The Human Dimension of MANAGEMENT

10th Global Peter Drucker Forum.

The anniversary congress in honor of the Vienna-born founder of modern management addresses the human dimension of leadership.

November 29-30, Wiener Hofburg
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Dear Readers,

The Global Peter Drucker Forum, initiated by Richard Straub in 2009 to commemorate Drucker’s 100th birthday, is taking place for the tenth time this year, on November 29-30. This event has been truly world-class from the outset because management professors and corporate leaders still acknowledge the ideas and concepts of the ‘father of modern management teaching’ and therefore willingly meet in his honor and in his birthplace to network and exchange ideas among their fellows.

To celebrate this anniversary, the event is taking place in the magnificent surroundings of the Wiener Hofburg.

The world’s top management thinkers are meeting in the global city offering the best quality of life. Many aspects of Drucker’s premise, that management is ultimately always about the human dimension, are exemplified in Vienna.

In this special edition, we therefore present not only the many top-notch speakers at the Drucker Forum but also a selection of those individuals here in Vienna who ensure that the special theme of the tenth Global Peter Drucker Forum, ‘Management. The Human Dimension’ is tangible in the daily lives of the city’s inhabitants.

Michael Schmid
Trend Editor
Twenty years of the Global Peter Drucker Forum

2009 PETER DRUCKER CENTENNIAL FORUM
2010 MANAGING THE NEXT SOCIETY
2011 A QUEST FOR LEGITIMACY - HOW MANAGERS CAN SHAPE THE FUTURE
2012 CAPITALISM 2.0
2013 MANAGING COMPLEXITY - NEW HORIZONS FOR MANAGERS
2014 THE GREAT TRANSFORMATION
2015 CLAIMING OUR HUMANITY - MANAGING IN THE DIGITAL AGE
2016 THE ENTREPRENEURIAL SOCIETY
2017 GROWTH AND INCLUSIVE PROSPERITY
2018 MANAGEMENT: THE HUMAN DIMENSION

AT THE LEADING EDGE

The first Drucker Forum took place back in 2009 under the shadow of the Financial Crisis. Digital disruption, the Euro Crisis, migration, Brexit, and protectionism have in the meantime magnified the CHALLENGES FACED BY MANAGEMENT many times over. That’s why Peter Drucker’s ideas are more current than ever.

IT was exactly on the day that Peter Drucker (1909 - 2005) would have celebrated his 100th birthday - November 19, 2009 - that organizer Richard Straub opened the Peter Drucker Centennial Forum in the festival hall of Industry House on Vienna’s Schwarzenbergplatz.

Global pioneering thinkers from the world of business, such as C. K. Prahalad, Hermann Simon, and Philip Kotler, were there to honor the founder of modern management teaching who had been born in Vienna. The outstanding success and the extremely positive feedback associated with the first event led to it becoming an annual meeting point for the world’s management elite in Vienna: the Global Peter Drucker Forum (GPDF), which attracts not only top-notch business professors as speakers but also top consultants and the CEOs of multinationals and Austria’s corporates.

This year, on November 29 - 30, the GPDF will be taking place for the tenth time. To celebrate the anniversary, it will be held in the splendid setting of the Wiener Hofburg. And with a particularly exclusive selection of speakers, ranging from Harvard...
Technology can't answer the questions about fundamental values and the purpose of management."

RICHARD STRAUB
legend Clayton Christensen, who was the first to put the term and the idea of disruptive innovation on the management agenda, and marketing guru Philip Kotler, who has regularly participated since the première event, to the CEOs of global players such as Unilever, Michelin, Safaricom, Klöckner, Mondi, and Roland Berger, and top journalists from the Economist, Financial Times, and Harvard Business Review. In fact, there are so many stars lined up that we can’t mention them all here (see page 30 onwards).

UNDER THE SHADOW OF THE CRISIS. Until shortly before it began in 2009, Straub was concerned about whether the Forum would take place at all. Triggered by the Lehman Collapse a year earlier, the shock waves of the Financial Crisis were in the process of impacting on the real economy and also dragging it down into the abyss.

In effect, the GPDF has from Day 1 accompanied a world which has been going through a fundamental and ever-accelerating transformation process which inevitably entails crisis-like events and major turmoil. The banking crisis, recession, Euro Crisis and Debt Crisis shaped the following years. While some looked for the causes, many others sought those responsible for the misery. Not without reason, these included the greed and short-term thinking of certain managers.

A management forum could of course not simply disregard this and therefore posed the question of the legitimation of management to shape the future. “Is there a Future for Capitalism?”, asked social philosopher, pioneering thinker, and regular forum speaker Charles Handy in his keynote address. Discussions focused on shared value and bottom-up entrepreneurship and their potential to supplement or overcome capitalism fueled by financial markets. Capitalism 2.0 was consequently the key topic the following year. Adrian Wooldridge, Management Editor of the Economist, for example, put forward arguments about how shareholder capitalism could be improved.

The “new horizons for managers” referred to in the subheading were also becoming visible – in the form of the start-up boom and digitalization. Dan Shechtman, winner of the Nobel Prize in Chemistry, professor at Technion Israel Institute of Technology and an architect of the start-up wonder in Israel, campaigned for technological

2009–2018: Crises, disruption, acceleration and protectionism as extreme trends.
entrepreneurship. Straub reports: “As a chemist 40 years earlier, he realized that the students at the Technion should not only learn about technology and science but also needed a sound business education.” As early as during a discussion round with the author and workplace pioneer Tammy Ericsson as well as London Business School professor Lynda Gratton, it was anticipated how digitalization and social media would sweep away traditional organizations and business processes at companies and would represent entirely new challenges for management.

DEPARTURE AND TRANSFORMATION. It was exactly these major issues and their global impacts on business and social structures that were discussed at the Forum in the following years: the digital transformation and all of its new and innovative business models, the platform economy, and the start-up boom as the path to the Entrepreneurial Society postulated by Drucker.

The speakers at the Forum have been reliable sources of new words and terms that have subsequently become common place in our language. For example, the VUCA world, the acronym for volatility, uncertainty, complexity, and ambiguity, which is characterized by a rapid acceleration in the rate of change and increasing complexity in a networked world which can no longer be controlled by means of classic management methods. Or the term GAFA, made up of the first letters of the internet and digital players Google, Apple, Facebook, and Amazon, which form the new global powers in the Digital Age.

Yet, one might ask what all this actually has to do with Peter Drucker. After all, he had already been dead for two years when Steve Jobs presented his very first iPhone. So, what can he tell us about digital and mobile transformation in the world of today?

“Drucker’s holistic perspective, extending across numerous disciplines ranging from economics, sociology, and psychology to historical science, enabled him to see the big picture,” says Straub. Drucker was more focused on the ‘why’ – currently in vogue under the buzzword ‘purpose’ in management consultancy circles – rather than with the ‘what’ and the ‘how’ of management. For Drucker, Straub asserts, the key to management was always “focusing on people. That is what makes it timeless.” The fact that companies also provide services and have to survive in the market was a simple precondition. “These two points form the poles of management,” Straub explains. This people focus is closely linked to the more than 2,000-year-old tradition of European values and an enlightened image of humanity, despite his profile and impact during his lifetime being far more pronounced in the Anglo-American region and Japan than in Europe.

TECHNOLOGY FOR PEOPLE. This is exactly what makes Drucker appear more relevant than ever given the impending disenfranchisement of the individual as a result of the alliance between Big Data and Big Brother, omnipotent algorithms, and artificial intelligence which is penetrating more and more areas of life.

We can’t expect a people focus to arise in Silicon Valley, with its technology-centric perspective, Straub claims unequivocally and formulates the idea behind an essay which appeared shortly before the Forum on the website of the Harvard Business Manager: “Digital technology and artificial intelligence are powerful forces which...”
we have to exploit for social purposes – not the other way around. 'Technology can’t answer questions about fundamental values and the purpose of management. That is why it can never be more than a tool to unleash human potential – the most important and least exploited resource on this planet.'

The general topic of this year’s Forum could therefore not be more closely linked to the issues of our time or closer to the core of Peter Drucker’s legacy for the 21st Century: ‘Management. The Human Dimension’

Whereby, it also says a lot about the relevance and future-orientation of the issues and agendas defined by the organizers of the GDPF that, given the developments related to robotics, Big Data, artificial intelligence, cloud computing, and the Internet of Things, the 2015 event was entitled ‘Claiming our Humanity – Managing in the Digital Age’. The key takeaways back then: Deployed in the right way, modern technologies can release unimaginable creativity in individuals and even entire companies. Straub averts any misunderstanding that his statements about Drucker and Silicon Valley are in any way aimed at discrediting technology: “As the organization team of the Forum, we are ultimately a perfect example of a virtual organization which can work together from different locations.”

THE DRUCKER COMMUNITY. Many of the top speakers who so happily come back to Vienna time and again have formed a network and become a community exchanging ideas with other outstanding specialists, management practitioners, and with motivated representatives of the younger generation from all over the world who have secured an invitation to come to Vienna for the forum by submitting an essay as part of the Peter Drucker Challenge. This community of course also keeps in touch between the fora by means of all relevant social media channels.

The event location has also contributed a lot to its popularity. The fact that the fora in Vienna have always taken place at locations with an historical flair rather than at sober conference centers is particularly appealing to visitors from overseas. They look forward to the glamorous social program events such as the gala dinner in the festival hall of Vienna City Hall.

By the way: In the meantime, the GDPF community also includes the city administration as well, which uses the forum to present Vienna to top-notch international multipliers not only as a cultural hotspot offering high quality of life but also as a smart digital city keeping abreast of progress, a city of research and innovation – in other words, a city for people and a city of knowledge.

At the time of this anniversary forum, ten years after the Financial Crisis, the world is still faced with serious challenges and threats, also caused by VUCA players such as the Brexit protagonist Boris Johnson and Donald Trump. There is still a need for Drucker’s humanistic mindset in such an environment – and not only in management.
Peter Drucker was born in Vienna, November 19, 1909. I always heard this sentence as an introduction back in 2007 when I received access to the eleven modules of an online management course which Peter Drucker had worked on and for which he acted as the narrator. After the third course, the penny finally dropped: 2009 was his 100th birthday. That was how it all began. My wife Ilse and I were convinced that one of Austria’s greatest sons of the past should be duly honored in Vienna.

Research led us to the Drucker Institute in Claremont, California, which was affiliated with the Drucker School of Management. Via this institute, I was introduced to Doris Drucker, Peter Drucker’s widow, who was extremely interested in our initiative and prepared to support the project from Day 1. Doris was even the guest of honor at the first Drucker Forum – despite already being 97 at the time. Her speech under the portrait of Kaiser Franz Joseph at Vienna’s Industry House was unforgettable for all of us who were able to attend (see photo, right).

C.K. Prahalad was one of the world’s leading management thinkers at that time. “I was told that it was nearly impossible to persuade him to attend a small non-profit organization event where he would have to speak on a pro-bono basis. I got in touch with C.K. via Professor Yves Doz from Insead and was peppered with numerous questions. It was immediately clear that Prahalad was a big fan of Peter Drucker. He soon warmed to the idea of acting as the opening speaker of the Drucker Forum and his involvement increased from month to month. His speech was brilliant. The full version is available in our video library. It was a major honor for us when we noted that C.K. had updated his CV to include the Drucker Forum as a key event in his career. It was a tragedy that he died suddenly and completely unexpectedly in April 2010. However, we have managed to remain in close contact with the Prahalad family via his wife Gayatri and his daughter Deepa over the years.

One of the highlights of the Drucker Forum was the homage paid to us by Clayton Christensen in his 2016 closing address – there is no greater legitimation you can receive than the unconditional recognition of this leading management thinker (just ranked Number One by Thinkers50).

We have always relied on Vienna’s cultural infrastructure. Dinner in the restaurant of the Sacher Hotel with the top speakers has been a tradition since the first Forum. Between Forums, there are numerous tweets in which the top speakers mention how they are looking forward to the dinner event (most recently from Rita McGrath and Lynda Gratton, for example). The first input I got from Adrian Wooldridge, then Management Editor of the Economist, was also organizational in nature: As we descended the steps to the halls in the Albertina for the gala dinner event, he commented: “You should definitely continue using such locations for the conference. This is an environment in which good and important discussions can take place.”

Karl Javurek, then chairman of WdF (Austrian Managers Association) put us in touch with key decision-makers from the City of Vienna who turned out to be enthusiastic fans of modern management methods. In recent years, this has led to the development of an excellent partnership founded on the idea that Vienna should become an important ‘center of knowledge’.
LIFE IS MORE THAN ‘DATA POINTS’

But is it really right to speak of ‘intelligence’ in this context? Intelligence, a deeply human characteristic, includes the ability to think rationally, coherently, with intentionality, and across disciplines, to imbue decision-making with values and ethical considerations, to develop relationships, to react emotionally and, last but not least, to make mistakes and learn from them – a vital prerequisite for creativity and innovation. Despite the awe that these new technologies inspire, let us never forget that machines can only perform the tasks we set them: the ‘brains’ of Deep Blue and AlphaGo are only useful in games of chess and Go. They have no wider application in the sense of a general AI.

In reality, artificial intelligence is a metaphor reflecting a mechanistic notion of humans as quasi-computers with bodies as hardware, controlled by mental operating systems. This, coupled with the belief that the world can be entirely apprehended through data, leads to a reductionist worldview that risks throwing millennia of intellectual history out of the window. At the 2015 Drucker Forum, Clayton Christensen, one of our leading management thinkers, reflected ironically that there could be no place for data in heaven because it always lied. Data could only reflect an impoverished version of our real lives, much of which simply cannot be represented by data points.

For me, the idea of computers embodying super-human intelligence is a false religion of an extremely dangerous kind, leading us into the mortal error of projecting abilities into them that they cannot have. It is not AI that threatens humanity, but the temptation to empower it to act and decide for us in areas that should be ours alone. Our blind belief in the machine is reinforced by the ‘black box syndrome’: i.e. we don’t understand what’s behind the algorithm, but because it’s a computer, it has to be right. Because they are machines, computers seduce by seeming to promise error-free functioning – at least in calculation and algorithmic problem solving.

Another looming threat is the power wielded by the FANGS: giant corporate AI users, that having already achieved quasi-monopoly power through network effects, are now cementing their position by exploiting their enormous troves of proprietary data. Our data – truly the ‘oil of the 21st Century’ – has effectively been annexed by a few ‘Digital Robber Barons’.

RICHARD STRAUB

Keeping AI in its place

Artificial intelligence requires human moderation

Peter Drucker once called the computer a ‘moron’. This was actually a compliment since, strictly speaking, the computer, which possesses neither consciousness nor personality, is not even that. What Drucker meant was that a machine can only carry out blindly, and thus ‘stupidly’, what it has been programmed to do.

However, the latest developments in artificial intelligence (AI) call Drucker’s dismissal into question: can computers, in all their increasingly complex, networked, and powerful forms, still really be called stupid? Or will they at some point come to outperform or even dominate their inventors, as futurologist Ray Kurzweil predicts?

Advances in AI have indeed been remarkable. Not so long ago, super-computers were no more powerful, and no smarter, than today’s cell-phones. And digital technology has leap ahead in areas such as robotics, autonomous driving, speech and image recognition, and machine learning. Digital personal assistants (Siri, Alexa, Cortana, and others) bear eloquent witness to this.

RICHARD STRAUB
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MACHINE IN SUPPORT OF MAN

Note that this is a plea for caution, not an attack on technology as such. A more realistic assessment of AI would in itself go a long way towards allaying the mistrust it evokes in large sections of the population: for example, only 15 percent of Germans believe that the benefits of AI outweigh the risks, according to a YouGov Institute survey.

Yet we know that synergies between man and machine already offer enormous potential for value creation. In diagnosing dangerous skin changes, Heidelberg University’s advanced AI system was right 95 percent of the time compared to 86.6 percent for humans. In the case of harmless changes, however, doctors are more often correct. At least in cases like these, then, man-plus-machine would seem to be the most rewarding way forward.

We can say with certainty that computer systems are unbeatable, and essential, for analyzing large volumes of data, recognizing patterns, correlations and trends, and performing complex calculations in the shortest possible time. However, this alone is no guarantee that the use of the technology will result in overall human benefit.

What is really at stake is learning how to use new technologies to complement and strengthen human intelligence. This requires, first, a better understanding of human capabilities and their limitations. We need to concentrate on the human, not the machine. It is therefore essential to emphasize not only STEM skills (science, technology, engineering, mathematics), but also the human and social sciences. Assessing the economic, social, and ethical issues arising from autonomous transport or the robotization of nursing care cannot be left to technocrats and market logic. Second, our political and civic institutions must be enabled to grapple with and properly engage with these developments. Managers as the ‘most important leadership group in society’, as Peter Drucker called them, have a decisive contribution to make here.

MANAGERS AS THE ‘BASTION OF REASON’

To state it clearly, the leaders who are at the interface of organizations and institutions – whether public, private, or civil – are perhaps society’s best, and last, backstop against the false positioning of AI as a better version of human intelligence. Managers are in a pivotal position: they can either further fuel today’s more problematic developments or contribute to a ‘reframing’ of AI and its capabilities. Seen through human as opposed to virtual-reality glasses, the need to confine systems to an exclusively serving role is evident. This would require the creation of strong frameworks to ensure AI remains under human control – such as the Open AI movement or efforts to open up the ‘black box’ by translating algorithmic logic into natural language that even laymen (i.e. almost all of us) can comprehend.

Arati Prabhakar, former head of the US Defense Advanced Research Projects Agency (DARPA), believes we are moving towards a symbiotic connection between man and machine. That seems likely – which makes it all the more important not to let Silicon Valley’s techno-fanatics and other technology evangelists steal the conductor’s baton from our hands.

The 10th Peter Drucker Forum is dedicated to the theme of ‘the human dimension’. In line with this leitmotiv, the discussion will be centered on people, not machines. It is high time for a rethink, one in which reason, human potential, and, in the long run, human dignity are seen once more as what they truly are: our greatest common opportunity and responsibility.
A city for people, a city of knowledge

Vienna, which is this year hosting the Global Peter Drucker Forum for the tenth time, is renowned as a global city of culture far beyond the participants at this elite event. It is not without reason that the international ‘Drucker Community’, which meets in the fall of every year, appreciates the accompanying social program organized among the historical flare of locations such as Vienna City Hall or the Albertina.

Yet, Vienna is also a city in which Peter Drucker’s central idea is put into practice daily, namely that management is ultimately about the human factor. Management, whether in the private or public sectors, always had a human and a social dimension for Drucker.

Not least because Vienna is also a modern city of research and innovation these days. From here until page 29 of this magazine, you have a chance to discover several of the people and projects responsible for making Vienna a city for people and at the same time a city of knowledge.

The project: noyb

THE IDEA. This NGO not only challenges data protection infringements, noyb also aims to support companies, with guidelines for practical implementation, for example. It also plans to launch whistleblower tools.

THE PEOPLE. Five lawyers and two interns currently work for this NGO, which started with €250,000 of seed capital from private and corporate investors: noyb.eu

A relaxed fighter on the front line

Who is interested in data protection in Europe? US technology firms pay such fines from their petty cash!” This nonchalant disclosure was made by a representative from Facebook eight years ago during a hearing in Santa Clara, California. By chance, an Austrian exchange student was sitting in the public gallery. This was when Max Schrems experienced his “magic moment” and, soon after, embarked on a mission which he would have preferred to turn out otherwise. He was unwilling to accept that corpo-

BY BARBARA STEININGER
And, this year, the tide does actually seem to be turning in favor of data protection. With the GDPR in effect since 25 May, the EU now has a regulation which non-EU companies have to comply with if they want to do business here. Schrems summarizes the change of heart: “A cultural shift has taken place at many companies: The earlier attitude of “nothing will happen” has been replaced by a “What if something happens?”

Last year, Schrems took the opportunity offered by the massive increase in awareness to professionalize his organization in the fight for data protection. He launched a crowdfunding campaign to finance a data protection association at the end of 2017: The minimum funding level of €250,000 was reached in a relatively short time. Besides a few thousand small donators, companies such as StartPage and the City of Vienna also contributed seed capital. “noyb” (none of your business) aims to deal with big tech players “at eye level and bolster the rights of the individual.”

Schrems himself adopts a sober and strategic approach to the legal proceedings and even sees something positive in the pending case against Facebook: “We make sure that such an ongoing case yields benefits,” he says, some of which are not expected. “The overturning of the safe harbor agreement was just such a case. This agreement used to regulate the exchange of data between US and the EU companies: ‘We went to the ECJ to challenge Facebook via the safe harbor agreement. That was how we found out that Facebook doesn’t even use safe harbor. If the Irish authorities had told us this earlier, we would not have been able to challenge them. The politically smart target was safe harbor, and it was this that we actually overturned.’ Sometimes detours are necessary to clarify fundamental questions. Safe harbor was subsequently replaced by the stricter Privacy Shield legislation in 2016.

Five lawyers working from the small noyb offices in Vienna’s 14th district are now dedicated to clarifying such fundamental questions. There is enough to do: Even if the impending fines can now reach astronomical amounts, the big tech players will still invest in an armada of lawyers to defend these cases. Schrems grins: “In the meantime, the sums involved are so high that it now makes sense for the companies to engage in year-long court battles.” The petty cash is no longer enough to fund these. For Schrems, the fundamental question in the future is simple and yet profound: “Who will our private information belong to in 50 years? Just a few major corporates or every individual citizen?” That is what needs clarifying.
An interview with **MICHAEL HÄUPL**, for the first time in his new role: The president of the Vienna Science and Technology Fund (WWTF) explains why Vienna’s lighthouse projects shine as far as Australia and why we need a university like Cambridge.

“Back to the roots”

**INTERVIEW: ANDREAS WEBER**

**TREND**: As the former Mayor of Vienna, how may I call you?

**HÄUPL**: Mr. Häupl. That’s enough.

How are you getting on, six months after handing over office? Great. I don’t miss anything. Except a few friends and people who I worked together with for many years and see less often nowadays.

The office that you now have here as the president of the Vienna Science and Technology Fund (WWTF) is very modest compared to the 200 square meters that you had in City Hall. It’s fine. I am grateful for having this office here in the 9th district. Before me, it was occupied by a federal president when he was still a university professor.

How busy are you as the president of the WWTF? It was quite quiet in summer but is picking up now.

The WWTF has twelve million euros in funds, which is very modest compared to the city’s budget of 14.7 billion euros that you used to be responsible for. That is in no way comparable. A city’s budget is decided upon by the city council and, a year and a half later, a balance of accounts sets out what has happened with this money. At the WWTF a board of five decides which areas should receive funding, such as the life sciences, cognitive sciences, or artificial intelligence. The project proposals we receive are reviewed by a jury composed exclusively of scientists and then presented to a board of trustees. Twelve million euros is not much money, but we are a small, selective research funding organization. By the way, we are the only privately financed research promotion fund in Austria. All the others are public-sector. The main share is borne by the AVZ Foundation, which used to be responsible for managing the investments held by the Zentralsparkasse bank.

**What contribution are you expected to make as a former mayor?** For me, it’s a bit like going back to my roots, but obviously not as a scientist. I can’t be a scientist any more after 35 years working elsewhere. But I can contribute organizational and financing experience. I can help young scientists become established. Our fund has a certain breadth, with a clear focus on Vienna of course. That matches my CV well.

Which are the most successful WWTF projects? Since WWTF was set up, projects have received around 145 million euros in funding, the largest being in the area of the life sciences in collaboration with universities, but also non-university research institutions. Biotechnology, microbiology, ICT – many fantastic research projects have been implemented. One of the results of our research funding is that our Vienna Research Groups for Young Investigators program has provided Vienna with numerous young researchers who are also in close contact with companies such as Siemens and Kapsch.

Around 30 percent of all research spending in Austria is invested in Vienna. Nearly 50,000 people work in R&D, there are 1,554 research centers, and 200,000 students. What does Vienna need to internationally be seen as a city of knowledge and not just the world’s city offering the best quality of life? There are currently two high-profile fields where Vienna is highly regarded internationally. The first is life sciences and the second is quantum physics. These are fields where we are taken seriously throughout Europe, in the USA, and even as far as Australia. The names
Josef Penninger and Anton Zeilinger represent these two fields.

**Josef Penninger has just moved to Canada.** Yes, but he still spends 20 percent of his working time here. And in Canada he is now responsible for around 80 research institutes. As you will be aware, science today is absolutely international. That’s why I see it as an enormous advantage for Vienna as a center of science and research that Penninger has gone to Canada. That offers us wonderful collaboration options. Therefore, I am not concerned, on the contrary, I am delighted.

Networking between science and business is becoming increasingly important. Is enough being done here in Austria? In Cambridge, 34,000 people alone work for university spin-offs. That’s the direction we should be heading in. OK, Cambridge is one of the world’s best three universities, but we should benchmark ourselves against the best.

Since you mentioned it: Why is no Austrian university among the 100 best in the world? As long as such rankings are exclusively based on the number of publications and citations, top rankings, I’m afraid, will remain out of reach for us. But, and this also counts, here in Vienna we focus in particular on networking between science, research, and business.

The new Austrian chancellor was recently in Singapore and Hong Kong and visited some impressive educational institutions there. Universities on a huge campus linked to state-funded start-up hubs which, in turn, work together with large corporations. We don’t have anything like that. I know. I am familiar with these institutions. They are impressive not only because of their size, but also because of their financial resources. These are simply other structural preconditions. I won’t mention their autocratic political structures here. There is, however, also the highly developed democratic system in the UK, which is among the world’s leading countries in terms of business and technology-oriented research. What is always important is the permeability between research and its practical application. The excellent cooperation in the field of life sciences with Boehringer Ingelheim here in Vienna is a case in point. Their investment of 700 million euros and 500 new scientific jobs is very important for the site.

Which scientific areas should Vienna be focusing on? It is important to achieve a critical mass, in the areas of ICT or cognitive research, for example. Frankfurt is the leading continental European center in terms of brain research. But we can also contribute significantly as we have already proven in the past.

**The intention is for Vienna to now become the digital capital. What does that mean?** First and foremost, something fundamental, namely people making the widest possible use of all digital options. We are currently setting up the structural preconditions for this. We have finally understood that glass fiber cables are far superior to copper cables. Speed is key given the volumes of data transmitted. This will also promote cooperation between European public-sector institutions and the private sector. The second big issue is the fight against digital illiteracy. We need to combat this the same way we overcame normal illiteracy in the past. People who only have a basic education will no longer find jobs because there won’t be any suitable positions any more. Anyone who can’t come to terms with the digital world will be excluded. Seen this way, the question of education is also a social question. We want everyone on board. Digitalization is not only about technology or economics, it is also about education. And a political issue: Fear of the digital future is fertile ground for populists.

**Does Europe really need digital giants like Google, Apple, Amazon or Alibaba?** Of course that is necessary. Europe needs to develop its own self-confidence, its own opportunities, and its own structures. Smart European politicians such as Emmanuel Macron clearly see that the cooperation with the United States is no longer as dependable as in the past. The challenge is to become independent of the USA and also China.

**Which structures need to be established for this?** The two remaining, more-or-less, powerful nations in Europe, Germany and France, need to significantly increase the pressure they exert, also in terms of the development of common business structures, particularly in the area of digitalization.

A last question: Are you suffering under the loss of influence? Far from it. Not constantly being under extreme pressure is very pleasant.

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**THE WWTF**

LEADING-EDGE RESEARCH.

The Vienna Science and Technology Fund was established in 2001 and is a private-sector, non-profit research promotion organization. The primary objective is to support the best young researchers. The president is Michael Häupl.
The Vienna Business Agency set a new record in terms of business expansions and relocations last year. It is now campaigning for more understanding of businesses.

The then Mayor of Vienna, Michael Häupl, made this clear to a high-ranking delegation from Boehringer Ingelheim in his heavy Viennese dialect: “We want you.” Only to add even more forcefully: “Believe us. We really want you.” Gerhard Hirczi, Managing Director of the Vienna Business Agency, a company owned by the City of Vienna, recalls: “That was the decisive moment.” Germany’s second largest pharmaceutical group decided shortly afterwards not to invest 700 million euros in a production facility in one of Europe’s large cities, but to invest that money at its site in Vienna’s Meidling district. An expansion project that will create around 500 new jobs by 2021.

Attracting international players to Vienna is one of the main tasks of the Vienna Business Agency. As the example with Boehringer Ingelheim highlights, the agency relies heavily on personal contacts and relationships. In Hirczi’s own words, “Vienna is a strong brand abroad as a city of culture, but not as a place for business. That’s why our team members, who constantly travel abroad, need to be extremely active and compensate for this by ensuring that all administrative procedures are completed as quickly as possible with the help of the City of Vienna.

The new record of 191 relocations in the past year is firm evidence of their success. For example, the Chinese company ICBC, one of the world’s largest banks, plans to expand its office in Vienna to become its Eastern European headquarters. The Central European University (CEU), financed by a foundation set up by the billionaire George Soros, is also planning to open a campus in Vienna. And the Lukoil energy group recently decided to massively expand its photovoltaic plant located in Vienna’s Lobau area.

Yet the Vienna Business Agency also offers numerous other services related to the issue of business expansion and relocations. Three million square meters of land are managed in order to attract companies looking for a suitable location.

Companies in Vienna can also receive grants of up to 500 million euros for certain activities. A particular focus here is on product and manufacturing developments related to the extensive area of Industry 4.0. The agency also offers consulting services for entrepreneurs and start-ups. And, last but not least, expats relocating to Vienna are supported by means of a dedicated expat center. As Hirczi puts it, “International groups no longer help their employees to find apartments, schools or childcare places. We jump in and help expats.”

He also sees it as a key task of the Vienna Business Agency to improve the public image of companies. “There is often resistance from local residents when companies expand or want to open a new facility in their neighborhood. We mediate and try to find a compromise. Vienna is a large city, not a dormitory suburb, and that’s why we need successful companies.”
A center of business-oriented research

Around 850 scientists work on interdisciplinary projects at the new AIT SITE in Vienna’s Floridsdorf district to boost quality of life and deliver tangible benefits for cities and their inhabitants.

This new facility of the Austrian Institute of Technology opened in April. It offers Austria’s largest non-university research center ultra-modern offices and laboratories. A “campus feeling” was how AIT’s President of the Supervisory Board, Hannes Androsch, described the site at its opening event. 850 of the 1,300 AIT employees now work alongside each other at this one location in Vienna. “This makes it possible to significantly improve interdisciplinary collaboration between the personnel in the various research departments, boosts our systems expertise and increases our international profile,” stresses Wolfgang Knoll, Scientific Managing Director of the AIT.

The institute runs eight dedicated centers for applied research which are clearly focused on future technologies and infrastructure. Regardless of whether components for intelligent energy systems, 3D sensor technologies for automated vehicles, Industry 4.0, environmental monitoring, cloud-based solutions for secure data networks or identification systems for a self-determined life for individuals in care – all of the development work is aimed at improving people’s lives.

Cities, as central habitats, are today home to many initiatives intended to improve traffic systems and the use of energy, for example, or to provide their inhabitants with relevant information in real time. The AIT is active in many such areas. These include, for instance, autonomous vehicles and delivery services which rely on the development of 5G networks for safe real-time communication between vehicles and infrastructure as well as sensory systems which can predict hazards.

The AIT is particularly renowned around the world in the fields of future-oriented infrastructure and energy systems. Directly next to the head office at the Floridsdorf site is the SmartEST (Smart Electricity Systems and Technologies) laboratory, a research institute which is unique within Europe. It is here that new photovoltaic modules or future-oriented energy networks are tested by running solar and environmental simulations. Not far from here, at the new urban development area known as Seestadt, the latest technologies to boost energy efficiency and many other smart city and autonomous driving technologies are being piloted.

The research agenda also includes systems designed to significantly increase safety at major events such as the Danube Island Festival or after football matches. Anonymized aerial and video surveillance make it possible to identify where dangerous bottlenecks form in crowds and allow timely action to be taken to avoid stampedes.

“The digitalization of society and the Internet of Things are fast-growing research fields,” says AIT boss Knoll. “Sensors are increasingly providing the necessary inputs for smarter cities, energy, and traffic systems.” For example, sensors form the basis of numerous new services such as airspace surveillance. Sensor networks for this are being further developed at AIT in order to now provide an app for cyclists, for instance. The aim is to highlight the route offering the best air quality by means of real-time air quality measurements. Sensors can also be used to manage traffic flows so that emission thresholds are not breached. These countless environmental data also serve to help urban and traffic planners develop scenarios relying on a sound basis of fact.

WOLFGANG KNOll is the Scientific Managing Director of the AIT
More than 15 million tourists visit Vienna every year to gaze in amazement at the sights or eat Wiener Schnitzel. Compared to other major cities, Vienna is also top of many rankings when it comes to quality of life. The city on the banks of the Blue Danube is not only popular with tourists and elite managers. The people who live here permanently also count themselves lucky. “The greater Vienna metropolitan area,” according to social researcher Günther Ogris, “is one of the most wealthy and productive regions of the world.” Based on his many years of research, the head of the SORA Institute for Social Research and Consulting knows the city better than most and regularly conducts benchmarking studies with other cities. “Vienna doesn’t have the highest income; people in Zurich and Munich earn considerably more. But the costs of accommodation there are significantly higher. In Vienna, people have more money left over to live on.”

Even if there is criticism and some inhabitants who love complaining, the city is not on a downward slide, quite the contrary. The population is increasing so fast that the two-million-inhabitants mark will soon be reached. The new residents are also attracted by the fact that rents are considerably lower when compared to those in London, Zurich, and Munich. This is all down to a single factor: “Vienna is the frontrunner in terms of social housing,” Ogris explains. Around 400,000 apartments are let socially. Nearly half of the population benefits from this, not just the lowest income brackets. “Poorer people have a better life here than elsewhere. You can even live on a minimum pension and enjoy the high standard of public well-being.”

Large, well-equipped housing complexes in the heart of the city were built as early as between the World Wars, even in the posher districts. One of the largest of these, the Karl-Marx-Hof, has long been a tourist attraction and the apartments there are as much in demand now as when they were built. The ongoing commitment to social housing continues to slow down segregation in the city. There are of course ‘good’ and ‘poor’ locations, but, according to Ogris, Vienna is significantly better intermixed socially than Stockholm, for example, which often serves as a flagship city.

Despite economic pressure, model projects are still being implemented in Vienna today. An example in point is Seestadt Aspern, where private, housing association and rental apartments for 30,000 people are being built. A colorful, traffic-calmed urban district is being created; one with restaurants, business premises, cycle paths, lots of green space and an underground line directly to the city center. However, the city is attractive not only because of its residential quality and extremely inexpensive public transport. The cultural attractions are as diverse and extensive as those of nearly any other city. No fewer than 94 percent of the population actively takes part in its cultural life, as one SORA study revealed. The second generation of ‘immigrants’ is particularly active, according to Ogris.

Viennese tend to see this diverse cultural offering as a natural right, but new needs are also arising as the dream of an even better life remains. Ogris is also aware of this: “It is good for a democracy when not everyone is satisfied with everything. This drives society forward. And the political system must learn how to deal with this.”

**Long live council housing!**

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**GÜNTER OGRIS, head of the SORA institute, is not only an opinion leader but also an urban researcher. No one can explain better why QUALITY OF LIFE is so high in Vienna.**

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**A REAL VIENNESE. Günther Ogris has been analyzing data about his native city for many years. He attributes the high quality of life to social housing in particular.**
Ali Mahlodji came to Austria as a refugee child, in due course founded the start-up Whatchado, and now tours the world as an ambassador for career guidance.

The amazing thing about Ali Mahlodji is that he keeps rediscovering himself: He became renowned through the start-up Whatchado, which he founded in January 2012 and led himself for several years at its offices in Vienna. Whatchado is an online platform for career guidance funded by prominent investors such as the former Siemens director Brigitte Ederer and former national bank president Claus Raidl. On this site, business people, politicians, and ordinary employees post short video clips to explain their career paths.

A childhood dream of Mahlodji’s came true when he founded Whatchado. “As a kid, I wanted something like a friendship book for adults in which everyone honestly answers a few questions about their job.”

He also spent a long time looking for his calling in life. He came to Austria as a refugee child, later quit school and worked in numerous different jobs not knowing for a long time what he ultimately wanted to do with his life. Then he took evening classes, did a technical degree at a university of applied sciences and got jobs at Siemens and Sun Microsystems, before finally founding Whatchado with a childhood friend at the age of 30.

Credibility through his own resume. He has since moved on from the role of a start-up CEO. “Today, I serve as a lobbyist at Whatchado, working in the area of education,” the 37-year-old points out. This is a job that didn’t previously exist at the company, but which allows him to do exactly what is so important to him and exploits his talents. He is regularly invited to schools in Austria and Germany to talk about the issue of career orientation. Sometimes in front of groups of teachers, but also often relating his own experiences to give ‘problem pupils’ the encouragement to find their own way in life. “My own, rather unconventional, career path gives me credibility that young people accept. It’s never about lecturing them, it’s always about clarifying things.”

This also applies to one of his latest projects: “Many young people simply don’t know which jobs exist in IT and how exciting these are. At the same time, the business sector is complaining about the lack of skilled employees. Together with the Ministry of Education and other partners, we...
are therefore working on a dedicated video platform which aims to explain to young people what, for example, a software developer or a data analyst actually do,” Mahlodji explains. The technology for this comes from Whatchado.

Besides his job as an ambassador for career orientation, he is also intensively involved in the future of work. “In the past, employees were always told what to do, namely by their boss. Today, they should be making their own decisions. People need external support to do this,” says Mahlodji, who is tasked with this in the course of keynotes and workshops for companies such as Lufthansa or SAP. The knowledge that he can draw on from his earlier activities also goes into preparing his so-called Work Report. This is a report on the future of work, published by the Zukunftsinstitut, which he became the author of this year.

“The issues of young people, discovering the potential of adults, and trend research are extremely good means for me to drive society forward,” explains Mahlodji, who also works as an EU Youth Ambassador. There is another position which he no longer holds, that of the integration ambassador, which he was appointed to do by an Austrian federal politician and many other prominent people back in 2011. Back then, Mahlodji relates, this politician was still saying that discussing head scarves was the wrong way to discuss integration. A statement which he, Mahlodji makes clear, fully agreed with.

But a lot of time has passed since then. “Today, I am seriously concerned about how Austria treats foreigners,” he says, having spent his first days in Austria in Traiskirchen as a child refugee. His father, an academic, suffered a breakdown under these circumstances, leaving his mother to bring him and his brother up alone.

Mahlodji has since written a German-language book about his turbulent past entitled Und was machst Du so? “It’s a book aimed at giving people the courage, even after setbacks, to always ask the key question: ‘What have I learnt as a result?’ and to view life as a journey,” according to this full-time optimist with so many roles.

“Technology has to work for people”

Vienna’s Deputy Chief Executive Director, WOLFGANG MÜLLER, on digitalization and quality of life in the city.

TREND: Mr. Müller: How did you react when not only the international consultancy firm Mercer but also the Economist magazine ranked Vienna as the world’s city with the highest quality of life?

WOLFGANG MÜLLER: Naturally, we are delighted by this award. But it also entails a challenge every day. One of the reasons for this success could be the fact that we are pursuing a different approach than other smart cities. It is key for us that technology has to work for people and not the other way around. Often, it’s only the bits and bytes which are focused on. The real question is: What benefits people? Here, we follow the thinking of Peter Drucker, the founder of modern management, who always put people first. The public sector doesn’t have the problem of first having to create customers, we already have everyone as a customer. That is the main difference to the private sector which can select its customers. We always have to be there for everyone.

What do you see as your most important task?

We strive to boost quality of life for all citizens. That is our top priority. Quality of life means service, and efficiency, but it also means doing things in a way so that the city functions for the benefit of everyone. Digitalization is an important tool here, but just one of many.

Some of the criteria that make Vienna the world’s city with the highest quality of life for the Economist were a high degree of social security, political stability, and a low crime rate. Can you understand that?

Of course. Those are the facts. The real question, however, is how this stability was achieved. It wasn’t a coincidence. Why, for example, do we have a minimum income? This not only protects those undergoing hardship but also everyone else. It safeguards public security and also has economic stabilizing effects, meaning that those affected remain consumers.

Which problem is occupying you most at present?

We are systematically working toward digitalization. For example, we are currently working on an online, one-stop shop for the use of public spaces. Until now, you often had to get permits from various municipal offices for a pavement café, construction sites or a street party. That is not only tedious for our customers. We often also have to send large teams to the location in order to be able to legally grant a permit. In future, there will be just one point of contact, the one-stop shop. This is how we aim to reach solutions faster, by means of a completely new approach.

How do you deal with this internally if several municipal departments are involved?

Over the past year, we have digitally photographed the entire city, all public spaces, and we are now creating a 3D model based on these photos. This model forms the basis for directly assessing all applications, requests and proposals. It is no longer necessary to go on-site. We can deal with it immediately. We are also working on an online assistant to help with applications. This will make life easier, both for us and for citizens. That is the key issue when it comes to digitalization. Both sides benefit.
You have also launched an app called vienna calling as a new service for citizens. What is this?
We didn’t come up with this behind closed doors. We consulted all Vien­nese citizens and asked them for their ideas. Everyone was able to get involved. It turned out that citizens wanted to help first and foremost to address minor shortcomings in the city, such as trash, out-of-order street lights and broken drain covers. Based on this finding, we jointly developed the vienna calling app for citizens.

How does it work?
It’s simple. Take a photo, add the location via GPS, upload and submit. You’ll receive a confirmation message shortly afterwards that we have started work on or resolved the problem. We used to have many offices to deal with this correspondence. You can still call us, but we have merged the back-office organizations. Since being launched in 2017, this app has already processed around 30,000 cases and we have achieved a completion rate of over 97 percent.

Vienna is growing pretty fast. What does population growth mean for the city administration?
The city has grown by 350,000 people since 2001. The population is currently 1.9 million. And increasing by around 26,000 a year. We have coped using the same personnel resources. The aim was to ensure that service quality didn’t suffer despite population growth. That was a top priority for us. We are always looking for ways to optimize.

The availability of affordable accommodation is also extremely important in order to keep up with the rapid population growth. Vienna regularly wins international praise for this as well. How is the situation at the moment?
Around 500,000 Viennese live in council housing, something envied by the whole of Europe given that this also stabilizes the private residential sector. This strategy will be continued. We have again started building council flats. Our policy also ensures that we have a healthy residential mix in the city and that there aren’t any no-go areas in Vienna.

What is particularly important to you as the manager of Vienna’s digital agenda?
Our top priority is to ensure that all Viennese are integrated, for example in the digitalization process. That is a concern of mine. We want to involve everyone; no one should be left behind. Regardless of their circumstances.

PROFILE.
Wolfgang Müller, 53, is Deputy Chief Executive Director of the City of Vienna and a key player responsible for the development and management of the city’s digital agenda.
Madreiter is delighted by the positive coverage Vienna receives every time it wins a city ranking competition – headlines such as “Vienna beats Melbourne” made the rounds in the international press in August. But Vienna was also number 1 back in 2011, when it was awarded the title of the smartest city in the world, beating Toronto, Paris, and New York, and highlighting its outstanding resource conservation management. Vienna has also once again made it into the final of this year’s iCapital Award.

This is no coincidence, as Planning Director of the city Madreiter knows better than anyone else, even if he is happy to let others handle the marketing of such titles. “Such objective comparisons are extremely valuable in terms of competition between cities. Companies and scientists decide on the basis of these rankings whether a location is attractive for them.” His work is a key factor in Vienna repeatedly achieving top rankings. In 2014, the city drew up its first smart city strategy; a document with over 100 pages which lists action plans for how the current high quality of life can be maintained despite the social challenges faced. The strategy covers the period until 2050 and is regularly updated. “The first update is currently in progress. Our aim is to present this to the City Council in 2019,” says Madreiter. “The fundamental principles remain unchanged, but many things have happened in the meantime, such as the Paris Climate Conference.

As a technician, Madreiter never tires of stressing that the term ‘smart’ in the context of a city has nothing to do with a technical arms race. “It is not about having as many sensors as possible on lampposts.” In Vienna’s smart city concept, technology is just a means to an end. “As little as possible and deployed both smartly and unobtrusively,” he points out. Many ideas are tested, particularly at both of the large urban laboratories, such as Aspern Smart City Research, where Siemens and the municipal utilities are experimenting with new residential concepts on a greenfield site. The second project,
Smarter Together, is no less exciting because it also deals with precarious social conditions in the densely-built Simmering district.

One element which makes the Vienna smart city strategy so unconventional in an international context is the human factor. All of the action taken is measured on the basis of it serving all of the city’s inhabitants, without exception. “We practice the teachings of Peter Drucker in urban development. We are trying to deliver real benefits for all Viennese,” Madreiter explains. Which is why apparently contradictory approaches in terms of implementation form part of the big picture. The connection between the expansion of the 5G network and the so-called 48er-Tandler, the flea market of the municipal waste management department (MAA48), is more logical than it might first appear. “Both are necessary in order to make the city attractive for its inhabitants,” says Madreiter. “For a successful meal, the pot you use is just as important as the good dessert.” According to Madreiter, dealing with waste in an intelligent and pro-active manner is one of the areas which makes Vienna stand out. Name a million-plus city where waste management works better than in Vienna and where it also has a cool image thanks to cheeky advertising claims, popular ‘waste parties’ and training programs?

In Madreiter’s systematic approach, everything is linked to everything else, and he doesn’t see himself in the traditional role of an urban planner who just rubber stamps plans: “As the head of a modern urban planning department, you need to identify trends and translate these into the context of your own city. The most important skill today is remaining flexible enough to change. A good city adapts to change.”

This is also his favorite response to critics who occasionally complain that plans have not been complied with entirely. “If I am managing ten urban development areas in parallel and need these plans for the next 20 years, then I may have to change the plans.” One of Madreiter’s favorite sayings is from former US President Eisenhower: “Plans are useless, but planning is essential.”

B eing the CIO of a city like Vienna is a major challenge – and the perfect job for a strategist like Ulrike Huemer. She defines the direction of digitalization and implements digital change with her 1,200-strong team. Despite the fact that industrial technology cycles are short, Vienna plans years ahead and innovation is assigned a high priority.

New approaches such as blockchain and the Internet of Things (IoT) are as much a part of the Digital City Vienna as running datacenters and providing online services for citizens. Besides the first blockchain projects (one in the area of open government data has already gone live and is attracting a lot of attention at the EU level), Huemer is also collaborating with the Research Institute for Cryptoeconomics at the Vienna University of Economics and Business and is involved with authentication solutions, among other projects.

“One of the top issues is work on a digital identity so that citizens no longer need to switch accounts to access various services online either in the public or the private sectors,” says Huemer, describing the vision behind the project. The citizen is the customer, and everything is about providing services to Vienna’s inhabitants. And customer numbers are increasing every year. Vienna’s population is rising by an average of 26,000 a year. More and more people are living longer, and they should be able to live in the comfort of their own homes for as long as possible.

Digitalization can also help here. The project WAALTer is testing how technology can help older people. “We offer people bracelets with built-in fall detectors which notify the emergency services,” Huemer explains. “This is an IoT application in the field of ambient assisted living. It is an attempt to make the environment more intelligent and to provide more support. We want digitalization to not only be seen as an issue for young people but as one that is for all generations.”

Besides the future-oriented laboratories Huemer runs in Vienna, she also has to deal with mundane issues associated with administrative reform. A milestone was reached on July 1: The various IT departments were merged and re-organized at a site in Vienna’s 22nd district and as a single Municipal Department 1 (MA1) founded. Her motto: “The customer is always the focus.” The next step will be the technical consolidation of the data centers and the standardization of the various software landscapes so that the Digital City Vienna also remains digitalized.
DigitalCity.Wien is a new form of cooperation between Viennese IT-companies and the city administration. The main goal of DigitalCity.Wien is developing Vienna to one of the leading digital hotspots in Europe.

Urban Innovation Vienna is the coordination center of the initiative.

www.digitalcity.wien www.urbaninnovation.at

We make Viennese digital technologies and solutions visible.
Tumors from the laboratory

STEM CELL RESEARCH is a promising field when it comes to curing serious diseases such as cancer in the future. Researchers in Vienna have been responsible for some amazing discoveries.

stem cell research is an important driving force behind modern biomedicine, with scientists around the world relying on stem cells to investigate the causes of serious diseases and develop new forms of treatment. Stem cells are the most versatile of all cells. They have the potential to regenerate tissue in the human body, a fact which makes them indispensable for regenerative and personalized medicine. Some of the most serious diseases, such as cancer or deformities, are due to abnormal cell division and differentiation. Researchers therefore want to gain a better understanding of the genetic and molecular control mechanisms underpinning these processes and learn how such diseases develop, as well as deriving new forms of treatment. These are the most important goals of stem cell research. It also gives rise to a new ethical dimension, since stem cells are bred in Petri dishes and may be able to substantially reduce the need for animal experiments in the future.

In the race for the best research results, the Vienna Institute for Molecular Biotechnology (IMBA) now enjoys global reputation in the field of stem cell research.

Back in 2013, stem cell pioneer Jürgen Knoblich caused a scientific sensation. His cell technology, developed for the first time at the IMBA, is now being used around the world, making it possible to study neurological diseases such as Parkinson’s disease, epilepsy, or brain tumors directly in human tissue. Knoblich, scientific director at the IMBA, used a number of biotechnological methods to create what are referred to as organoids from stem cells. These cell cultures, called ‘miniorgans’, grow and behave as they would in the body. Knoblich and his colleagues are building models for epilepsy, brain, stomach, and intestinal tumors in order to test which drugs are effective against cancerous cells (see below). 70 scientists are now working at the IMBA in the field of stem cell technology.

“Parkinson’s cannot be investigated using mice”

JÜRGEN KNOBlich, Scientific Director of the IMBA, on organoids from stem cells.

TREND: What is an organoid?
KNOBlich: It is a highly simplified miniature version of an organ that is grown in the laboratory from human stem cells – which nowadays can easily be obtained from skin or blood cells. They can be used for systematic research into organ development and diseases, as well as to safely test new substances and treatment methods in human tissue. Since they are cultivated from human stem cells, it is possible to draw direct conclusions about the human organism and even about individual patients – a major advantage when, for example, testing whether a patient responds to a particular drug.

What significance does your research have for the field of medicine?
Diseases such as epilepsy, Parkinson’s, or schizophrenia are difficult to study using mice or flies. Organoid research now makes it possible to examine how the brain malfunctions in human tissue. Basic research is moving increasingly in the direction of faster patient application.

Do you feel under pressure? I find this development very positive. For me, as a basic researcher, collaborations with hospital colleagues are a professionally rewarding experience.

What do you expect from research funding on the back of these spectacular successes? It is important for stem cell research to be correctly recognized and appreciated as an important pillar of the healthcare system of the future, and for sustainable structures to be created.
> Supporting health with outstanding performance
- Largest medical university in Europe, with 8,000 students
- 5,500 employees (including 3,600 scientific staff)
- 29 departments and clinical institutes
- 12 medical theory centers and departments

> Focus on preventive and precision medicine
- Ranked 25th in Shanghai Academic Ranking of World Universities in subject field Medical Technology, 33rd in Pharmacy & Pharmaceutical Sciences
- Subject Ranking 51-100 in Medicine in global QS University Ranking

> Research-led and practice-based teaching
- Medicine degree program
- Dentistry degree program
- Applied Medical Science doctoral program (ten research themes with a focus on clinical research)
- PhD programs (17 research themes)
- Medical Informatics master’s program
- 19 postgraduate continuing education courses and three certificate courses

www.meduniwien.ac.at/en
TREND: What does healthcare research entail and what does this research focus on? ANITA RIEDER: We deal with health determinants and social factors. Many research projects are looking at the following questions: How are certain population groups cared for? Are there barriers in the healthcare system? Are the right target groups served? Why do we still have such big differences in life expectancy between eastern and western Austria? Are these down to lifestyle factors or genetic factors, or are they due to certain factors in the healthcare system?

Have you already obtained some answers or results in respect of these questions? If we could find the answer to why we have a higher mortality rate as a result of cardiovascular diseases in the eastern part of Austria than in the west, and why people live longer in the west than in the east, we would certainly be in the running for a Nobel prize.

But there are clues, aren’t there? Yes, 30 to 50 percent can be explained by standard lifestyle factors and associated diseases such as diabetes, high blood pressure, and obesity.

As far as lifestyle is concerned, Austria is not exactly a shining example. To add insult to injury, we are also the European leader in terms of smoking and drinking. Yes, we obviously face serious problems, and there is also an increasing number of overweight and obese children and adolescents. This is often attributed to a lack of education and awareness, but it is not as simple as that. Healthcare research explores the real reasons why health levels are so unevenly distributed across a population, despite the fact that the healthcare system is essentially one based on solidarity, and is therefore a system to which 98 percent of the population has access. This means that there must be other factors which need to be considered that we perhaps are unable to sufficiently pinpoint and are unable to properly treat with the resources we have at our disposal.

Prevention is also part of healthcare research, isn’t it? Yes. An example of this is cancer-screening programs. These are both worthwhile and effective. Healthcare research, such as breast cancer screening, makes it necessary to find out which groups of women make use of the screening program and which do not, as well as the reasons why such programs are ignored, in order to achieve the objective of detecting breast cancer at an early stage in the vast majority of the population.

Does healthcare policy benefit from the results of healthcare research? Yes. Healthcare research focuses particularly on examining real situations involving medical care and, ideally, includes people’s living environments. For policy-makers, the most important decision-making aids for reforms, investments, introducing new healthcare models, technologies and, above all, proof of the effectiveness and feasibility of healthcare concepts – such as integrated healthcare, disease management programs, for example in the case of diabetes, healthcare models for dementia patients, and much more – are proof of the effectiveness and practicability of healthcare concepts. The aim of all these aspects is to achieve improvements for the patients concerned, their relatives, as well as the healthcare and social professions. Preventive research is, of course, also part of this, as are projects in our department, when it comes to preventing frailty in older people and thus helping to considerably promote autonomy in old age.

What are you currently focusing on? The importance of general practice as well as the training of medical students, doctors, and healthcare professionals, for example the role of interdisciplinary training. Other factors I see, of course, include the advancement of technology, what significance it will have in the future, and how it will bring about even more changes in the healthcare sector, including, in particular, developments in digital medicine and digital healthcare.

PROFILE. Anita Rieder, 55, is the Vice Rector for Teaching at the Medical University of Vienna, a university professor of social medicine, and a public health specialist, focusing on preventive medicine, healthcare, and preventive research.
People, Vienna

Urban development for GDP – or for the people? How Vienna aims to benefit from quality of life ‘SOFT FACTS.’

It doesn’t work without the GDP – so-called gross domestic product, a benchmark conveniently synthesizing entire economies. But the GDP is less meaningful in the context of local policy and relies on several abstract, illogical principles. Adverse events, such as accidents and catastrophes, effectively boost the GDP. fortunate events, such as moving in together after getting married, however, lead to a drop in the GDP. Voluntary work is not measured, and long-term environmental impacts are not taken into account at all.

Vienna therefore focuses more on prosperity indicators which are more closely linked to quality of life. For example, the smart city framework strategy, with its three primary goals of conserving resources, improving quality of life and boosting innovation, formulates a whole series of soft factors for urban development which take the ‘human factor’ into consideration.

Klemens Himpele, Head of the Municipal Department for Economic Affairs, Labor and Statistics, puts it as follows: “There are few cities in the world where you can live on an average income as well as you can in Vienna.” International statistics support this claim. Statistics such as the famous yet simple Big Mac Index. Although the hamburgers from this restaurant chain are produced in the same way all over the world, they cost different amounts. A comparison says a lot about local purchasing power. According to this index, you only need to work for 18 minutes in order to be able to afford a hamburger in Vienna. A top figure for Europe and one that can’t be topped by Berlin, Brussels or Rome. In Prague or Budapest, you’d actually need to work for 42 or 56 minutes, respectively.

The figures for accommodation also reveal that, beside other factors, the efforts to slow the rising costs of housing have secured the city a top ranking in European comparisons. These efforts include subsidized residential projects and the management of building land zoning.

While prices have recently risen sharply in Vienna and all other capital cities, the current Property Index published by the consulting firm Deloitte nonetheless highlights that Vienna, with an average rent of €9.60 per square meter, is still one of Europe’s most affordable cities. Only Berlin has slightly lower rents (€9.30). From Prague to Paris (Ile de France), the rents rise from €13.10 to €18.40.

Himpele: “One could consider whether soft factors such as satisfaction with childcare or inexpensive public transport would be better benchmarks for regional policy than the widely used, purely economic indicators.”

He then refers to the satisfaction surveys of the European Commission: Regardless of whether regarding green spaces, the healthcare system, public transport or cultural institutions, Vienna always ranks high, with satisfaction rates of over 90 percent among its inhabitants.

The surveys of consumption patterns among Viennese conducted by Statistics Austria make the human factor most obvious, and highlight advantages in an Austria-wide comparison. Himpele: “Due to the low costs of meeting daily needs, more money is left over for the nicer things in life.” While Vienna’s inhabitants in part spend a lower-than-average share of their income on accommodation, energy or food, they spend considerably more on leisure, sport and hobbies as well as in restaurants and cafés, and even a third less on cars and fuel (see table).

This sounds far more relevant than the gross regional product benchmark mentioned above. Although this also looks healthy: With a regional GDP of €48,000 per capita, Vienna ranks 18th among the 276 regions in the EU.

How the Viennese spend their money*

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<tr>
<th>Where the Viennese pay less...</th>
<th>Vienna</th>
<th>Austria</th>
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<tr>
<td>Accommodation, energy</td>
<td>697</td>
<td>781</td>
</tr>
<tr>
<td>Food and non-alcoholic beverages</td>
<td>308</td>
<td>353</td>
</tr>
<tr>
<td>Transport</td>
<td>281</td>
<td>425</td>
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<tr>
<td>Clothing and footwear</td>
<td>135</td>
<td>147</td>
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<tr>
<td>Meat</td>
<td>49.6</td>
<td>71.4</td>
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<tr>
<td>Alcoholic beverages</td>
<td>23.9</td>
<td>31</td>
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<tr>
<td>Consumer electronics, film and photos</td>
<td>12.4</td>
<td>37.8</td>
</tr>
<tr>
<td>Leisure, sport, hobbies</td>
<td>378</td>
<td>344</td>
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<tr>
<td>Vacation travel</td>
<td>166</td>
<td>134</td>
</tr>
<tr>
<td>Sport, leisure &amp; cultural events</td>
<td>76.7</td>
<td>67</td>
</tr>
</tbody>
</table>

* In euro per household, per month (examples). Source: Statistics Austria.
Given the turbulent times of Brexit and resurgent US protectionism, studying an MBA IN VIENNA is becoming an attractive option for many international students.

Uncertain conditions in traditionally strong MBA destinations such as the UK and the USA mean that MBA providers in other countries are becoming a viable alternative for the international participants of such degree courses. Barbara Stöttinger, Dean of the WU Executive Academy, is convinced that her business school will also benefit from this in the future. The Vienna University of Economics and Business (WU) offers its executive education program portfolio through the WU Executive Academy, which includes MBA and Master of Law programs, as well as university courses, customized programs and short programs.

Today, the WU Executive Academy is one of the leading providers of further education in Central and Eastern Europe, and regularly performs very well in leading rankings. “As far as quality, international orientation, and opportunities in the labor market are concerned, numerous Austrian MBAs are in no way inferior to the major programs of their international competitors – on the contrary, they offer participants a range of advantages that are not easy to find elsewhere,” says Stöttinger.

An example here is the campus of the Vienna University of Economics and Business, which, with its high-quality architecture, excellent functionality, and direct connection to the underground, opened just a few years ago in the heart of the Vienna Prater, a green space within the city. However, it is not only the flair of the campus, but indeed the entire city of Vienna that provides an attractive setting for providers of high-quality management training. “When it comes to quality of life, the same criteria for expat managers apply to MBA students,” says Stöttinger, pointing out that Vienna has been at the top of the Mercer ranking of cities with the highest quality of life for expats for years. “Vienna is a very uncomplicated city because everything works,” says Stöttinger.

It goes without saying, of course, that the quality of the academic education must also be top. This is guaranteed at the WU Executive Academy by something known as ‘triple accreditation’ – the WU is one of no more than 86 business schools worldwide that have all three internationally relevant accreditations (AACSB, AMBA, and EQUIS).

Another argument in favor of international MBA aspirants coming to Vienna is the convenient location in terms of air travel. Europe’s largest cities are less than two hours away by plane. Even Moscow, Reykjavik, or Tehran can be reached by plane in less than four hours.

“The new campus is a real magnet, and also offers a lot of inspiration as a good learning environment”

BARBARA STÖTTINGER
WU EXECUTIVE ACADEMY
In January and in your capacity as Chair of the High Level Group of Innovators, you presented a report to the EU Commissioner entitled ‘Europe is back’. Was that forced optimism?

HAUSER: During the Industrial Revolution, Europe was the most innovative region in the world, so we certainly do have form. However, the USA is unquestionably leading the way at the moment, with China hot on its heels. Fortunately, there has recently been a shift in European attitudes towards innovation, giving cause for optimism.

The European Commission and, in particular, the German government are dedicating a lot of time and energy to the topic of artificial intelligence (AI). Is this an area where, faced with increasingly fierce global competition, there is still an opportunity for Europe to play a leading role in the world? Yes, it is. However, this is not just the case for AI. In my opinion, there are four fundamentally new technologies that will change our lives in the next five to ten years: AI, blockchain or smart contracts, synthetic biology, and quantum computers. This is the first time in our history that four technologies will have such a major impact on our lives at the same time.

Wouldn’t it be better for Europe to focus on one or two of these fields rather than on all four at once? That is not an option. We cannot afford to disregard any of these technologies.

What can the EU do to ensure this? First and foremost, it must support universities. The ERC, the European Research Council, is the best initiative in the world that I know of in this area, and it is incredible to think that it comes from the EU. We have very strong support here from Germany and France, the two engines driving the EU.

And at the national level? Austria has always been one of the slowest to adapt in Europe, which now means that we have the benefit of hindsight and can avoid repeating the mistakes of others. In absolute figures, the situation remains pretty grim, but there are clear indications that things are picking up. The glaring problem continues to be the (lack of) availability of venture capital (VC): With the exception of Speedinvest and my activities, there is almost none to be had. It is worth taking a look at what worked in England, for instance, and what didn’t.

You have been a member of the Austrian Council for Research and Technology Development for five years. Do you see any progress being made? It now appears that long-lobbied-for measures are finally being implemented. My key recommendation is to set up a fund of funds holding at least a few hundred million euros, a solution that has been successfully implemented in all other countries. This would also add a new dimension to the state’s role in the innovation process, i.e. not just providing a framework, but financial aid as well.

Mariana Mazzucato has also recently been the subject of intense debate in Austria thanks to her books on the role of the state in the innovation process; she was even invited to Vienna by former Chancellor Christian Kern. How do you rate her ideas? She makes an excellent argument for the importance of the state, a role that has often been underestimated in the past. Yet Mariana takes the argument a little too far. For every euro that goes into basic research, ten euros are needed for technical development and 100 euros for marketing. We should not lose sight of this relation. Nevertheless, it is true that, without this one euro at the beginning, it would be the case, more often than not, that nothing groundbreaking is created. It is ultimately a joint undertaking of the state, universities, venture capitalists, and entrepreneurs.

What is your role as Chair of the High Level Group? The European Innovation Council (EIC) officially starts work in 2021 – with

“Power is shifting”

HERMANN HAUSER, an investor and innovation consultant from Tyrol, on the research race with the USA and China, his investments, and why Austria needs more venture capital.
Hermann Hauser, 70, studied physics in Vienna and Cambridge. The company he co-founded, Acorn, developed the ARM processor, among other things. This Tyrolean is a sought-after investor with his British VC company Amadeus Capital. As Chair of the High Level Group of Innovators, Hauser advises the European Commission on technology issues.
Horizon Europe, the EU Framework Programme for Research and Innovation, which means that, at the moment, we are coming up with pilot projects. At the end of the day, it is a matter of defining the instruments: grants, loan guarantees, and equity. The exact ratio between these three depends on the individual case. Equity is always only intended as a catalyst to get the most money out of the market.

You have already mentioned the global innovation race. What can Europe learn from the USA and China? The scale of investment decisions. That is the main problem in Europe. After all, we already have more start-ups than in the USA, which means we don’t have a start-up problem, but rather we have a scale-up problem. VC companies with funds worth billions and individual investments of up to 100 million euros are practically non-existent here. Yet that is exactly what we need.

Have you already identified the companies in Europe that should be targets for so much investment? An example here is Graphcore, an 18-month-old company from Bristol, which has been manufacturing the world’s largest chip for a month – one with over 23 billion transistors. This chip stands a chance of becoming the world’s largest chip for a month – one with over 23 billion transistors. Graphcore has the potential to become a company worth tens of billions. I know the team from my involvement in two prior company-scale-up problems, but rather we have a scale-up problem. VC companies with funds worth billions and individual investments of up to 100 million euros are practically non-existent here. Yet that is exactly what we need.

You have also made 21 investments in Austria in recent years. These investments are still very small, but the good thing is that there is now something resembling an ecosystem in Austria, and, on top of this, there is now also a willingness on the part of politicians to address the issue of digitalization.

You caused a stir about a year ago by predicting that at least one of the three big German car-makers would soon cease to exist. I stand by what I said. In ten years, three to five of the largest carmakers will no longer exist as independent companies, and one of these will be German. There has been no major disruption in the car-making industry since Henry Ford introduced the assembly line. Now there are two at once.

One is electrification. Yes. The German automotive industry will master electrification, although it will lose its current advantage in engine know-how. There is a lot of hype surrounding Tesla and Elon Musk at the moment, but Tesla is a sideshow here and basically irrelevant when it comes to the electrification of industry. The Germans, with their wealth of engineers, will certainly build better electric cars than Tesla. However, the Chinese, who are already building more e-cars, are actually the ones to watch. The largest battery manufacturer in the world is not Gigafactory in Nevada, but BYD in China.

The other disruption is autonomous driving. Yes, and that constitutes a real problem for the German car companies, because they will lose their customers. If Mercedes and BMW want to achieve lasting success, they must allow their service subsidiaries to sell their cars to providers such as Kia or BYD. But they can’t seem to manage this, and if they do, they wind up hurting themselves. The truly disruptive events are those where a breakthrough in technology goes hand in hand with a change in business model. That’s why ARM also beat Intel.

So, you think that the decisive factor is not autonomous driving per se, but that owning a car no longer plays as big a role as it did in the past? My son brought home to me the changes which are taking place. When he was 18, I asked him: Are you finally going to get your driving license now? He was aghast and asked why on earth he would want to do that? Having to hunt for a parking space, forking out for running costs, etc. At first, I thought that maybe only the young people in London or Cambridge saw it that way. But the actual number is far greater. And this change is now gathering pace.

You are betting on this change with your own company, FiveAI – and you have set your sights high. Yes, we want to be the one to provide London, as the first major city in Europe, with autonomous taxis: 10,000 to be exact, by 2022. Our calculations demonstrate that, once a passenger is willing to travel with one or two additional passengers, the costs are comparable to those of a bus. Autonomous taxis will be so much cheaper and more convenient than any other alternative offering, that this change will happen in the next five to ten years. Power is moving away from the carmakers to the service providers.

While we do not yet know what a possible Brexit deal will look like, do you already know whether you will be able to maintain both footholds afterwards – namely in England and in continental Europe? The direction will change. I used to spend 90 percent of my time in England and ten percent in Continental Europe.

I’m sure I will be in Austria more in the future.
Vienna has increasingly become a hotspot for start-ups.
Not least due to the VIENNA START-UP PACKAGE, the city has been attracting more young entrepreneurs from around the world to bolster its home-grown talent.

Vienna Calling

Its culture and history attract millions of tourists to Vienna every year, but also numerous large businesses which appreciate the central location in Europe and the high quality of life. Vienna now aims to more firmly establish itself as a start-up city. An excellent and fast-growing ecosystem for innovative founders has already been developed in recent years. This includes around 30 co-working spaces, numerous incubators and accelerators, as well as a vibrant network of business angels. Special grants are also having a very positive impact: According to the Vienna Business Agency, approximately 9,000 companies were founded in Vienna last year.

START-UP HUB VIENNA.
The Vienna Start-up Package has established itself as a very important element of these efforts to expand internationally. Initiated in 2014 by the Vienna Business Agency, this program invites start-ups from all over the world to Vienna for two months and also increases the profile of Vienna as a center of innovation. Those founders invited to come receive reimbursement of their travel and accommodation expenses, a desk in a co-working space and ten hours of coaching worth €2,000.

In its first year, this initiative attracted 22 applications; In 2017, a total of 230 start-ups from 73 countries applied. Vienna is therefore increasingly becoming an international hub for start-ups. During their two months in Vienna, the founders can not only further develop their concepts in a creative environment but also have the chance to network. If all goes well, they will ideally decide to remain.

Of the 230 applicants last year, 20 start-ups were invited to Vienna, including the fintech company Xenico from China, which specializes in cash flow analyses for SMEs, and Eco Pack from Kazakhstan, which is developing a bioplastic made of starch and gluten. Both companies are also looking for future access to the European market; possibly from Vienna.

The start-up Medicus from Dubai, which came to Vienna in 2016, has put down roots and now aims to conquer the global market from Austria. This company, which visually presents medical data in an easily understandable way, has since opened further offices in Paris and Beirut, and recently attracted Pioneers Ventures as a strategic investor.

By the way, the next call for the Vienna Start-up Package is open to applications from young entrepreneurs until January 31, 2019 (vienna businessagency.at). Perhaps the number of applications this time will double again, as it did last year.
PETER OSWALD, CEO of Mondi, the global paper company, talks about why he wants to have highly motivated employees everywhere and how he wants to get more women into management positions, despite the pitfalls of quotas and diversity management.

TREND: Mr. Oswald, you were also the president of respACT for many years and, just a few days ago, you were made an honorary member. This is an association that aims to promote socially and ecologically sustainable economic activity - and this is obviously what you want as well.

PETER OSWALD: Yes. This is a matter that is very dear to me. It may sound a little dramatic, but I want to leave the world in such a way that people say, “he helped make it a better place.” At least in the small sphere of influence I may have at my disposal.

It is not that small. You lead a papermaking corporation worth over ten billion euros on the stock exchange. Generally speaking, such decisions do not depend on the size of the company, and they are founded in the personal values of each and every manager. But yes, it is perhaps a little easier to do so in a large company.

Yet this is not how things are perceived in the outside world, where large corporations are usually considered the bad guys, looking to profit at the expense of the environment, employees, and society as a whole. In fact, quite the opposite is true: doing business in a sustainable way often makes the most entrepreneurial sense for large companies. Regardless of the ethical issues, it is a matter of maintaining a reputation. And there is also value in a company treating its employees fairly, paying attention to health and safety matters, and not forcing anyone to do illegal things, indirectly or unofficially. The younger generation in particular wants to be able to identify with their work, and it is important to them what the company does, how it is going about doing it, what the working climate is like, and how environmental responsibility is practiced. This all goes hand in hand.

“Anywhere in the world.”

TREND: So, success doesn’t just come from developing products, managing prices, or cultivating markets?

Peter Oswald, 56, is CEO of the Mondi Group, a paper and packaging manufacturer based in Vienna/Johannesburg/London, with around 26,000 employees and 100 production facilities. Oswald is appearing as a speaker at the Global Peter Drucker Forum.

Of course, long-term success is also associated with social responsibility, especially when it comes to how employees are treated. We see through how our plants perform that the management and the corporate culture created in each case are decisive factors for success, and I can use this fact to attract people who have high ethical values of their own. It is not for nothing that our new mission statement also includes the claim:
'Being an Employer of Choice.' We want Mondi to always be high on the list of attractive employers for potential jobseekers, no matter where in the world we are.

So, you need good employees. What do you do to win them over? There are many different ways we can do this, from having company kindergartens on site to maintaining an open culture of discussion, and holding workshops on diversity management. We also carry out a global employee survey every two years to find out whether employee performance is being recognized or how supervisors handle criticism, etc.

And what are the findings? This survey has been performed four times over the past eight years. Each time we have been able to improve and achieve a high participation rate. The fact that we measure this and give people the opportunity to express themselves is seen in a very positive light. And if we receive some critical feedback or shortcomings are exposed, we can take action to improve the situation. And we usually manage to do this somehow.

There is no such thing as a perfect solution.

Just take a look at the Austrian rating platform kununu, where you can also read critical remarks made about Mondi. If you take a closer look, it is always very black and white. Negative statements come from ex-employees; for some reason we didn’t fit together. And yes, we do have a performance culture that surprises some, even if we try to be very transparent in this respect. However, we take justified criticism very seriously and try to introduce improvements.

The issue of work and performance between companies and their employees is a very political one. Just look at the discussion about the new twelve-hour working day. The uproar surrounding this is a good example of a storm in a teacup. It’s not about working more, it’s about having more flexibility. According to the collective bargaining agreement for the paper industry, the number of hours an employee is expected to work remains 36. All the new law has done is legalize what was happening all the time in practice before, i.e. that work is performed as required by operating circumstances. I haven’t heard a single complaint from employees at our company who feel disadvantaged by this.

Let’s come back to other measurable figures regarding employee satisfaction at Mondi. What is the situation regarding the share of women at work? This is a very important topic and we held a two-day event just a couple of weeks ago to discuss exactly this. There is a dedicated working group that, as should be expected, is led by a woman. And we have found that we have made progress. The current figure is 20 percent in the Executive Committee; last year, 14 percent of senior executives were women.

That does not sound very impressive, but, two years ago, we didn’t have any female Executive Committee members at all, and we doubled the share of women in senior management in a single year. This means that we are making progress, even if we have to fight hard for it. The proportion of women participating in our trainee programs is 60 percent, yet, when it comes to pursuing a career, women fall behind for a variety of reasons.

You want to promote diversity in particular. Basically, I think something like this is a good thing in any situation. The fact that people come from different countries, that there are women and men, that all religions or lifestyles are represented, is something of value that helps us to be more creative, to have better ideas and so on and so forth. Secondly, we do not want and are unable to ignore the skills that women bring with them: specific know-how and intelligence. Something that we simply cannot do without.

How about just setting a quota for women? I understand that frustration is the reason for setting quotas, but that is still a risky business. If the specified number is not reached, the company runs the risk of having people with insufficient experience and expertise finding their way into certain positions.

As a listed company, you are also exposed to capital market constraints. Do you feel caught between shareholder demands for higher dividends in the short term and sustainable management for the benefit of all stakeholders, from employees to society as a whole? No, these two aspects fit together well. After all, our shareholders are also interested in the long-term success of the company.

Is it possible to sustainably generate returns of 20 percent and more on invested capital? It’s more the other way around: We enjoy a high level of profitability because we do business with due care. We pay our employees well, we invest a lot, and therefore are very profitable. Our sustainability activities are enough to fill entire reports, from using renewable energies and cutting CO2 emissions to making substantial investments in occupational safety and living up to our social commitment, such as the Caritas learning cafés, which we support in Austria.

Is this still the case when you consider the high dividend you paid out this year for the previous year? The amount was 708 million euros. A perfectly sustainable course of action as, given the current interest rate situation, it was better to work with borrowed capital and distribute profits. A one-off correction. We were below our EBITDA (earnings before interest, taxes, depreciation and amortization) in terms of debt, a situation that was no longer efficient. Even after the one-off dividend, we are still very conservatively financed, with debt amounting to one and a half times our EBITDA. But, more importantly, despite these disbursements, we have been able to invest in growth and expansion. This shows that we are making every effort to meet our responsibilities. One thing, however, remains clear: As the CEO, I am just a trustee of the shareholders’ assets. It is not my company.
TREND: You are taking part in the discussion “Are executives activists in society?” at the Drucker Forum. What do you think about that?

EMMANUELLE DUEZ: This topic is particularly important to me. I founded the Boson Project six years ago with the original idea of viewing companies as laboratories or test beds in which to observe changes within society. Our goal in the Boson Project is to mobilize teams through a shared sense of responsibility, teams that, in turn, mobilize organizations to take responsibility and influence the whole of society. You can look at it as a system of Russian dolls: We call upon the human capital of businesses to take responsibility for our society as citizens and to transform the business world both in the way it works and in the logic behind it.

Isn’t that the job of politics? We firmly believe that, within the context of the decay of politics in today’s post-modern era, international political organizations and labor movements are gradually losing their major influence over society. We must take the lead, i.e. we must take matters of society, politics, and civic engagement into our own hands. And who would have more legitimacy to do so than the private sector? Companies are the building blocks of society; they are the most fundamental spaces in which people create a sense of community and belonging.

But, up to now, hasn’t it been the primary task of a company to turn a profit? Companies today must stop focusing solely on this role. Instead, "All companies are political."

Emmanuelle Duez. This Frenchwoman is a versatile entrepreneur and has worked in the fields of strategy development, social media marketing, management consulting, and politics. She is the president of WoMen’Up and founder of the Boson Project, a consulting firm that harnesses the power of the younger generation.
they must become politically responsible, in the noblest of ways. Not just because the future of our planet is at stake, but also because the brightest young minds of tomorrow only want to join companies that take brave and courageous action in the public arena. Even the consumers of tomorrow will choose daring companies that not only care about global problems, but also take action to solve them. The issue of whether managers should also be activists is important to us because we have been focusing our attention and efforts on this issue of the political implications for six years now.

What is the core message of your management theory? I don’t just have one single core message. I have three: Management cannot be reduced to a cold and purely analytical science, since a management culture of engagement brings together many technical and human sciences. My second core statement is the so-called ‘War for Talent’. We believe that tomorrow’s talent is tomorrow’s manager, because he or she will become the guardian of engagement, precisely because we live in a time of a crisis of engagement and the search for meaning. Thirdly, I believe in a change in management. For me, this consists of people who are committed to human complexity and play a forward-looking role. It is the evolution from being a mere role to becoming a mission, and here you will find the bright minds of the future, the most coveted talent for companies.

How did WoMen’Up and the Boson Project come about? I started WoMen’Up seven years ago with a very simple idea that women have been dealing with within the private sector for 30 years: achieving a balanced and meaningful life, material and immaterial recognition, transparency about the rules of the business game and meritocracy. These thirty years of feminist struggle in the business world have been passed on, both naturally and unconsciously, to the millennial generation because the members of this generation are the children of those women who have tried to challenge the status quo. We subsequently launched the Boson project, which is a kind of continuation of the WoMen’Up story, because if we look at diversity in the broadest sense, the interface between gender and age issues becomes a lever to change the business world. This is why we are trying to mobilize staff in organizations as part of the Boson project. Whether they are blue or white collar, young or old, whether they are at the top or at the bottom of the hierarchy: They should take the fate of the company into their own hands and provide the first impulse towards a new movement that goes beyond their role as employees and involves them as citizens. To help companies understand that there is an external effect, beyond their internal transformations, which ultimately drives them to engage in civil society.

To what extent has your own biography influenced your thinking today? I am the eldest of four siblings. I have three younger brothers and, as the eldest, I have always liked to boss my brothers around. I originally went to law school to become either a judge or a police commissioner. After working for some time in the office of a French ministry, I quickly realized that the public sector would not be able to change the world, so I went to the ESSEC Business School with the aim of using entrepreneurship as a means of changing society. While I was at the ESSEC, I founded WoMen’Up. I then went to the Bocconi in Italy. It ultimately took me eight long years to create the Boson Project. It was originally intended to be nothing more than a wild adventure, opening up a new perspective on the business world for younger generations. Today, we are a cheerful team of 20 people with very different backgrounds, some from the social sciences, some from the literary world, and others with a background in engineering, but what we all share is a common, deep-rooted love of the private sector and trust in its ability to reinvent itself.

Have you had any experiences that had a decisive influence on your way of thinking? One of the most important moments in my professional life was probably the lecture I gave at the ‘One Young World’ forum in Johannesburg, following a rousing speech by Kofi Annan, to motivate the young leaders of my generation to take responsibility, especially by harnessing entrepreneurship as a lever for change. Another important part of my career was my entry into the French Navy. As a reservist officer for the navy, I have in recent years been overwhelmed and deeply moved by the incredible modernity of this organization, which is so often wrongly stereotyped. Today, I am fortunate enough to be able to work with them to help in an internal reassessment of their organizational methods, as well as to take a close look at the magnificent practices they have already developed themselves. They are true guardians of engagement, and it is fascinating to be able to study them.

Which parameters will determine management thinking in the future? In order to think about and put tomorrow’s management into practice, the great challenge of our time will be to break away from a world that tries to interpret a new, multi-layered context by adopting a single perspective. The complexity of this new world can only be analyzed and understood if we make use of different thought patterns at the same time. With this in mind, I believe that the humanities will experience a reawakening within the private sector.

What does that mean? That, without the help of anthropology, sociology, philosophy, or even ethnology, we will be unable to understand and rekindle our engagement. It is crucial for us today to diversify perspectives, whether they come from athletes, religious personalities, doctors, practitioners, or researchers in both the hard and soft sciences, in order to understand human engagement. Without this diversity of perspectives, without these different paradigms, we will no longer be able to understand the complex world in which we find ourselves and which we must be able to influence.
Google, Microsoft, and the World Bank listen to what Dorie Clark has to say when it comes to marketing strategy.

It was in 2001 that Dorie Clark was fired from her job as a newspaper reporter. Suddenly, she was faced with the task of reinventing herself from one day to the next. “This experience taught me the importance of flexibility and the need to proactively build networks around your brand so that you are found, instead of just waiting for things to happen,” says the rising star among current management gurus.

Today, Clark is a marketing strategy consultant and a sought-after keynote speaker, having worked as a spokesperson in the US presidential election campaign. A recognized branding expert, she frequently writes for the Harvard Business Review, Forbes, and Times magazines, as well as the Wall Street Journal. She advises clients such as Google, Microsoft, Fidelity, and the World Bank, is Associate Professor of Business Administration at the Fuqua School of Business at Duke University and a visiting professor at the IE Business School in Madrid. She has been a visiting lecturer at Harvard Business School, Harvard Kennedy School, Stanford University’s Graduate School of Business, Wharton School, and MIT Sloan School of Management.

Clark’s unshakeable belief is that “we cannot rely on our work speaking for itself. We must constantly reinvent ourselves to adapt to changing circumstances and take control of who we are and what we can do to make sure that others recognize the contribution we can make.” In her latest book, ‘Entrepreneurial You’, she offers a plan for professional independence, with advice on building your own brand, monetizing personal expertise, and extending your reach and impact on the Internet. She tells the stories of entrepreneurs from all walks of life – from consultants and coaches to podcasters, bloggers, and online marketers – who have managed to generate six and seven-digit incomes.

In Clark’s opinion, Peter Drucker continues to be the most influential management thinker of all time, and she believes the Drucker Forum is a powerful event “because it honors his legacy and works tirelessly to complement his ideas with the crème de la crème of contemporary management thinking.”

It is her belief that management ideas only make sense if they help managers and all employees to adapt to rapidly changing circumstances: “The best management thinking can be a powerful tool to help people build fulfilling careers.”
Everyone has a little bit of genius in them,” Linda A. Hill is convinced. “We should be ashamed of the fact that we do not harness the genius within us to make this world a better place.” The Wallace Brett Donham Professor of Business Administration at the Harvard Business School and Chair of the Leadership Initiative is considered a top leadership expert and has developed a number of innovative learning programs for managers.

One of her most significant publications is the book ‘Collective Genius: The art and practice of leading innovation’. Hill: “Leadership today is about building an organization that is ready and able to innovate – what we call collective genius.” She completed a post-doctoral research fellowship at the Harvard Business School, having previously earned her Ph.D. in Behavioral Sciences and her MA in Educational Psychology from the University of Chicago, and a BA summa cum laude in Psychology from Bryn Mawr College. “I became an economics professor because I am interested in development,” says Hill. “My goal is to help people – even those who are disadvantaged and excluded the most – to be able to express their values and passions and share their talents.”

WHAT SHE VALUES at the Drucker Forum is that it brings together people with different perspectives, expertise, and backgrounds to create a marketplace of ideas through debates and discourse: “There is still no substitute for face-to-face interactions where putting heads together produces the highest levels of productivity. Innovative thinking rarely comes about without diversity and constructive conflict. And indeed, creative thinking is one of the skills we see in organizations that are able to be innovative.” Hill serves in a variety of capacities, being a member of the Board of Directors of State Street Corporation, Harvard Business Publishing and the Global Citizens Initiative, Inc., and the Board of Trustees of the Art College of Design. She also serves on the advisory boards of Eight Inc., the Aspen Institute Business and Society Program, and the California Institute for Telecommunications and Information Technology (Calit2).

She launched an initiative for leadership, organization, and digital transformation at the Harvard Business School, in the course of which she interviewed a number of executives from digital companies to find out where executives need help: “Interestingly, many of them mentioned the need for moral judgement regarding emerging technologies associated, for instance, with artificial intelligence and precision medicine.” Now, she is eager to hear from the Forum’s executives “how we’re helping to humanize technology by thinking through the effects of what we can do thanks to this technology.”

LINDA A. HILL helps business leaders awaken the collective genius in an organization. To achieve this, leaders must create a culture of shared goals, values, and roles.

**Aiding the birth of innovation**
We are our work

Management professor GIANPIERO PETRIGLIERI on the excessively central role which work plays in our lives, emotional leaders and an all-but superhuman level of commitment.

INTERVIEW: MARTINA BACHLER

TREND: Mr. Petriglieri, you recently called Elon Musk, the CEO of Tesla, “a poster boy for impulsive authenticity and compulsive overwork”. Is the eccentric Mr. Musk a typical leader of our time? GIANPIERO PETRIGLIERI: We often look at leaders as people who shape our culture, as setting an example for how others behave. But leaders are also a symbol of our culture and our time. They mirror what’s happening in our society. Musk certainly is such a symbol. He is restless, work is at the center of his life, and while he celebrates science, technology, and rational decision making on the surface, he often follows his gut feeling and impulses. But isn’t work in general becoming more technical? Work plays an extremely important role in our lives. We often define ourselves by what we do, and organize everything else around work. Leaders like Elon Musk exemplify this way of life. Who you are depends a tremendous amount on what you do. Work is the place where many of us not only want to develop ourselves professionally, but also personally. And when everything that you are depends on your work, that same work becomes, psychologically speaking, a matter of life and death. Then it’s no longer irrational to work around the clock.

This doesn’t sound very healthy... It’s neither healthy to work that much, nor does it make us more useful and productive. But for many people work has become so important that they risk their sanity, their health. Leaders like Elon Musk exemplify this extreme commitment to the job and thus legitimize such behavior. They normalize it. Is this limited to the start-up world? It’s neither a cultural, nor a generational phenomenon, and it’s also not limited to specific industries. You can have this attitude, this relationship to work, at any age, anywhere, in any industry. Once what you do is who you are, work becomes your way of life. Why do people expect so much from work? Because work, again, is such an important facet of our identity. We expect not only a deeper relationship with work, but also a broader relationship. It has come to include parts of our lives that traditionally happened in other spheres: We try to meet our social, spiritual, and professional needs at work. We put all our eggs in one basket, and that’s a convenient but rather risky strategy. What are the consequences? They are not all negative. The trend has a progressive side. When work becomes more personal, then we try to make it meaningful, to make it matter. We ask ourselves: Am I doing some good, how does my work improve the lives of others? We expect our work to have a meaningful impact, and when it does, then we are more willing to dedicate ourselves to it. This is, what makes this kind of work so exhausting but also appealing. We demand more from our work, since work demands a lot from us.
Gianpiero Petriglieri is Associate Professor for Organizational Behavior at the elite French university INSEAD where he also leads the Management Acceleration Program. In his research work, this physician and psychotherapist attempts to combine the areas of leadership, identity, and learning ability.

In what respect? Because there's the danger of being disappointed.

Because work cannot offer us everything in life? That's one side of it. On the other side, we have to realize that we can lose everything – our friends, our meaningful purpose in this world – if we lose this work. Thus, we are willing to do a lot for this work. Traditionally there were more boundaries.

Which ones? There were boundaries in terms of how much time we were meant to devote to work compared to other parts of life, there were boundaries to how much space we gave to work in our social relationships and also boundaries in terms of how much energy we put into work. I often talk to executives who say that they go to the gym to be in shape for work. They don't do sports, say, to be a better tennis player, but relate it to their work. Others say that they try to get a good night's sleep in order to make better decisions. Here, the boundaries clearly are blurred.

But as long people are happy with that, there's no problem, right? It's not that simple. If you don't really have a job, but your job actually has you, this can very quickly lead to unhappiness. Because there is no freedom. It very much depends on the person when this point is reached. Some can work many hours without feeling overworked, because they view it as their own free decision to do so, and they experience what they do as meaningful. Others can feel trapped.

But do I actually have a choice when these extreme hours are normal in my environment? Exactly. Leaders are important decision makers and role models when it comes to the question of how much freedom employees really have. Their voluntary decision to work from 5 am to 11 pm can mean that it becomes compulsory for their employees.

But will the younger generations play along? For many, a decent work-life balance is more important than a traditional career. I think you should be able to have both, but too often it is a struggle in organizations. The younger generation demands a lot from work as such but, at the same time, also doesn't want work to overwhelm their lives. The struggle is not resolved, but I welcome it. As I welcome efforts to put work back into its place. So, it's okay to have space for cultivating relationships, serving the community, or spending time with one's family.

How do companies react to this cultural struggle? Their reactions are ambivalent. Some leaders do understand that there has to be an alternative to total commitment. Nobody benefits if you run people into the ground, and they also realize that this does not lead to better innovations. Organizations understand this intellectually but, at the same time, their systems remain based on the idea of total commitment. Often, the rule is as follows: 'If I give you meaningful work, you give me your life, but I, as a company, also will do your laundry and your groceries.' Up to now, we also see that the younger generation of leaders remain role models for almost superhuman levels of commitment.

Do people see this as an inspiration? Some do, but for others this behavior is a source of mistrust. Especially when they have the feeling that they won't benefit in the same way from their efforts as their leaders do. Here, leadership ethics are extremely important. If you do not share the value your organization creates fairly, you can't expect people to trust you.

Donald Trump is a very different kind of leader to, for example, Angela Merkel, the German chancellor, who always seems calm, rather technocratic and rational. Is his emergence a coincidence? Of course, leaders are always emotional, even when they are passionate about rationality. But in general, we know that the more polarized a society becomes, the more likely you will see the emergence of leaders who have a radical view of many things and argue emotionally more openly. They don't even bother with rational arguments. Those on their side will love these leaders, and the others totally reject them. We know that anxiety always favors leaders who provide very simple answers to complex questions.

Does Trump's aggressive, emotional leadership style, which is perceived as authentic, affect business elites? Absolutely. If you look at the celebration of passion, of gut feelings, and all of that, he is not so unusual. The business world is becoming more and more technological. But if you scratch under the surface, for many it's all about this total commitment to a certain thing, to an idea, a so-called vision. Leaders often see this vision as an almost religious purpose. Pure rationality is never enough to lead. And Elon Musk is an example of that.
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