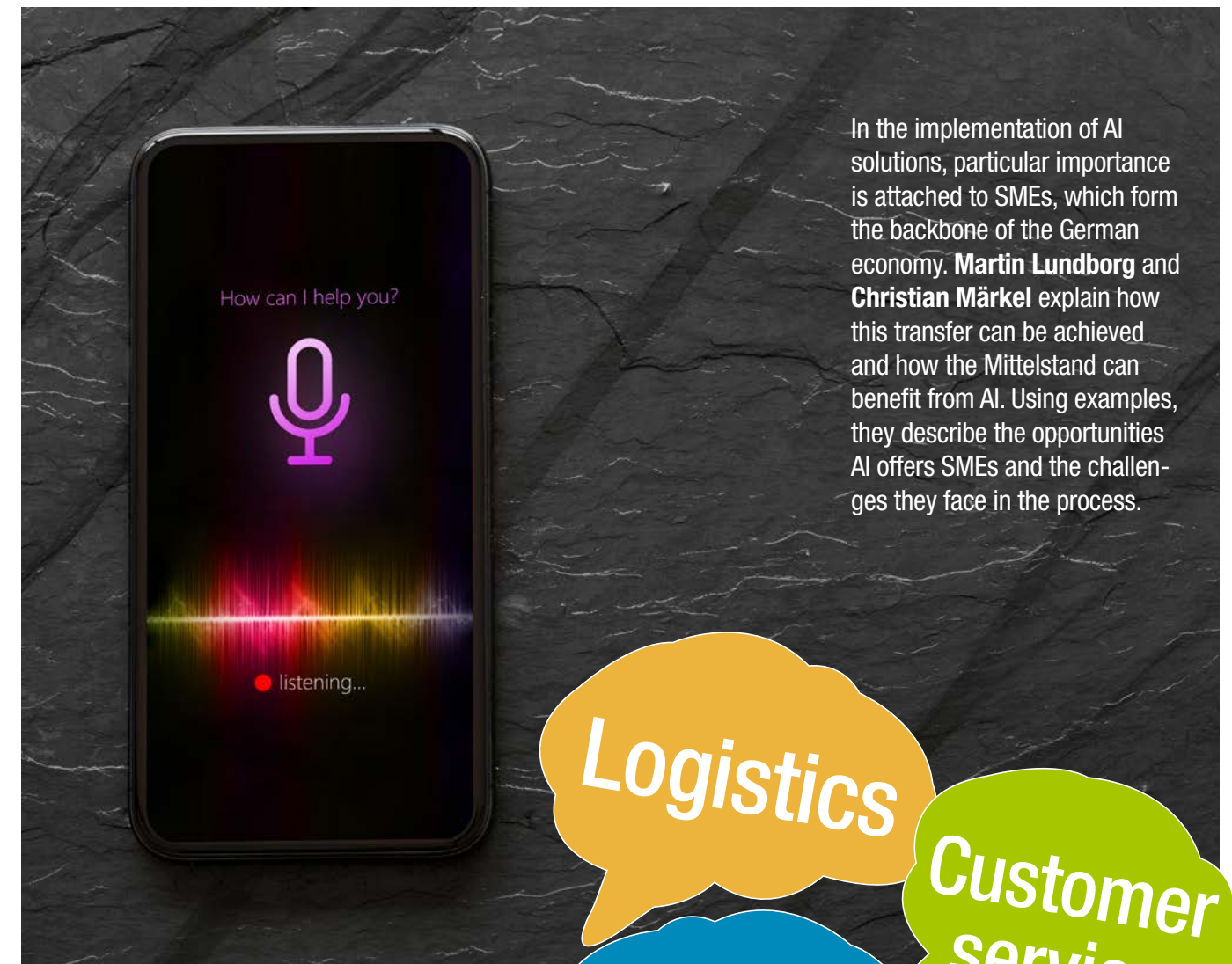


www.ki-strategie-deutschland.de

Author: Dr Dörte Nielandt, German Federal Ministry for Economic Affairs and Energy (BMWi)

The Next Step in Digital Transformation

How Artificial Intelligence is Changing SMEs in Germany



In the implementation of AI solutions, particular importance is attached to SMEs, which form the backbone of the German economy. **Martin Lundborg** and **Christian Märkel** explain how this transfer can be achieved and how the Mittelstand can benefit from AI. Using examples, they describe the opportunities AI offers SMEs and the challenges they face in the process.

Nowadays nearly everyone is confronted with artificial intelligence (AI) on a daily basis: anyone who asks Alexa or Siri about the metro schedule or unlocks their smartphone using facial recognition is using applications with artificial intelligence. Because all of these applications have now become a part of our everyday life, we do not really notice the AI there. It is now taken for granted.

Many people still consider AI to be more a part of “Hollywood” than their daily lives. In our imagination we often associate AI with science fiction scenarios such as highly

intelligent robots, cyborgs and computers that want to conquer the world. But the applications that use AI which are currently relevant are not about creating hyper intelligence. Instead, in today's world, AI already offers businesses major opportu-

ities: More and more enterprises are using it to improve their processes, optimise their resources, and launch new products and services. For SMEs, logistics (84 per cent), customer service (78 per cent) and product innovations (75 per cent) are seen as

the areas with an especially high potential for the use of AI. These are the results of a survey of experts, carried out as part of the SME Digital study, “Artificial Intelligence in SMEs – Relevance, Applications, Transfer”, which was published in April 2019.

AI can be seen as the logical continuation of the digital transformation that our society and our economy is currently undergoing. What is new are the intelligent algorithms that are able to learn and are thus self-optimising. In contrast to traditional software that is based on deterministic algorithms, intelligent algorithms are also expected to function in situations with elements of uncertainty. In this way, AI offers major potential for increasing efficiency in nearly all areas of the economy and at all levels of the supply chain.

Analyses of potential place a value on the economic opportunities of AI for Germany at about €50 billion annually. To leverage this potential, it is of massive importance that the implementation of AI solutions – also in SMEs which form the backbone of the German economy – succeeds. SMEs generate more than 50 per cent of the net added value of all businesses in Germany and employ more than 60 per cent of the labour force which is subject to social insurance contributions. There are already examples of how artificial intelligence can be used effectively, even in small and medium sized firms.



AI-Optimised Work Schedules

A medium sized producer of turned and milled parts in Thüringen is currently implementing an AI-based optimisation process, concerning working times, with the support of the SME 4.0 Competence Centre Ilmenau. The competence centre is one of 25 regional points of contact for the “SME Digital” (Mittelstand-Digital) initiative sponsored by the Federal Ministry for Economic Affairs and Energy (BMWi). The first step to intelligent data analysis is data gathering. For this reason, experts from the centre have worked together with the firm to link all of the

machines in production with sensors and compiled the data from the different systems. Based on these data, self-learning software now analyses machine run time, setup time and downtime so that it can reliably determine redundancies in the employee-machine interaction in real time. The employees are informed promptly via smartphone of resulting idle time and can use the respective time for other activities instead of waiting at the machine. The firm’s objective is to enable employees to use these times for private errands as well. So, AI might also be a way to enhance employer-attractiveness.

Analyses of potential estimate growth opportunities worth

50 billion

euros each year for Germany through AI.



Optimised Knowledge Management through AI

German SMEs have high hopes for AI as regards the topic of knowledge management. Many SMEs currently have no developed knowledge management system within the business due to a lack of capacities. The result is that many smaller enterprises depend on the knowledge of just a few experienced employees. If they are absent or leave, the enterprise can incur economic losses. This is also true of machine manufacturing as well, for instance. Often just one experienced employee at the plant knows the optimal setting, especially for a machine that has a lot of variable parameters. If the setting is not optimal, it will produce a lot of reject parts. This is the case, for example, in the production of nonwoven fabric. In this industry, rejected goods produced in Germany amounting to €50 million annually have to be recycled in a complex process. Using optical measurement technology and self-optimising algorithms, the Augsburg Institute for Textiles Technology – together SMEs – has developed a solution with which nonwoven fabric systems can automatically be set to reduce the dependency on individual employees to control the machines.

Overcoming the Obstacles of Using AI

The examples given should provide an insight into the great potential AI offers SMEs. But we still should not ignore the

fact that there are also hurdles to the use of AI. A survey of experts conducted as a part of a recent supporting research study for SME Digital clearly shows that a lack of IT expertise is the greatest obstacle for the use of AI in SMEs. Ranking second in the largest hurdles for the implementation of AI is the lack of a data pool, followed by data security concerns in third place. This reflects familiar problems in German SMEs: Due the skills-shortage, SMEs often have problems acquiring suitable experts for their business. Additionally, due to their size, they often have a modest data pool. One solution for SMEs might be to use cloud-based AI services, referred to as AI-as-a-service, whereby cloud providers offer access to various types of AI-based services. Based on a pay-per-use scheme, the right services can be selected by the SME. The advantages: The SME needs less of its own AI know-how, the investment risk is manageable and the first steps in using AI are faster compared to proprietary development. If attention is paid to professionalism and trustworthiness when selecting the cloud provider, data security is also guaranteed. Ultimately, cloud solutions are frequently more secure than a firm’s internal IT architecture.

Support with the Right AI Strategy

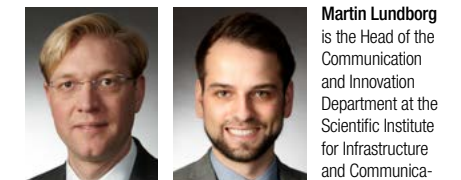
German businesses that want to introduce AI-based applications can benefit from the SME 4.0 competence centres sponsored by BMWi, which can help to work out

strategies that guarantee knowledge transfer within a firm or demonstrate practical examples of applications for artificial intelligence in SMEs. Soon a training programme will also be starting as part of the national AI strategy. For this purpose, AI coaches, who have been specially trained in AI solutions for SMEs, are being posted at the SME 4.0 competence centres.

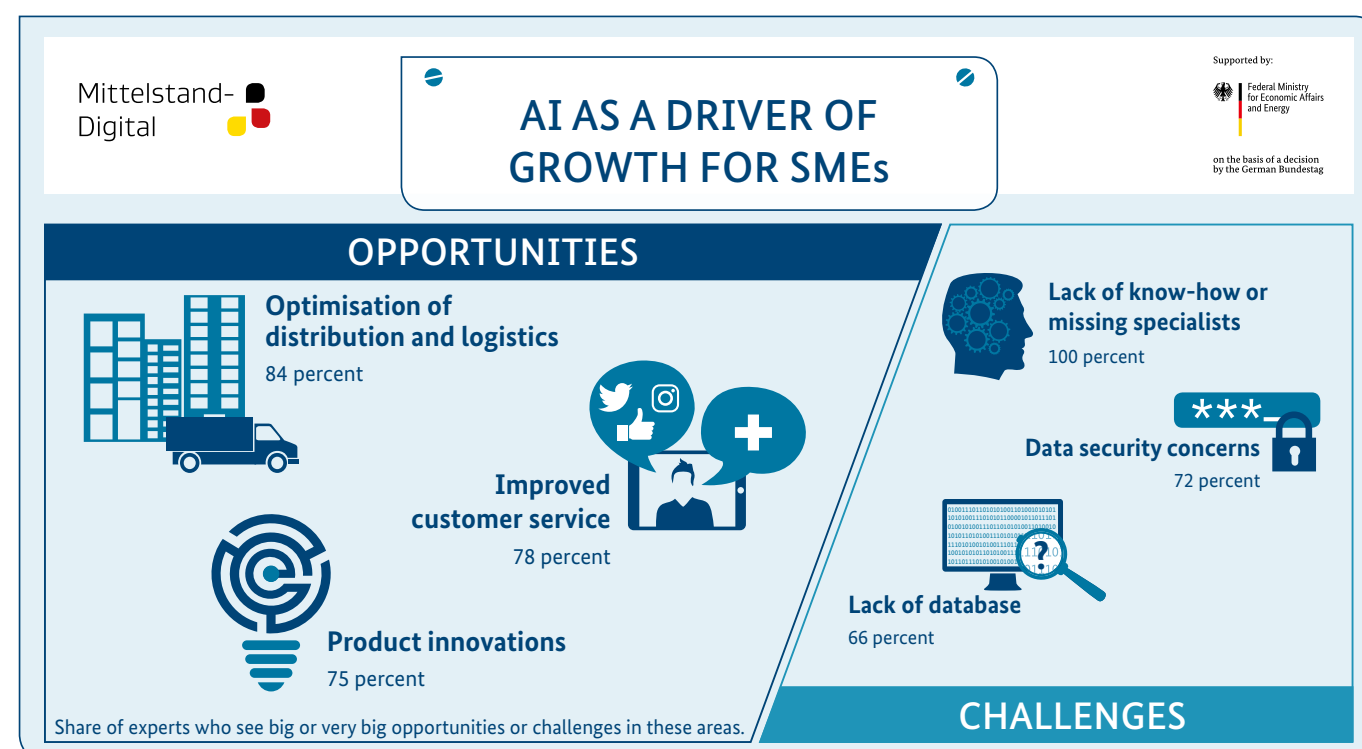
Even though most business processes are not based on artificial intelligence today, there is no question that AI will quickly grow in importance. If Germany wants to retain its numerous medium-sized global market leaders that it is so proud of, then it should set the course for the implementation of AI services. This will help eliminate the association of AI with science fiction, and instead put a focus on application-oriented intelligent tools for increasing efficiency in everyday business.

 www.mittelstand-digital.de

About the authors:



Martin Lundborg is the Head of the Communication and Innovation Department at the Scientific Institute for Infrastructure and Communication Services (Wissenschaftliches Institut für Infrastruktur und Kommunikationsdienste (WIK) as well as the head of the accompanying research for the SME-Digital (Mittelstand-Digital) initiative. **Christian Märkel** is a senior economist at WIK and responsible for future-related topics in the accompanying research for SME-Digital.





At Phoenix Contact, work on the intelligent production of tomorrow is underway. Eastern European MP participants had the opportunity to see this at close hand during a company visit.

“We Integrate Artificial Intelligence into Automation”

Artificial Intelligence (AI) has arrived in German businesses. The electronics manufacturer Phoenix Contact, a medium sized enterprise, uses smart solutions in, among other areas, its factory automation. In an interview with the *Journal*, **Lutz Steinleger**, the manager of digitalisation platforms at Phoenix Contact, provided insights into the possibilities and limitations for the use of AI.

Journal: How is Artificial Intelligence applied in your enterprise?

Steinleger: We approach AI from various perspectives and apply it, for example, in internal process improvement. PROTIQ GmbH, which belongs to our group of companies, operates an online platform that produces 3D objects within just a few days. Here a variety of additive production methods for synthetic materials

and metals are applied. The entire process, from the customer's idea of a 3D model up to the delivery of the components, is highly automated. For instance, different components are printed simultaneously to optimise the production process. Up to now, separating these components after the production stage and allocating them to the respective orders has required a considerable amount of manual work.

Conventional automation technologies, which are geared towards repetition, reach their limits where single customised components are produced. Machine learning provides an innovative solution, with which machines continuously learn on the basis of familiar components, i.e. 3D samples and images from camera sensor technology can be used to reduce the currently high level of sorting effort required. As a



We support our customers in making their industrial processes more efficient and effective.

result, processing time and the quality of the product are improved.

And what products do you use AI for?

Connecting the world of IT with automation is simple with our PLCnext Technology brand, our IoT Gateways and Phoenix Contact's Proficloud. Users can make use of various AI providers such as IBM Watson or Amazon Web Services to evaluate

the collected information and implement AI-led processes.

How do your customers benefit from the innovations?

Of course, we want to make the advantages that Artificial Intelligence offers for products, systems or services available to our customers wherever this is possible. In this way, we support them in making their industrial processes more efficient and effective. And here factors such as costs, speed, precision or solutions to problems are relevant. Technological experts help us in the application of AI mechanisms, for example, in production areas, processes or products.

What are your visions for the future?

Our focus for the future is on two areas of application for AI. On the one hand, we intend to apply AI to further optimise our internal processes in, among others, the areas of purchasing and production. On the other hand, we will, naturally, also offer the insights gained here to our customers in the form of expanded and new products.

Where do you see challenges for medium sized enterprises in the application of AI?

The lack of skilled experts in the fields of data science and informatics with an emphasis on AI poses a major challenge to us. As an answer to this problem, we offer vocational education programmes in cooperation with universities, but we also see cooperation in research projects with different institutes as a tried and tested means of transferring knowledge from research to practice. One further obstacle is access to or the availability of data; which is at the foundation of all AI endeavours. Because, no matter how smart the devised AI algorithms may be, unless the algorithms are applied to the soundest possible data, no AI solution will be able to provide added value. Thanks to our extensive vertical integration, we have created the possibility for Phoenix Contact to collect comprehensive data along the entire production process and to store it efficiently, so that we can use it for various AI applications.

Your firm participates in the Manager Training Programme. What motivated Phoenix Contact to do so?

Technological developments and the possibility of using the Internet of Things in smart production open up new opportunities. Today, information is available as digital data across domains. New applications require an interdisciplinary exchange, which we actively seek through the personal exchange of experience, among other things. That is why we are always very glad to speak with MP participants and we appreciate the positive professional exchange.



Lutz Steinleger is the manager of configuration and digitalisation platforms at Phoenix Contact GmbH & Co. KG in Blomberg. He and his team are responsible for developing software platforms for digitalisation in the fields of manufacturing, IIoT (Industrial Internet of Things), artificial intelligence and the lifecycle management for digital assets.

Siberian Entrepreneurs Take Stock



Sixteen Russian Manager Training Programme (MP) alumni experienced a special kind of follow-up in April. In addition to the exchange of experiences and a workshop on environmental management, the agenda for the event in Kemerovo in western Siberia included a visit to an opencast mine.

Many of the alumni who attended the meeting in Kemerovo are active in the mining sector.

The entrepreneurs from a 2018 MP group spent two intensive days exchanging MP experiences and their successes so far. Two participants reported in detail on the current state of the implementation of their cooperation projects. One businesswoman described her approach to purchasing printing machinery manufactured by a renowned German manufacturer. A technology entrepreneur spoke about resource-saving technologies in using flue ash in the production of building materials and described the effort involved in convincing a Russian investor of the benefits of using German technologies and the benefits of working with German equipment producers.

In the interactive workshop on the topic of environmental management systems, the focus was on organisations' and enterprises' ecological sustainability. Here the alumni had the opportunity to analyse the social, legal and institutional framework conditions in the Russian Federation based on their experience and perception and to develop possible ways of stimulating a contribution to ecological sustainability in their own enter-

prises. The subject met with keen interest, and the participants recommended its integration as a programme item for future on-site visits within the scope of the MP.

Later, there was also intensive discussion on the environmentally friendly management of resources during the visit to the Chernigovetz open-cast black-coal mine, which belongs to the Russian SDS-Ugol mining company. Its head of production, Dmitriy Zelenin, had participated in the MP himself in 2017 and could therefore well understand the questions and concerns of the present MP alumni, many of whom are active in



the mining sector. Maxim Byakov, Chief Geologist at SUEK-Kuzbass coal production company and an MP alumnus, was also present. Two years after his stay in Germany he is still very positive: "The training broadened my horizon; I became familiar with something I previously knew nothing about. Now time management is much more important to me. I have started planning one year in advance. Moreover, I have realised that it is necessary to distribute responsibility among employees".

The MP alumni from 2018 were also able to report on changes within their businesses. One third of the alumni present said that they now involve their employees more strongly in decisions; 30 per cent of them had experienced increases in productivity in their enterprises, and another one third had been able to attract more customers and improve customer satisfaction since their stay in Germany. In addition to a number of contracts concluded with German firms, further projects with business partners have been launched.



at the MP Meeting in Vietnam

The invitation to the annual alumni meeting in Vietnam was also met with much attention this year. The more than 80 Manager Training Programme (MP) alumni showed great interest in the workshop topics. These included maintaining business relationships with Germany and environmental management, but the main topic was the current issues related to Industry 4.0.

At the meeting, which was held in the Vietnamese city of Nha Trang in May, two workshops on the topic of Industry 4.0 were held. In them, Le Tri Tin, head of factory automation at Bosch-Rexrodt Vietnam, spoke with the Programme alumni about the changes to production processes and job profiles. The continuing education and re-training of employees is crucial, especially for the economic development of Vietnam in order to climb the higher steps of the value chain, open up professional employment opportunities for qualified employees and

escape from the "middle-income trap". Using the German system of vocational education as an example, possible solutions for Vietnamese firms were developed. The question of whether Industry 4.0 is an evolution or a revolution, was answered by the alumni with a unanimous "both": on the one hand there is continuous product development and

improvement, while at the same time the means of production and the sales processes of the products are changing radically. A further highlight of the alumni event was the talk by Björn Koslowski. The deputy head of the AHK Vietnam spoke about current developments in German-Vietnamese cooperation and presented the China-plus-one strategy.



There is an alumni meeting once a year in Vietnam



Numerous alumni grasped the opportunity to take stock and share information with other Programme alumni at the meeting in Tehran.

Let's Network!

In April, Iranian entrepreneurs from the past three years of the Manager Training Programme (MP) met in Tehran to take stock. They talked about their takeaways from training in Germany, ideas they had successfully put into practice and how their enterprises had developed.

Over the course of two days, 54 alumni shared insights with each other regarding their experiences on the MP. In addition to a detailed evaluation of the Programme's impact, attendees also took part in a workshop on new leadership skills in the digital age. Five Iranian entrepreneurs spoke about their current business activities, referencing what they had learned during the MP. One tool manufacturer related his experience in setting up a subsidiary in Germany as a limited liability company (GmbH). This topic was met with great interest, as many Iranian managers see setting up a German subsidiary as a way to continue to promote business with Germany and as a way to purchase the raw materials they urgently needed for production.

Two current MP participants, an entrepreneur in the field of mechanical engineering and a producer of dried fruit and herbs, talked about buying specialist equipment and getting food products certified according to EU standards. Hossein Sarafraz from the German-Iranian Chamber of Industry and

Commerce spoke about the INSTEX payment channel designed to facilitate trade between the EU and Iran despite the limitations posed by US sanctions. Iranian participants asked about the instrument in great detail, since financing is currently the biggest problem facing German-Iranian business relations.

Iranian and German government officials were present to welcome MP alumni on both days. Ahmad Javanmardi from MP partner organisation ISIPO (Iran Small Industries & Industrial Parks Organisation) hosted the event. All the speakers acknowledged the Programme's successes and its importance for both countries. German Ambassador Michael Klor-Berchthold praised the MP as a "shining example of German-Iranian cooperation". The ambassador added, "I believe that the partnership approach is what makes the Programme so successful. The Fit for Partnership with Germany motto expresses it very well. It is a win-win

situation. Iranians learn from Germans and Germans learn from Iranians." After the event, many participants emphasised how valuable the information and networking opportunity had been.



When I look back at the time I spent training in German, I remember...

- ✎ ... the fantastic experiences I had visiting large firms.
- ✎ ... order, discipline, friendly people, great beer.
- ✎ ... wonderful moments there. I had an opportunity to see how the theory I'd learned really worked in practice on on-site visits.



What the Alumni Say

The Iranian participants were asked to complete the following three sentences.



What surprised me most in Germany was that...

- ✎ ... a business based in a small village engaged in business all over the world.
- ✎ ... new technologies were not the most important factor in achieving high quality. Good management and well-trained staff are also key.
- ✎ ... lots of people are friendly when you ask questions or ask them for help.

My advice to new MP participants:

- ✎ ... have a clear goal in mind.
- ✎ ... know your industry and business inside and out and define where they stand internationally.
- ✎ ... be familiar with research and development, even if you run a well-known and successful firm.



From Zero to 300,000

Marketing manager expands business in Germany

VRP Consulting is a global IT firm that counts global players like Facebook, Burberry and Rolls-Royce among its clients. From its office in Belarus it directs its activities in Europe, the second most important market after the United States.

Nastassia Shabasovich supports the team in Minsk and is responsible for expanding business in Germany. Thanks to her commitment she has succeeded in acquiring the firm's first clients in Germany, and among them a new key account.



”

The client is interested in added value – that's how you win them over.

Nastassia Shabasovich

The marketing manager has been able to initiate eight new contracts with German businesses over the course of the Manager Training Programme, including one lucrative service contract with a major online comparison portal. Revenue generated by the Minsk office from business with Germany then rose from around zero to €300,000 annually. Shabasovich is pleased with her success, which she has worked hard for. These contracts did not exactly fall into her lap. She had to be very persuasive and address reservations; in one case concerning a new IT service provider and especially in another case regarding her home country as an IT outsourcing location. However, Belarus has been an extended IT workbench to Western firms for several years now. This is where digital products for Adidas and Microsoft are developed, to name just two. The 36-year-old project manager won over her clients with a combination of professionalism, reliability and persistence. A key part of her efforts to persuade the clients were multi-hour workshops tailored to the needs of the clients, held free of charge, prior to the signing of any contracts. These workshops served as a way to collectively establish how IT services could be optimised.



Nastassia Shabasovich is convinced that professional expertise and a human approach are key factors when it comes to selling IT products.

“When working with a provider of outpatient nursing services from Berlin, we first took stock of which systems were running and who was responsible for what. After that, it was about looking at the critical points and discussing what wasn't working well and why”, explained Shabasovich. It turned out that many processes were taking too long, e.g. the sending of faxes – an outdated form of communication that nevertheless still plays an important role in the traditional hospital system. The solution was to integrate the fax into the existing client management system. Faxes are now converted directly to PDF and sent automatically, saving time and reducing the error rate. The HR software was also optimised. The care provider can now tackle increasing staff fluctuation in the nursing care sector through marketing and e-mail campaigns.

A leading online comparison portal was also persuaded to switch service providers and have its CRM system sales force optimised by VRP Consulting. One of the ways Shabasovich was able to win over the Heidelberg firm was with an online workshop. Since then the rate comparison specialist's marketing processes have been improved in order to increase the conversion rate, and there is

also a lucrative long-term service agreement with a volume of 1,000 hours per month. Recently a German-language account manager has been supporting the team. Shabasovich herself studied German and English. That makes it easier for her to build trust. Her language studies were also advantageous in contract negotiations. Closing deals with German customers is tougher than with, for example, American clients, says the German language scholar. “I recently had a 39-page contract for a small-scale order. Everything was documented”, she reports. The advantage: as a rule, once signed, everything is set, and the project can start.

“Prior to the Programme I had a typically Eastern European modesty”, says Shabasovich in hindsight. Now she knows – also as a result of her successes – that the client does not care about someone's origins: what matters is their professional and human side. “The dialogue with the client didn't start with the Manager Training Programme, and it won't end there”, she says. Following on from the meetings, she stayed in touch, sent out offers and developed marketing campaigns. “The client is interested in added value – that's how you win them over”, she says.

Strong in Steel

In Egypt, the name Faltas is synonymous with steel. The Faltas family has been making a name for itself in the steel business for over 25 years. The metal blends produced by Sambo Metals are primarily sold to the automotive industry, where the alloy steel is used in Maseratis and Mercedes-Benz buses. **Aline Faltas** is part of the most recent generation to continue the family dynasty. The 31-year-old financial expert brought back impulses from Germany to optimise her firm. She also intensified contact with existing customers and set up some new trial shipments. An expansion of the product range is planned for the future.

Journal: What does Sambo Metals manufacture and what is your role in the company?

Faltas: We produce high quality, cold-worked steel bars. We are the market leader in Egypt where we cater for 95 per cent

of the domestic demand which is processed by manufacturers. The London Stock Exchange Group's annual report recently named us one of the top Egyptian companies. Most of our steel goes to the automotive industry. Our



Aline Faltas

alloy steel is also used in the production of elevators, aircraft wing parts, trucks and gas and water valves, i.e. in areas

that demand high quality and strength. My father runs the company of 75 employees. I am responsible for import and export, my sister Sandrine for marketing and finance.

What motivated you to take part in the Manager Training Programme and what was your ultimate goal?

I wanted to see how SMEs are managed in Germany, visit steel firms and check out the technologies they are using. Although we already have some German customers, it was important to me to improve my intercultural understanding and learn to engage with German business partners because we hope to increase our exports. It was also exciting for me to see how we could improve our presence at international trade fairs.

Did the Programme meet your expectations?

Yes, it actually surpassed them. I brought a lot of new ideas back with me. Before everyone was kind of involved in everything, so we redefined roles within the company. Whereas we only went to domestic steel trade fairs, we now have booths at international ones. This falls within my purview. We also introduced an automatic inventory system so now we always know exactly how much steel we have in stock, listed by type and size.

What insights did you gain from the MP?

The MP helped us set up trial shipments to new customers. I realised that we needed to further perfect our quality and improve our profitability. The German market is very demanding, and we still need to acquire some certificates, such as

an OHSAS certificate. Additionally, our current systems cannot meet all customer requirements, which is why we now want to expand our product range.

Were you able to conclude new contracts?

I hope that the trial shipments will result in new contracts. At any rate, the MP has enabled me to intensify cooperation with two long-standing partners. Our sales to these customers have tripled.

What are your plans for the future?

We are currently installing a new mirror finish steel plant for a European customer. We are looking to expand our product range as well. The new step is to add flat steel bars, which are currently in high demand on the market. We also want to attend steel trade fairs in Germany.

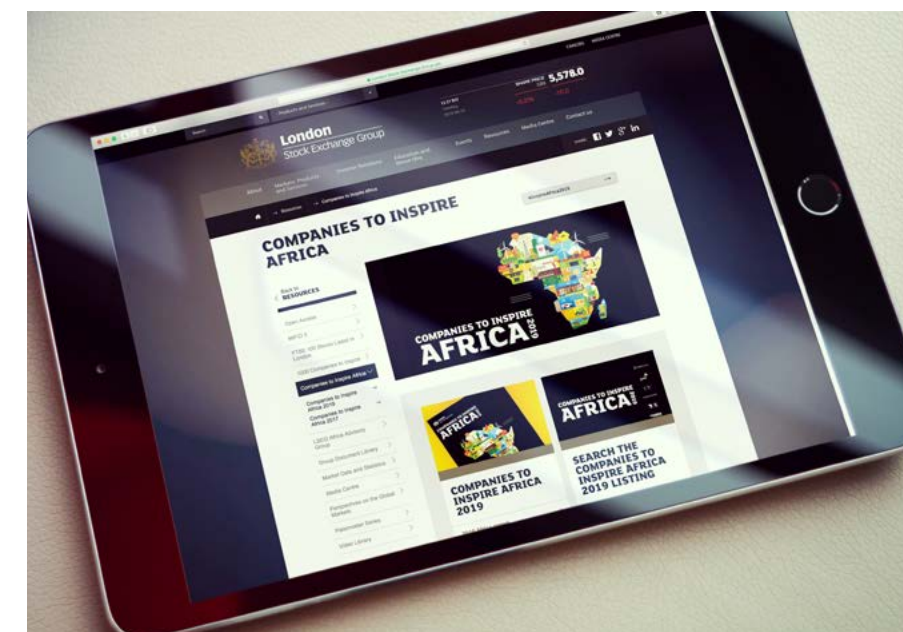


A Top Player in Africa

In 2019, Sambo Metals is currently one of the 500 top-selling African firms. The "Companies to inspire Africa" magazine identified visionary, dynamic medium sized enterprises with growth prospects in Africa in its second issue. Three of the Egyptian firms listed had taken part in the BMWi Manager Training Programme: Sambo Metals, the El-Fateh steel and construction company, and Eagle Chemicals. For an overview of African enterprises by turnover, country and industry, please visit:



www.lseg.com/inspireafrica



Securing Health Care Services

Mongolia is one of the most sparsely populated countries. Half of the approximately three million inhabitants live in rural areas, and the other half live in the capital city of Ulan Bator. The capital city is not only the uncontested economic, cultural and political centre of the country, it is also the centre of the health care system: Many Mongolians have to travel there to get medical services. Especially in the field of urology, there is a country-wide lack of specialists and facilities. **Nansalma Naidan** is therefore in the process of converting her private urology centre into a clinic and outpatient centre. She used her participation in the MP in 2018 to acquire a new medical instrument for her enterprise ADAM Clinic and to promote exchange with institutions in Germany.

“In Mongolia there are only three urology departments and about 50 specialists. That’s not enough for a population of three million”, says Naidan. For 19 years, this committed doctor has been working as an independent urologist. Two years ago, she started to convert her private practice into a centre for men’s health. Her team now consists of six employees. Three doctors, one nurse, one laboratory assistant and a secretary cater for about 30 patients per day. The new centre offers services from a single source. There is an in-house laboratory for running blood tests, for example, so that the results are available on the same day.

That benefits the patients. “Many clients are from the countryside. During the waiting period they often stay with relatives or have to pay for a hotel”, explains Naidan.

Better Preventive Health Care

Now Naidan can also offer prostate screening tests. She has purchased an endoscope from a Bavarian enterprise that supplies used medical equipment. “Many patients aren’t diagnosed until the disease has already reached an advanced stage. Then it’s often the case that surgery is the only thing that will help. We can detect diseases in early stages using the endoscope”, says Naidan. The instrument is more expensive than its equivalents, but it is of higher quality. The German firm also offers a 12-month warranty and an 8-year delivery guarantee for spare

parts and accessories. And it is on hand with advice and assistance after purchase. That was the decisive argument for Naidan in deciding to purchase it during the MP. “We used to get instruments from China that had 6-month warranties. If they broke down after that period, you had no one to turn to”, she remembers.

Expansion of the Centre

Naidan has planned the installation of patient rooms for inpatient treatment and the hiring of three more employees as the next step. Then she can increase the number of patients treated per day to 60. She is financing the expansion with loans from the Japan International Cooperation Agency and the Asian Development Bank. In the long term, Naidan would also like to treat patients from the neighbour-

ing countries of Russia and China at the ADAM Clinic.

Naidan is a member of the Committee for Andrology and Urology at the Mongolian Ministry of Health and consults the government on men’s health issues. She supports training more urologists, improving care in rural regions and promoting health and preventive health awareness among Mongolian men. In Germany she has met with the Director of the Urology Department at the University Hospital in Essen to share experiences. The director is herself from Mongolia, and she supports Naidan’s efforts. And later this year, a cooperation meeting will be held in Ulaanbaatar at the ADAM Clinic to discuss possible mutual research projects and the idea of a cooperative German-Mongolian clinic.



Nansalma Naidan is actively helping to improve medical care in rural regions in Mongolia.

A Programme with a Long-Term Effect

Temirtau is the capital of the metallurgical industry in Kazakhstan. The city (Temirtau means "iron mountain") is home to Inkar-1, a mechanical engineering and metalworking business. The head of the firm, **Kuandyk Nurpeissov**, participated in the Manager Training Programme in 2012 – with considerable success: on the occasion of the tenth MP anniversary in Kazakhstan in 2014, he was awarded first prize for the best cooperation project. And his success story is continuing. Last year, he built a new production facility and was recently in Germany to find new machinery for it.

Journal: You have just returned from Germany. Please tell us what you did there.

Nurpeissov: We completed the construction of our third assembly hall last year. It has an area of 1,350m² and a well organised infrastructure with a canteen, showers, recreation rooms for the personnel and storage rooms. The hall was needed due to our capacity constraints. In Germany, I met with a management consultant from the European Bank for Reconstruction and Development and visited mechanical engineering firms with him. The expert is advising and supporting me in my search for suitable equipment. In addition, we receive support from one of our government's programmes to promote SMEs.

Who were your interlocutors in Germany and what were the results of the meetings?

We met with two manufacturers of milling machines and we visited a producer of CNC machining tools. The meetings were very interesting; however, I have not yet made a decision as I first want to inform myself at the Metalloobrabotka trade fair in Moscow, where numerous German firms also exhibit their products.

What purpose does the new building serve?

We will house further equipment in it, with which we can address capacity bottlenecks and increase our productivity. We do not intend to expand our range of products but will continue to make spare parts, production elements and complex assemblies for blast furnaces in iron works and for steel and rolling mills. Our emphasis is on the mining industry. Our main customers are an international steel group, which has a plant in Temirtau, and the Kazakh copper mining firm, Kazakhmys.

You participated in the MP seven years ago. How would you describe your business's development since then?

After the MP, we increased our production capacity, among other things, through the purchase of CNC-controlled lathes and milling machines from Germany. In addition, we have been awarded diverse prizes. For instance, we received an award as the best industrial enterprise in the "Altyn



Kuandyk Nurpeissov's firm Inkar-1 has received several awards, e.g. in 2016 as the best Kazakh industrial enterprise.

Sapa" state competition in 2016, and in 2018 won the "Best Industrial Product" award in the "Best Product of Kazakhstan 2018" competition. We are growing constantly and creating new jobs. As an example: we are hiring 20 new employees for the new facility. Talking of personnel: we have tripled our personnel since 2012. And since 2014 I have been a partner in a pilot project for vocational training in Kazakhstan, which is led by GIZ.

What exactly is the cooperation in the project on vocational training like?

Within the GIZ "Strategic Alliance on Vocational Training in the Republic of Kazakhstan" project, the Kazakh system was adapted together with experts from Germany based on German standards. The Temirtau Higher Polytechnic College is the education partner on the Kazakh side, and on the German side, Evonik Industries AG is the cooperating enterprise. Inkar-1 trains fitters, turners and milling technicians and, as from this year on, will also be training mechatronic technicians. In the past year, four milling technicians and eight fitters completed their training in our firm. This year, we want to hire 20 apprentices. The vocational system is extremely important for us as we have a severe shortage of skilled workers. The director of Temirtau Higher Polytechnic College had suggested me for the programme due to my good relations

The new assembly building has an area of

1,350

square metres and a well organised infrastructure.

with Germany and GIZ. We know each other through my participation in the Manager Training Programme.

How has the MP helped your business to grow?

For me personally, it was very important to visit family businesses in Germany, some of which have a corporate history that dates back 150 years, to see how they work, what values they have and how well organised they are. In the meantime, I have developed from the production of spare parts to become a producer of complex assemblies for equipment for the mining industry. Since my participation in the MP, Inkar-1 has been growing steadily and has increased its turnover fivefold.



Aziza Hudayberdieva (on the left) believes in a well thought out sales strategy.

Natural Remedies for Uzbekistan

Nika Farm Servis GmbH based in Tashkent is a producer and distributor of medicines and food supplements. The company owns Oxymed, the largest and most modern pharmacy chain in the country, and further firms in the field of pharmaceuticals. 500 of the roughly 700 employees work in the pharmacies. Together, they generated about 200 million euros in turnover in 2018 and contributed to improving healthcare in the country. Managing Director **Aziza Hudayberdieva** visited Germany in 2018 within the framework of the MP, with the aim of finding new products to expand Oxymed's range, particularly with regard to natural medicines, which are also becoming increasingly popular in Uzbekistan.

"Biomedicine and demand for natural medicines are gaining ground in our country too", says Hudayberdieva. Nika Farm Servis has been cooperating with a German manufacturer of herbal medicines, which is primarily known for its natural remedies, since 2015 within the scope of the "Phytothek" (phytopharmacy) project. This is a specifically designated area within a pharmacy which specialises in selling herbal medicinal products and providing advice on their use. In Germany, there are 900 phytopharmacies and business with natural

medicinal products is also doing well in Uzbekistan. Nika Farm Servis sets up five phytopharmacies every year. The personnel for these phytopharmacies is regularly trained by experts in Germany. "We attach great importance to the professional competence of our employees and a high-quality range – and that is why our customers come to us", says Hudayberdieva. To strengthen the co-operation with the pharmaceutical manufacturer, she met with company representatives in Germany and presented a suggestion regarding the production of medicinal products under licence in Uzbekistan, which is now awaiting agreement between the management of the respective firms.

And an energy tonic that is popular in Germany could soon find its way into the pharmacy network in the largest Central Asian consumer market: The product has developed into a brand name for an entire own range of health-trend items. Hudayberdieva met with the manufacturer in Germany to discuss the possibilities of exporting to Uzbekistan and also of an exclusive distribution partnership. Now the first step is an analysis of the top-selling products. "In Germany calcium and magnesium supplements sell well, but it would be rash to include them in our production line. We must first see what sells well in Russia and Kazakhstan because the market there is more similar to the Uzbek market and we will base our activities on their top sellers", says Hudayberdieva, describing the firm's sales strategy.

Expansion of Production

Hudayberdieva also had talks with a pharmaceutical company in Hamburg which manufactures innovative food supplements. They discussed both the import of articles and manufacturing under licence. "The problem with importing is that, unlike medicines, food supplements are subject to high customs duties and that pushes prices up", the 38-year-old business manager says. Therefore, Nika Farm Servis has plans to expand and modernise its production facilities in the future. To that end, Hudayberdieva met with a trading company in Baden-Württemberg. This firm provides



advice for the purchase and financing of equipment. Through this firm, Nika Farm's management is currently analysing the purchasing options of packaging machinery and laboratory equipment.

Growing Pharmacy Network

At the moment, there are 130 Oxymed pharmacies in Uzbekistan, of which 90 are in the capital Tashkent alone. Moreover, Nika Farm Servis has also been running franchising pharmacies since 2018 under the Domaschnaja Apteka brand name. In 2019, roughly 100 new pharmacies are to be set under the franchising model, particularly in rural regions. Consequently, Nika Farm Servis is contributing to addressing the needs in isolated areas and the country's small towns, some of which still have considerable deficiencies with regard to the provision of healthcare.



A branch of the Uzbek Oxymed pharmacy chain

Strategic Partnership

Taking Off for Europe



With an annual growth rate of 17 per cent, the Mexican aerospace industry is among the fastest growing markets in Latin America. According to estimates by the Mexican Office for Economic Affairs, it will be in tenth place worldwide by 2020. The aviation industry is located primarily in selected federal states, including Baja California, on the border to the USA. This is also where **Sergio Segura** established his firm InnoCentro Aerospacial. In 2018, he participated in the MP and, as a result, invested in a German firm in order to boost his business with Europe and to become less dependent on the US market.

“We are purely an export business; 90 per cent of our exports are to the USA and Europe”, says Segura. So far, the 47-year-old mechanical engineer has fared well with this strategy. There is strong demand for suppliers of aircraft components in the American market, which is dominated by the industry giant Boeing. In addition, Mexico benefits from preferential tariffs through a free trade agree-

ment with the USA and Canada. Back in spring 2018, InnoCentro’s order books were therefore full when Segura took part in the Manager Training Programme of the Federal Ministry for Economic Affairs and Energy whilst also keeping his eyes open for new business opportunities. At the time, business with the US accounted for 90 per cent of his turnover; he generated roughly 10 per cent

through German sales. “Up to then, we had always only had temporary projects with German firms, no long-term dealings”, Segura adds.

In Germany, he got to know Aviawerks GmbH in Bremen, a medium sized enterprise strong in the field of technical flight simulation. “We have specialised in aircraft interior design, and a simulation

system is the perfect supplement to that. With it, we can find out in advance how we can, for example, improve passenger comfort even further”, Segura explains. Together with his business partner Roberto Corral, who is also an MP alumnus from 2015, he decided to acquire Aviawerks. “In the beginning, the German personnel had reservations”, Segura says. In the meantime, he has been able to dispel their concerns. As he proudly reports, he has already even heard that “a Mexican boss is better than a German one”.

He says that the MP helped him and his partner with this intercultural challenge as it taught them a lot about the German business environment. Moreover, the two business owners are now learning German to improve the communication with the team and with customers and hence the long-term development of the firm.

Mexican Aviation Industry Needs Equipment

Aeroplanes are not assembled in Mexico; the country supplies aeroplane components to the USA, Canada and Europe. The umbrella association for the Mexican aviation industry – of which co-founder

According to estimates by Femia, the umbrella association for the Mexican aviation industry, demand for supplies amounted to

500 million

US dollars in 2018.

Segura has been a member since 2006 – estimates that demand for supplies amounted to about US\$500 million in 2018. “It is currently difficult, but not impossible, to conclude new agreements” says Segura. He adds that there is primarily demand for components for turbines, aircraft fuselages and landing gears but also for plastic parts, composite materials and other special materials. “The duopolists Boeing and Airbus determine the market development in the aviation industry; as suppliers, we are dependent on them. If Boeing is not doing well, as is currently the case, this has an effect on our business too”, the entrepreneur says. He adds that orders are partly de-

creasing because less aeroplanes are being produced; at the same time, demand is increasing for cabin refurbishments. He met with several potential cooperation partners in Germany in the area of interior equipment and fittings, including a manufacturer of aeroplane tables, seat coverings and interior equipment made of synthetic materials. Due to the poor order situation at Boeing, he has had to put his established contacts “on ice” for the time being. Now, with the help of the new firm, InnoCentro is concentrating its energy on expanding its European business, which is dominated by Boeing’s main competitor, the German-French company Airbus.



A technician from InnoCentro producing an injection moulded part made of synthetic foam for an aeroplane seat.

Ice-Cold Innovations

Everyone in Ukraine knows and loves Rud. Their frozen dairy and sorbet treats like the “Impreza” and “Es-kimos” have cooled the taste buds of the young and old alike for years. **Svetlana Lysak** heads up the firm’s laboratory and is responsible for quality control. She participated in the MP in 2016, travelling to Germany to gather some inspiration for her work and to see how quality management is done in German enterprises. While there, she also concluded some new supply contracts.



“

Now I really prepare more professionally for face-to-face meetings with potential partners. I have modernised the content, structure and design of my business presentation and geared it to international business contacts

Svitlana Lysak

Zhitomir, 120 kilometres west of Kiev, is home to the most popular ice cream factory in Ukraine. More than 150 different varieties are produced at Rud and delivered to around 56,000 points of sale where Ukraine’s 42 million citizens snap them up. Rud ice cream is also exported to many countries, including Israel, Georgia, Kazakhstan, Iraq, the Czech Republic, Poland and the USA. Since 2018, Rud ice cream has also been available in Germany. It is distributed by Dovgan GmbH, a company specialising in the distribution of Eastern European foodstuffs.

“Establishing new business contacts is not that easy”, Lysak says, and there is a lack of trust in business partners and food from her homeland. She recalls that many of her emails used to go unanswered, until the MP taught her the importance of personal contact. “Now I really prepare more professionally for face-to-face meetings with potential partners. I have modernised the content, structure and design of my business presentation and geared it to international business contacts”, she says. This excellent preparation and the support of the sales department helped her establish a working relationship with Dovgan. The partnership has continued to grow from the first trial shipment of ice cream and frozen fruit. “We have increased the quantity and range of varieties with each

delivery, which include frozen alcoholic desserts for the first time this season”, Lysak says.

“I really enjoy my work”

Lysak applied to the Programme looking for new inspiration for her role as a quality expert. Like all food firms, Rud has to meet very strict quality guidelines. Lysak and the 30 employees under her leadership ensure that the enterprise is always compliant. She started there 16 years ago as a laboratory assistant and has remained loyal to the firm ever since. “I really enjoy my work”, the engineer says. Completing the MP has helped her hone her management skills, and she particularly valued the on-site visits and the insight they provided into the management of German medium sized enterprises. These included Pulsnitzer Lebkuchenfabrik

GmbH in Saxony and Capron GmbH, a Saxon motorhome manufacturer from Neustadt that focuses on quality management, certification and marketing for its motorhomes.

“The MP has helped us improve the way we do business”, Lysak says. During training, Lysak learned the key factors to take into account when conducting negotiations with German partners and how to avoid common mistakes, like the wrong business attire or gifts. “My time in Germany and the things I learned there have given me more self-confidence, and helped me better structure my work”, the entrepreneur says. Although Rud holds a certificate for export to the EU and Germany, in the near future, the next challenge for Lysak will be getting her product lines listed outside the niche market for Eastern European specialities. The German ice cream market is highly competitive. In 2017, Germany surpassed the birthplace of gelato, Italy, to take first place in European ice cream production with a total of 517 million litres manufactured. Nevertheless, Lysak is confident: “I know our product is good and can hold its own on the demanding German market. That is a really good feeling”, she says.



Digital Leadership

Leadership Skills in the Age of Human-Machine Interaction

Today digitalisation is seen as a strong driver of change in all business sectors. This does not only accelerate the need to adapt strategies more regularly; the higher degree of uncertainty among employees in view of continuous changes in the markets and business models also requires an adaptive leadership style. **Bertram Lohmüller** describes how this can be achieved.

The Internet of Things enables the networking of devices and systems and the direct integration of users. With new, intelligent software systems, machines and systems are controlled autonomously and managerial decision-making processes are automated. Additionally, there is also the implementation of transformation processes, from the analogue to the digital age, which is also a leadership responsibility. Numerous sources of uncertainty about the future of enterprises and change are directly or indirectly associated with digitalisation. They include disruptive technologies and innovations, strong pressure to perform due to global and flexible value chains, heterogenic and intercultural employee structures,

new forms of information and communication as well as new, agile organisation forms. The ways in which these factors influence management and leadership is described in detail below.

Innovations Arise Through New Ideas and Incremental Changes

Disruptive technologies and innovations lead to the creation of new enterprises throughout the world with new business models that drive established players out of the market. For example, Uber has positioned itself in many countries as a successful competitor to traditional taxi businesses, Tesla is a serious rival for the established German car mak-

ers, and electronic sales platforms like Amazon are changing buying behaviour and thus conventional retail trade. Production processes are becoming more flexible and transparent through the increased use of sensors, the interaction of machinery and the use of industrial robots and 3-D printers. There are also fundamental changes in management processes, in which, for instance, job applications are analysed and automatically evaluated with intelligent algorithms. Furthermore, the development and application of digital solutions requires more advanced skills on the part of all those involved than classical analogue solutions do. Particularly managers need to recognise which external and internal machinery and human-machine interfaces (touch points) must be taken into account in the future and the influence they have on business organisation, the future strategy and the related employee competencies. To remain successful as an organisation under these conditions, it is necessary to create a culture in which "all of the ideas" in the enterprise can be

unlocked. Connecting employees and customers through the use of new means of communication such as chats and platforms makes this possible. Then, through the combination of new ideas and continuous improvement, new products and services emerge with the potential of fundamentally changing existing market mechanisms.

Counteracting an Increased Burden

Global value chains become more transparent and flexible through digitalisation and require a high degree of commitment

The development of new, digital-based technologies makes it necessary to employ highly specialised personnel. So-called knowledge workers with sound professional expertise are therefore becoming more and more important.

on the part of employees. Networking with international partners and customers makes it necessary for the responsible employees to be available around the clock. Additionally, in order to successfully gain orders, a flexible supply chain is often necessary as well as entering into contractual obligations that are hardly cost-effective. This significant pressure to perform and the results-oriented management style practised in many businesses are factors that can lead to exhaustion among managers and employees. Work and labour studies show that managers, in particular, are often affected by burn-



out. Responsible behaviour with regard to their employees' and their own health is therefore important for "healthy" leadership. Still today, too little use is made of coaching and prevention programmes, and managers often do not have the necessary information about possible areas of application.

Diverse Workforce Requires Different Communication

The heterogeneous composition of the workforce and the variety of cultures involved is a further challenge for managers. Organisations are increasingly employing people of all age groups and from different cultural backgrounds who work together directly or in virtual teams. This requires intercultural management of various generations and, at the same time, different ways of working with digital media. In addition, the development of new, digital-based technologies makes it necessary to employ highly specialised personnel. So-called knowledge workers with sound professional expertise are therefore becoming more and more important. To retain them for the long term, it is necessary to promote not only hierarchical career paths but also specialist careers and to implement talent management.

Along with digitalisation and internal and external employee networking, the form of information and communication



has changed fundamentally. Informal communication via new media, a global exchange of knowledge on communication platforms and social solidarity in superregional social groups are all increasing steadily. The use of online media and the international exchange of data make it possible to work flexibly (both with regard to time and place) in networks. As a result, the organisation of work on a local basis as was customary in the analogue age is disappearing, and managers must be able to lead employees and teams from

Communication, placing people at the forefront, trust and team spirit are some of these skills.

a distance – for example, when team members are working from home. Rules are needed for this to succeed. For the employees this means accepting more responsibility; and managers have to spend more time supporting the employees. For enterprises and their management, this also means balancing the communication flow with customers, shareholders and further stakeholders; that in turn, places higher demands on compliance management.

Managers Guide Agile Teams

Enterprises are increasingly implementing agile organisation forms in order to be efficient and, at the same time, flexible and thus "master" the transition into the digital age. For this purpose, agile teams are being created which organise themselves in a "swarm" without a conventional hierarchy. This means that, simultaneously to the line and project organisation, individuals from different fields work together to develop ideas and concepts which then become projects.

Due to the parallelisation of organisation forms, employees assume diverse roles – in one project they are involved in the project management and in another project, running in parallel, they are members of the project. This differing perception of roles is to be eliminated through the implementation of a modern corporate culture. A future structure requires the distribution of tasks according to pull principles based on common work and target principles. Furthermore, in order to be able to react quickly and flexibly to changes, small and agile teams within the organisation work on special projects. Nevertheless, stable production and business processes are still required in order to be able to produce faultless goods and services at the best possible cost. Hence, managers become mediators between two speeds and, with that, promoters of stability and agility.

Transferring Leadership Skills from the Analogue Age to the Digital Age

The drivers of change mentioned above are leading to a reassessment of the competencies that managers and employees need to have. Results from our own research and international studies show that many leadership skills from the analogue age continue to exist in the digital age and that they complement each other. Communication, placing people at the forefront, trust and team spirit are some of these skills. Important additional digital competencies include networking capabilities, transparency, media competence and the unlearning of hierarchy. The leadership skills for the digital age are defined in the seven fields of the IMLead® Concept for Integrated Management & Leadership (Figure 1): the manager, the individual, the information, the future, the processes, the agility and the finance, including integrated thought and action. This concept provides a framework for the implementation of transformation processes within firms and facilitates the identification of enterprise-specific leadership skills.

Current research clearly shows that communication skills are the core competence of the digital age. Connecting people – in this case employees and stakeholders – makes people-orientation another important skill. The most important skills for the digital age are listed in

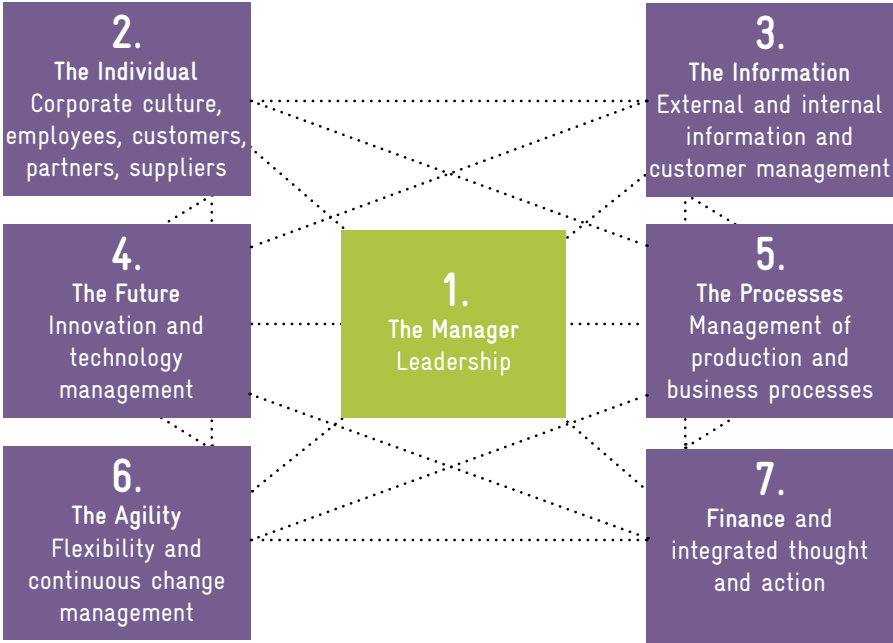


Figure 1: The seven fields of the IMLead® concept (Lohmüller and Pfeiffer 2019)

Skills	Manager	Individual	Information	Future	Processes	Agility	Integrated thinking and action
Communication skills	•	•	•		•	•	
People orientation	•	•	•		•	•	•
Networking skills	•	•	•		•	•	•
Trust building	•	•	•	•			
Transparency	•	•	•	•	•	•	•
Team spirit	•	•	•				
Change capability	•	•		•	•	•	•
Unlearning of hierarchy	•	•	•	•	•	•	•
Media competence	•	•	•				
Decision-making capability	•	•					
Customer orientation	•	•	•	•	•	•	•
Innovation capability/creativity	•	•		•			
Professional expertise on technologies	•	•	•	•	•		
Flexibility	•	•			•	•	
Team spirit	•	•			•		
Mastering complexity	•	•		•	•	•	•
Cooperation skills	•	•		•	•		•
Distance leadership	•	•	•		•	•	•
Strategic thinking	•		•	•	•		•
Willingness to learn	•	•					
Emotional IQ	•						
Recognising new trends	•	•	•	•	•		•
IT competence	•	•	•		•		•
Understanding data	•	•	•		•		•
Self-management	•	•	•				•
Relinquishing responsibility	•		•				
Accepting responsibility	•	•	•				
Willingness to take risks	•			•		•	
Agility	•	•		•	•	•	•
Disruptive thinking	•	•		•	•	•	•

Table 1: Management and Leadership Skills for the Digital Age (Sources: Steinbeis Global Institute Tübingen | Steinbeis-Hochschule Berlin, 2019; IFIDZ Institute for Leadership Culture in the Digital Age, 2018)

Table 1 in their order of importance, and their influence on the seven fields is indicated with a tick. The new skills for the digital age have been marked in colour. It can generally be observed that numerous skills from the analogue age are still dominant and merge with the new skills of the digital age. With regard to agility, disruptive thinking and a willingness to take risks, it should be noted that these skills are mainly dominant in Anglo-American countries, and particularly in Silicon Valley. All in all, it is clear that even complex management processes will be automated in the future. With that,

leadership skills are of even more significance in the digital age and are the key to the success of a business.



About the author
Professor Dr Bertram Lohmüller is CEO and partner at Export-Akademie Baden-Württemberg GmbH, which supports the MP in carrying out training programmes. He implements training and transformation projects for technologically oriented enterprises throughout the world as a consultant. He teaches leadership, innovation management and technology management at Steinbeis University in Berlin (SHB). His research includes the investigation of leadership skills and the function of the modern Chief Technology Officer (CTO) in enterprises. bertram.lohmueLLer@eabw.org

Flexibility in Motion

Agile working can give enterprises a leg up in adapting to new market conditions

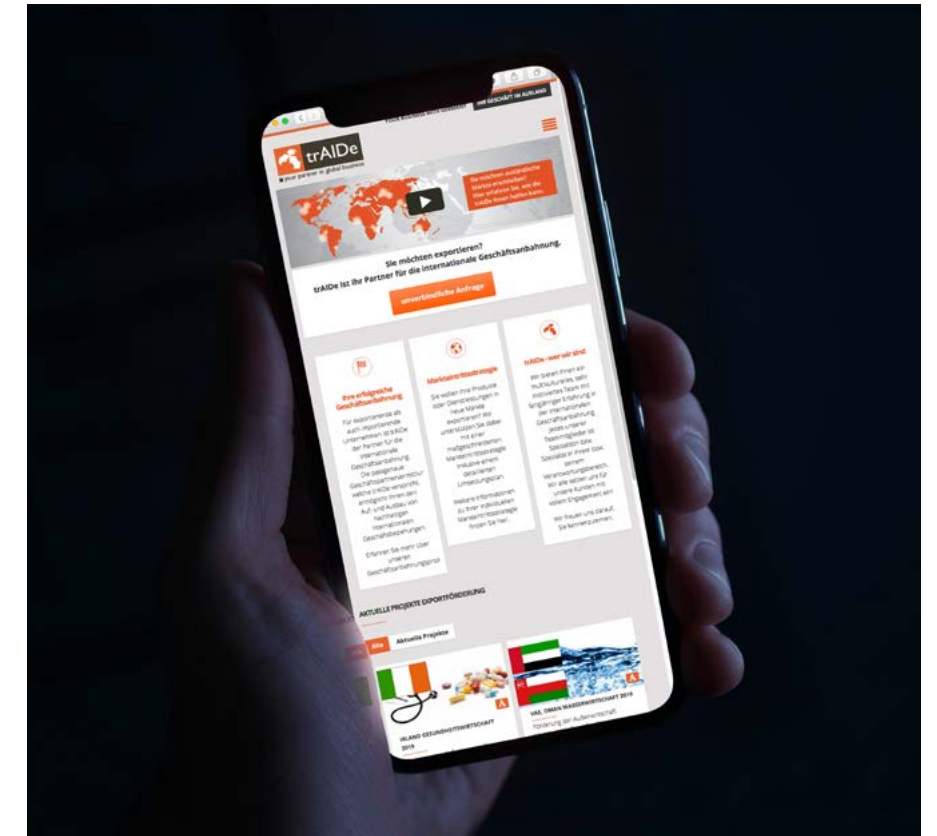


All around the globe, businesses are facing increasingly dynamic environments. Along with shorter development cycles and growing competition, digitisation is also changing everything from products, services and relationships with stakeholders to the level of knowledge and needs of target groups. Sina Okito explains how businesses can apply the concept of agile working to improve response times to new conditions.

These days, a seemingly great idea is not enough to launch a new business model. In fact, enterprises have to continually adapt to ever changing circumstances. This is the only way for them to be innovative and to grow. This adaptability stems largely from adopting a different attitude towards our own actions and mindset; because only if the enterprise puts true listening, open feedback and a healthy mistake culture into practice, can these aspects be used as resources for external promotion. This often requires fundamental and structural changes within the organisation, which above all need to be exemplified by strong management. Agile working has proven to be an effective new form of cooperation.

Flexibility, but Rules Still Apply

The term agility originated in software development where problems and challenges are often not apparent until the implementation stage. "Agile" is defined as the ability to be mentally and physically resourceful and adaptable and simply refers to the capacity to react flexibly to and help shape change. Agile does not mean all the rules go out the window though, and requires clear guidelines to be effective. The 2001 Agile Manifesto, a set of principles agile teams follow in



software development, is often linked to agile project management. These values can be transferred to other types of projects where team members apply a range of methods, combining them into different formats and including elements of design thinking, lean start-ups, objective key results (OKR) and scrum.

Shift from Conventional Project Management

Agile project management differs in many ways from conventional project management where project scope is fixed and a great deal of effort and time is often invested in following this set plan. An agile approach initially defines budget and time as constants, and the project team then works to develop project scope and design with input from users. Digital

business models in particular often face unpredictable framework conditions and results, and agile methods can be especially effective here. Step-by-step and repetitive development loops allow for the targeted testing and advancement of business models. In addition to software and digital projects, agile working is most frequently used in marketing, CRM, supply chain management and sales. Figure 1 shows the differences between agile and conventional project management.

Agile Working at trAIDe

At trAIDe, the decision to introduce a new, agile way of working was made at an annual strategy workshop. Instead of reviewing the previous year and previewing the year to come, we set a course for a new strategy that involved more per-



The Four Agile Manifesto Values

- Individuals and interactions over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

Source: Utah, 2001

sonal and team responsibility, a robust error culture, efficient feedback and learning loops, and a strong focus on existing resources with the best possible result. A strategy process at the management level laid the groundwork for this sea change by identifying potential for improvement within the organisation. The workforce was used to the existing business model and increasing workloads had led to higher error rates. This meant management had to intervene more and more, making decisions and putting out various fires, leaving little time for strategic development and innovation. And although the trAIDe team was aware of its skills and strengths, these could not be fully utilised because staff were so firmly

entrenched in operative business. Employee dissatisfaction was on the rise.

The new agile working model gave various teams and each individual employee more scope and freedom. A new digital business division was also created to help the business better weather market changes while moving away from the old business model. The new division has been tested and improved over the course of this year, and we have introduced new processes and cooperation principles (see box).

The creation of trAIDe Health in particular meant the team had to live with a sense of uncertainty about results. At

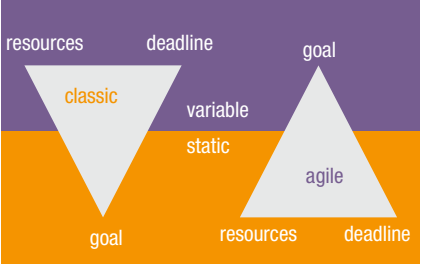


Image 1: Traditional and agile project management in comparison

the beginning, the health team outlined a product solution for a problem they firmly believed was crucial for customers. As an initial digital prototype for a matching platform between international manufacturers and distributors was developed, in close coordination with test customers from the medical technology industry, it quickly became clear that the problem was important but not urgent. This insight allowed the team to quickly add adjustment loops without rushing to select a preferred solution and possibly exhausting the budget.

Upshot: Mindset over Methods and Tools

Any enterprise that begins exploring new, agile working methods will soon discover that these go hand in hand with a new set of values and principles reflected in the varied methods and approaches. Agility supports teams in making decisions that result in better products. Determining which methods and approaches work best depends on each individual organisation. At trAIDe, we found giving teams and staff more responsibility and an opportunity to mindfully shape the organisational structure valuable. The top priority here is to have management lead by example, modelling the change and re-evaluating their management style in view of the new principals. It is less about methods and action than about a shift in mindset. Regular reflection through in-team reviews help executives and staff objectively evaluate the state of cooperation.



About the author
Sina Okito (nee Battenberg) is a senior development manager at trAIDe GmbH, which supports the MP in carrying out training programmes. Her portfolio includes introducing and continuously reflecting on agile working as well as the implementation of strategy, organisational development and change projects. She also works as a freelance consultant with teams and high-level personnel.



At trAIDe GmbH, emphasis is placed on teamwork.

The new processes and principles introduced at trAIDe GmbH:

- **Project teams work in 6 to 12-week sprints with clearly defined meeting formats:** starting with a project kick-off and sprint plan, then on to half-hour weekly meetings and periodical reviews that reflect all the results achieved so far and the cooperation within the team. The entire cycle starts again after each sprint to ensure teams go through as many effective learning loops as possible.
- **New tools significantly increase transparency and effectiveness.** Thanks to Slack (a channel-based communication tool) and Trello (a project management tool that uses a Kanban board that breaks tasks down by processing status), all team members have a good overview of upcoming tasks. This enables every individual to assume team responsibility.
- **Project goals are clearly defined using various (interactive) methods.** This also allows progress monitoring and everyone in the team is encouraged to contribute ideas and immediately test them out as pilot projects.

Lots of information at a glance
for participants or anyone
interested in the Programme!
www.managerprogramme.com

Follow us on
Facebook!
www.facebook.com/managerprogramme



IMPRINT

Journal
'Fit for Partnership with Germany'
Manager Training Programme of the
German Federal Ministry for Economic Affairs
and Energy (BMWi)
Issue 14
Publisher:
Deutsche Gesellschaft für Internationale
Zusammenarbeit (GIZ) GmbH
Manager Training Programme of the BMWi
Reimut Düring, Head of the Manager Training
Programme of the BMWi
Email: mp-pr@giz.de
Internet: www.managerprogramme.com

Responsible party:
Anne Jach-Kemps
Editorial team:
Katrin Schomaker (responsible party), Anke Flören,
Dr Gerd-Schimansky-Geier
Layout:
DIAMOND media GmbH, Miria de Vogt

Contributors:
Irina Alexiadis, Mengyi Cen, Michael Emmrich,
Verena Freynik, Karina Gabrielyan, Isolde Heinz,
Tobias Knubben, Dr Angela Leeke, Ljudmila
Metzdorf, Ronald Schulz, Karin Weber
Photo credits:
Adobe Stock (Cover, p. 2, 7, 10, 25, 27, 28, 35,
40, 52, 53), GIZ/Hans-Jürgen Vollrath (p. 3r, 12),
BMW/Susanne Eriksson (p. 4t), School of Business
of BSU (p. 4b), ProSME (p. 5t), BMW/Andreas
Mertens (p. 6t), BMW/Bildkraftwerk (p. 6b),
Commit Project Partners (p. 7), AHP International
(p. 10b, 11), DMAN/Stoyan (p. 11b, 32), iStock
(p. 31), Messe Frankfurt (p. 16), Gitta Feyerabend
(p. 17, portrait Jürgen Werz), CORFO (p. 15b),
FOTOMAC/Merwyn Mascarenhas (p.18, 19),
Enterprise Georgia (p. 20t), Ulan Bazarbaev (p. 22t),
IHK Moldau (p. 24b), WIK (p. 30b, 31b), Phoenix
Contact (p. 33), Kemerovo Regional Resource
Center (p. 34), VCCI (p. 35), David Khizanishvili
(p. 36, 37), N. Shabasovich (p. 38, 39), A. Faltas (p.
40), N. Naidan (p. 42, 43), Inkar-1 (p. 44, 45), Nika
Farm Servis (p. 46, 47), InnoCentro (p. 48, 49),

Shutterstock (p. 2, 6, 8, 13, 14, 15, 17, 18, 20, 21, 24,
26, 27, 28, 29, 30, 48, 50, 54, 56), S. Lysak (p. 51),
EABW (p. 55), trAIDe GmbH (p. 58)
Translators (English version):
Joanne Chapman-Rose, Norah Schmidt, Sarah
Smithson-Compton, Thomas Swinehart
Translators (Russian version):
Sprachenfabrik GmbH
Publication frequency:
Twice a year
Editorial deadline of the current issue:
July 2019
All rights reserved. Reprints – also of extracts – only
with express permission in advance. While every care
has been taken, no liability is assumed for the con-
tent. The cartographic presentations do not imply any
recognition of international boundaries or regions.
**Funded by the German Federal Ministry for
Economic Affairs and Energy (BMWi).**
ISSN 2195-8718



Fit für Auslandsmärkte

Machen Sie Ihr Unternehmen fit für China und Russland!

Das Bundesministerium für Wirtschaft und Energie sowie die Regierungen Chinas und Russlands laden Führungskräfte deutscher Unternehmen in ausgewählte Wirtschaftszentren ein.

Ihre Vorteile

- Marktinformationen aus erster Hand gewinnen
- Potenzielle Geschäftspartner vor Ort treffen
- Zugang zu Entscheidungsträgern aus der Wirtschaftsverwaltung
- Einblick in die Unternehmenspraxis und Geschäftskultur

Jetzt bewerben: www.managerprogramm.de/FFA



Manager Training Programme

Supported by:



Federal Ministry
for Economic Affairs
and Energy

on the basis of a decision
by the German Bundestag

Deutsche Gesellschaft für Internationale
Zusammenarbeit (GIZ) GmbH
Friedrich-Ebert-Allee 40
53113 Bonn
T +49 228 4460-1227
F +49 228 4460-1333
E mp@giz.de
www.managerprogramm.de