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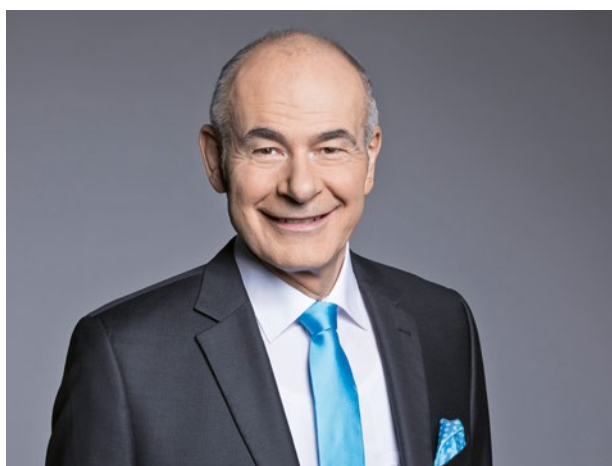
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Dear Customers and Partners

The past few months have shown us how quickly and unpredictably everyday life can change. What was completely normal and usual last year became impossible earlier this year and is only barely possible today. And this situation is unlikely to change much for at least a few months yet. We have all faced difficult challenges this year.

Despite the suffering the pandemic brought, it has also revealed some positive things about people and companies. At Otto Hofstetter AG, we have seen how loyal and flexible our employees are. Thanks to their dedication and commitment, within a very short period of time we were able to adapt our organisation to the hygiene regulations stipulated by the Swiss government. This remarkable effort enabled the business to continue at full capacity without interruption. In fact, we delivered all customer orders on schedule.

On top of that, we were also able to introduce new products like the groundbreaking OH Xport mould monitoring system, which you can read about in this issue. With this innovative real-time process monitor, we have taken a big step into the Internet of Things (IoT).

This extraordinary period also demonstrated how great our customers are. Although the usual communication channels between sales, engineering and support were disrupted, requiring us all to adapt to the new circumstances of remote working, all running projects went smoothly and new ones could be started. Our flexible and very capable customers made this possible and we thank them for their cooperation. Ultimately, our steady performance throughout the pandemic was made possible by our robust supply chain, sourced mostly locally in Switzerland. On the next page, we interview Michael Lustenberger, a supply chain expert. His insights into ensuring a crisis-resistant supply chain are well worth reading.

I want to take this opportunity to thank all of our employees, our customers and our partners for their understanding and loyalty. For our part, we pledge to continue to strive to be a reliable employer and partner, regardless of the challenges the future holds. For now, I wish you an enjoyable, informative read and I look forward to contact you again soon, be it digital or analogue.

Yours, Stefan Zatti



RESILIENCE IN THE SUPPLY CHAIN.

Crises like the **COVID-19 pandemic** are an acid test for supply chains, often determining whether a company can respond effectively to unforeseen events or not. We interviewed supply chain expert **Michael Lustenberger**, a researcher and university lecturer, who discusses how to think about creating a resilient, **crisis-proof supply chain**.

Michael Lustenberger is a lecturer and research assistant at the Center for Enterprise Development at the Zurich University of Applied Sciences.

MICHAEL LUSTENBERGER

is a research associate at the Center for Enterprise Development at the Zurich University of Applied Sciences (ZHAW). He studied Operations and Supply Chain Management at the University of Liverpool and has a master's degree in History, Political Science and International Law from the University of Zurich. From 2003 to 2015 he held managerial positions in logistics and supply chain management, spending three years in Bolivia. His work and research focuses on supply chain management, Industry 4.0 and blockchain technology.

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The virus with the abbreviation SARS-CoV-2 has confronted all of us with challenges we never thought of before. The circulation of goods around the globe came to an abrupt halt as companies shut down and infrastructures of all kinds could no longer be serviced. Provisioning society with essential goods became an immensely difficult, even nearly impossible, task.

The manufacturing industry also confronted these obstacles. In order to keep plants running and to continue serving their customers, solutions had to be found and implemented in a hurry. We are pleased to report that Otto Hofstetter AG successfully met the pandemic's challenges. Since the outbreak of COVID-19, all enquiries and orders have been processed on schedule.

The most important factor for this solid performance has been the company's robust supply chain. Michael Lustenberger is a research associate and lecturer at the Zurich University of Applied Sciences (ZHAW). His research at ZHAW's Center for Enterprise Development focuses on supply chain

management, Industry 4.0, lean management and blockchain technologies. In an interview with Inform, he explains why some companies have suffered more than others from the lockdown and which factors make a supply chain stable.

Mr Lustenberger, as part of your work at ZHAW, you focus on supply chain management. What were your spontaneous thoughts at the beginning of the crisis triggered by COVID-19?

It was the same for us academics as for most people. We were confronted with a situation in a form that we could not have imagined and therefore could not have prepared for. Until the pandemic erupted, we had always viewed such a scenario as a purely academic exercise. Suddenly it was a reality, one that quickly achieved a scale that surprised us all. Of course, we feared that supply chains would collapse. But based on our experience during the previous SARS, bird and swine flu pandemics, we viewed these events as rather contained, localised in nature, that could be suppressed with a lockdown in China. We all now know that this assumption was incorrect.

Does that mean that researchers have considered such an event before, if only abstractly?

Not in such a form and on such a scale. We had viewed such scenarios as unlikely and therefore never calculated their full impact in any depth. In fact, it's quite possible that our current calculation models are not sufficient for incidents of this magnitude. In the usual models, the scope of effects and the probability of risk events happening are weighed against each other. However, projecting the true effect of an event in reality is extremely difficult. And since we viewed an event of this magnitude more as an abstract possibility, these rather vague projections remained built into our existing models.

Around 15 weeks have passed since the start of the lockdown in Switzerland. What is your interim conclusion?

What strikes us is that it was not the supply chains that were the big problem, but rather that demand completely collapsed. This can be easily understood by looking at the example of the automotive industry. In Switzerland alone, interest in a new Volkswagen model fell by 70 per cent between March and April 2020. Nor did things look better in other countries. The question now is: Did VW shut down production because too few new cars were ordered or because certain parts were no longer available?

It was also interesting to see how demand was distorted. Goods that previously never enjoyed huge sales volumes were in great demand from one moment to the next. Online retailing also faced a massive increase in demand, which pushed wholesalers, postal and parcel services to their limits and beyond. In this respect, from our point of view, the crisis is more related to the demand side.

One interim conclusion from the perspective of the supply chain could be that, thanks to the flexibility of employers and employees, we got away merely with a black eye so far. With the rapid shift to air freight – with corresponding additional costs, of course – a lot of shortages could be filled. The coming weeks and months will show how long-term the changes in demand are and how long companies can bear the additional shipping costs. We know that changes at the beginning of a supply chain can be felt all the way down to the last link. Often such effects are even intensified as we move down the chain. To take the automotive industry as an example again, if sales collapse by 20 to 30 per cent, the short-term loss of sales revenues for certain suppliers can amount to 80 to 90 per cent.

Can the recovery be forecast?

Since this pandemic is without precedent, forecast uncertainty is extremely high. What will trigger which reactions? Which factors persist longer than others? How is the demand structure changing? Some experts describe humans as creatures of habit and dare to predict that everything will be back to what it was before the pandemic. Others speak of a turning point having been reached, with everything changing thereafter. I would not venture a prediction, but I am very curious to see whether there will be shifts in demand. What is certain to me is that the trend towards online trading will continue and even accelerate.

"THANKS TO THE FLEXIBILITY OF EMPLOYERS AND EMPLOYEES, WE GOT AWAY MERELY WITH A BLACK EYE IN SWITZERLAND."

Michael Lusterberger, ZHAW

Has Switzerland shown itself to be flexible enough?

It seems to me that companies and employees in Switzerland have demonstrated a good level of flexibility. They quickly adjusted shift schedules, created new workspaces and instituted home offices or other new organisational measures. Furthermore, the state has shown itself to be flexible too, quickly providing financial support and implementing models for short-time work. This flexibility certainly helped a lot. The question now is how to proceed.

Like Otto Hofstetter AG, whose export share is 99 per cent, many Swiss companies are very active internationally. How do Swiss supply chains differ from those in other, larger countries?

The Swiss currency certainly is an important risk factor for Swiss companies that operate globally. Import and export duties are also very important. These two factors will always have to be included in any calculation about the future. They represent known risks, but can nevertheless alter a situation significantly. To reduce or even eliminate them, a company would have to purchase its raw materials or components locally. If a company serves a global market, it would have to consider minimising customs duties and currency risks through an alternative production location.

For the most part, Otto Hofstetter AG works with local partners. Does this mean that the company's supply chain is secure?

In the current crisis, this does indeed appear to be the case. Let's imagine a scenario similar to Italy's, where factories were fully closed down. In such a case, Otto Hofstetter AG would be happy to have a second site somewhere in the world that could take over production immediately. Centralisation has as many advantages as disadvantages. Any strategy you choose involves risks and costs. The question is always what are the operative assumptions in each case. That's why at the ZHAW we take the approach of not devising risk strategies for specific types of events, but rather evaluating the effects of events on a given company.

"IT DOESN'T MATTER WHAT THE REASON FOR A CHANGE IS. IT IS MUCH MORE IMPORTANT TO BECOME AWARE OF THE CONSEQUENCES."

Michael Lusterberger, ZHAW

Diversification is also a common piece of advice for making a supply chain more resilient. To what extent do you agree?

Many companies are switching from single to multiple sourcing these days. Indeed, this can be very effective, especially when the suppliers are not all in the same country. The same applies to the markets in which a company operates. Operating in different markets and different industries is a form of diversification that does foster stability. With regard to the supply chain, a company can basically react to fluctuations in supply or demand in three ways: building up or reducing inventories, enabling the allocation of resources to be more flexible and delaying the provision of its services. A warehouse does not have to be run by the company itself; it can be managed by a partner firm. Flexibility can be enhanced in production and logistics. The last point, adjusting how it provides its products, depends on how urgently the end customer needs the goods. Basically, the same questions need to be asked in the supply chain as in sales: "What happens if ...?"

Are you talking about scenarios?

Exactly. But it doesn't matter what the reason for a change is. It is much more important to become aware of the consequences – at ZHAW we talk about the impact – and to

calculate the costs resulting from it. There are many risks. It is therefore crucial to know which risks can have the greatest impact and which ones are less serious. On the basis of this analysis, a company can develop measures in quieter times that can give them the necessary stability in the event of a crisis.

What about companies that operate in a highly specialised industry?

In this case, suppliers actually are at an increased risk. A company can react to this with various strategies. Long-term purchasing contracts, partnerships or even acquiring a key supplier are effective responses. It can also be checked whether alternative solutions or product adaptations are possible, to which other trading partners can contribute. In all these considerations, it seems important to me to deal with what one knows instead of speculating about what could be.

How well does industry meet this challenge?

Experience teaches us that when it comes to risk analysis, companies tend to consider too many possibilities. Instead of trying to figure out what happens in an earthquake or a flood, a company is better off asking narrower questions. Questions such as: What impact does it have on our organisation – whatever the reason – if a certain supplier can't produce for six weeks? This is a tangible, real question. Thinking in such tightly defined scenarios and analysing their consequences on your company strengthens a company much more than worrying about environmental disasters and how to react to them.

Why is it that scenario thinking is still not widespread in supply chain management?

Based on our observations, costs have been the focus up to now. With the wave of globalisation in the 1990s, price optimisation came to the fore. All processes have become leaner and more efficient. Along with that, systemic buffers have been reduced, making organisations more fragile. Issues such as total cost of ownership faded a little, which was possibly also due to the difficulty of being able to clearly identify the other factors.

How does the experience with COVID-19 change the importance of supply chain management?

The focus has shifted very sharply towards the notion of devising resilient supply chains. As a company, it is important not only to be efficient and agile, but also to be able to respond to unexpected events. Thus, the importance of supply chain management continues to grow, a trend that will continue, I believe, in the future. Awareness of the various effects of





**"THE CHEAPEST WAY TO
CREATE A RESILIENT SUPPLY CHAIN
IS THROUGH PARTNERSHIPS
WITH ALL SUPPLIERS AND CLIENTS."**

Michael Lusterberger, ZHAW

given scenarios and the appropriate countermeasures to meet them makes an organisation more resilient. But I must emphasise that solutions are always individual. There is no magic bullet, no black box, applicable to all companies.

In the current discussion about supply chains, transparency is also cited as an important factor. How is this to be understood?

The cheapest way to create a resilient supply chain is through partnerships with all suppliers and clients. Because only those who are informed about everything that is happening with their suppliers and clients can assess the scope of the risks that arise from this cooperation. The basic requirement for open, active communication is mutual trust. In this context, transparency means all stakeholders need to be up to date, fully and honestly informed about all relevant developments.

Another focus of your teaching and research is Industry 4.0 and digital transformation. The latter is also often associated with the supply chain. Where do you see the possibilities?

We can assume that automation and robotisation will continue to advance in our companies. This means that processes will be ever more digitised and automated. On the one hand, this makes production more efficient; on the other, it also enhances flexibility – an important resilience factor, as we know. This is because data makes a big contribution to transparency in the supply chain. The latest developments in the field are called supply chain control towers, from which the entire supply chain can be monitored and managed.

What advice do you have for companies for the next three to six months?

Forecast uncertainty has certainly increased, and massively so. In order to gain a greater sense of security, I think it would be essential to clarify the outlook for demand. Another recommendation would be to permanently focus on the risk analysis, concentrating more on consequences and impacts than on any specific scenario itself. Basically, I recommend companies make their supply chains as flexible as possible. The more flexible it is, the quicker it can react to changes of any kind. A more resilient supply chain makes a company more crisis-proof.

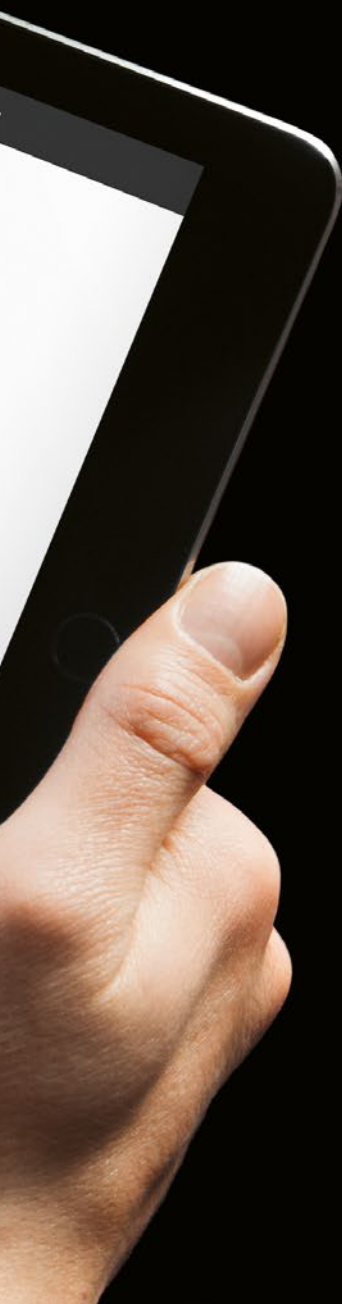
Thank you very much for this informative conversation, Mr Lusterberger. We wish you every success in your future activities.

SMART INTO THE FUTURE.



The potential benefits of the Internet of Things are widely acknowledged. In manufacturing, IoT systems connect production, people and data, supporting both commercial goals and sustainability strategies. OH Xport from Otto Hofstetter AG is an innovative IoT solution for manufacturers of PET preforms and plastic packaging. This smart system monitors the state of the injection moulds, enhancing operational safety while protecting the manufacturer's investment. Thanks to its high level of effectiveness, an OH Xport installation usually pays for itself within three to nine months.

THE INTERNET OF THINGS
HAS THE POTENTIAL TO ACHIEVE
84 PER CENT OF THE
UNITED NATIONS' SUSTAINABLE
DEVELOPMENT GOALS.



The World Economic Forum (WEF) has called on companies around the world to embrace a sustainable, inclusive and trustworthy digital future. To make this goal more achievable, the thought leaders at this Swiss-based organisation have defined six key areas of the digital economy. The WEF believes that the Internet of Things (IoT) offers significant opportunities for a responsible transformation. Estimates put the economic added value of applying IoT solutions in industry at some 14 trillion US dollars by 2030. When the added value to consumers and the public is calculated, the returns look even more promising.

The Internet of Things is moving forward.

In one of its many studies on this topic, the WEF shows that widely deploying IoT solutions would wholly or at least partly meet 84 per cent of the Sustainable Development Goals (SDGs) defined by the United Nations (UN). The reason for this dramatic performance lies in the technology itself. IoT allows previously disconnected elements – humans, machines and data – to communicate with one another seamlessly in real time, with quite remarkable potential benefits.

Advantages at all levels.

In industry, IoT is crucial for achieving growth and enhancing productivity without sacrificing sustainability. Key terms such as communication, real time, integration, modularity and system intelligence drive its development. According to experts in Industry 4.0, a blanket term for this next step of industrialisation, solutions in this area should be based on three pillars: digitalisation, sensorisation and optimisation. In order to be able to monitor processes in real time, these processes must first be digitised. This is followed by sensorisation, which enables the connection of machines and people. On the basis of these two steps, it is then possible to optimise the processes, increasing quality and cutting costs in a variety of ways.

OH Xport makes good things happen.

With OH Xport, Otto Hofstetter AG has created a platform for significant value-adding IoT innovations for manufacturers of PET preforms and plastic packaging, opening up a wide range of advantages. OH Xport came about because the Swiss toolmaker has always listened closely to its customers. The specialists in Uznach know the challenges that manufacturers face every day. Perhaps the greatest of those is how to continuously optimise production while using existing equipment and infrastructure. This is where OH Xport comes in. Its potential to improve the profitability of an existing production line is considerable. In fact, an OH Xport system usually pays for itself within the first year of operation.

Process optimisation and downtime prevention.

OH Xport is a small, clever multifunctional system that skilfully supports packaging and preform manufacturers in various ways. On the one hand, it provides data for optimising production routines. It also warns operators when performance thresholds are being reached before serious faults occur.

OH XPORT PROVIDES THE RESOURCES TO DRASTICALLY REDUCE SYSTEM DOWNTIMES.

Any drop in quality is flagged to the system operator early. If target values are beginning to be undercut or exceeded, this information is communicated in the clear graphics which the OH Xport unit regularly produces. And in urgent cases, when serious trouble is imminent, a real-time alert is transmitted to selected users.

Again, for timely maintenance planning, any gradually deteriorating conditions in the mould are represented graphically in the regular reports issued by the Xport system. In the event of a rapidly developing problem, an urgent alert is issued. Less downtime and smarter maintenance cycles, both of which significantly boost the production line's profitability, are among OH Xport's many benefits.

Relevant data visualised.

OH Xport records the mould's performance data and transmits it via a mobile data connection to an evaluation centre, which automatically transforms it into clear charts displayed on a secure data dashboard that can be accessed with any standard Internet browser. For up to 10 moulds on an injection machine, OH Xport visualises the number of shots, overall system efficiency, cooling circuit and hot runner temperatures, coolant flow rates, mould breathing, condensation conditions, probable machine downtimes and the reason for a possible machine stop, among other parameters. The responsible staff, defined by the operator, have all the information they need, for example, to prevent abrupt, unplanned machine downtime or to fine-tune the production processes. The benefits are clear when the plant manager sees the results of the implemented optimisations, namely greater efficiency over the short-, medium- and even long-term time horizons.

Retrofitting existing systems with OH Xport.

OH Xport is available as an option for all new injection moulds from Otto Hofstetter AG. The simple assembly of sensors and a data hub also allows retrofitting Xport on existing systems. Installation, commissioning and instruction times are quickly completed, usually in two days. Production losses from the necessary machine stoppage of two to four hours are quickly recovered.

Security at all levels.

OH Xport is connected to the production process only via its sensors. The sensors only record the data that is requested by the system operator. OH Xport does not actively intervene in the production process. Accordingly, OH Xport does not offer unauthorised persons any possibility of gaining access to the production line. All data is stored on a well-protected cloud platform. Otto Hofstetter AG pays the annual licence fees for this service as well as the costs of data transmission for the first two years of OH Xport's operation.

INCREASED PRODUCTION, EXTENDED EQUIPMENT SERVICE LIFE, SMARTER PREVENTIVE MAINTENANCE CYCLES AND ENHANCED SAFETY ARE OH XPORT'S DECISIVE ADVANTAGES.

Short-term payback and longer guarantee.

Increased production, extended equipment service life, smarter preventive maintenance cycles and enhanced safety are OH Xport's decisive advantages. Another strong argument for this clever multifunctional monitoring system from Otto Hofstetter AG is its moderate price. An investment starting at 15,000 euros creates potential cost savings of up to 60,000 euros per year. Thus, production gains offset the investment costs well before the end of the first year of operation. In addition, the Swiss toolmaker offers an extended warranty of two or three years on new moulds that are equipped with OH Xport. The Internet of Things promises a new Industrial Revolution and with the innovative OH Xport, PET producers can start enjoying the benefits today.

OH Xport

THE SMART GUARDIAN
FOR YOUR MOULD

Software Version 4.00
25. July 2009
Time 14:47:19

Production Data	CC1 - CC3 Temperatures Flow rate	Dim Display
X - Blow	Mould breathing

OH XPORT – ROI IN 90 DAYS.

OH Xport provides the resources to drastically reduce system downtimes, which results in potential cost savings of EUR 20,000 to EUR 60,000 per year. The initial investment starting at EUR 15,000 is thus offset after just three months.



MAXIMUM COST SAVINGS
IN 12 MONTHS
EUR 60 000.-



CHANGE TOGETHER.

Plastics pose a **major challenge** to our society. Completely eliminating them is certainly not the answer. Rather, we must use them more **consciously and carefully**. New research has confirmed the well-known fears about plastic pollution, but it also offers grounds for optimism, and proposes some specific **recommendations for action**.

Plastic pollution on land and in the oceans is a fact. However, estimates vary about the extent and the future development of this phenomenon. Some researchers say plastic pollution levels will triple by 2040 if nothing is done. The prospect of stretches of coastline, river banks and fields laced with plastic waste, as well as floating islands of waste in the oceans, is worrying in any case.

BETWEEN 80 AND 120 BILLION US DOLLARS ARE LOST TO THE ECONOMY AFTER A SHORT ONE-WAY CYCLE OF PLASTIC PACKAGING.

Various initiatives point the way ahead.

Environmental pollution from plastics is one issue. Then there is the negative economic component to the story. Some 95 per cent of the total value of plastic packaging, which amounts to between 80 and 120 billion US dollars a year, are lost to the economy after a short one-way cycle. This emerges from the report “The New Plastics Economy: Rethinking the future of plastics” published by the World Economic Forum (WEF) and prepared by the Ellen MacArthur Foundation and McKinsey & Co., a consultancy.

Many people around the world have recognised the problem and are taking action. The “New Plastics Economy Global Commitment” is an important initiative launched by the Ellen MacArthur Foundation and the UN Environment Programme in October 2018. It currently unites over 400 companies, governments and other organisations behind a common vision and ambitious goals based on a circulating economic model in which plastic never becomes waste.

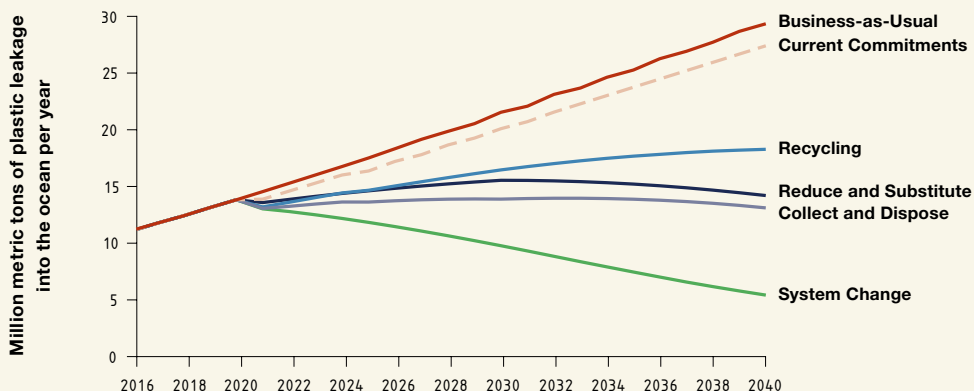
Concrete scenarios and their consequences.

The recently published study, “Breaking the Plastic Wave”, produced by Pew Charitable Trusts and Systemiq provides new insights into the subject. Pew Charitable Trusts is a global research and outreach non-profit organisation and Systemiq are consultants for sustainable economic systems.

“Breaking the Plastic Wave”, which the initiators developed in collaboration with scientists and experts from around the world, models the evolution of the volume of plastic released into the global ecological system and the proportion of plastic waste in the oceans from 2016 to 2040, and also compares six scenarios ranging from “everything-as-before” to a complete system change. The model also quantifies the associated effects of these scenarios in terms of costs, climate effects and jobs.

Land-based plastic leakage under different scenarios

The System Change scenario would achieve about an 80 per cent reduction in annual plastic leakage into the ocean relative to the Business-as-Usual scenario exceeding all other modelled scenarios.



The graphic shows expected levels of plastic leakage into the ocean over time across different scenarios. The graphic shows that although upstream-focused pathways (Reduce and Substitute scenario) and downstream-focused pathways (Collect and Dispose scenario and Recycling scenario) reduce annual leakage rates relative to BAU, they do not reduce leakage below 2016 levels. Only the integrated upstream and downstream m scenario (System Change scenario) can significantly reduce leakage levels.

Realistic ideas with attractive advantages.

With a profound systemic change like the one proposed in “Breaking the Plastic Wave”, the amount of plastic waste landing in the world’s oceans could be reduced by around 80 per cent by 2040. In addition to the positive effect on maintaining the health of the oceans, such a system change would allow

**TECHNOLOGIES AVAILABLE
TODAY COULD REDUCE
THE GREENHOUSE GASES CAUSED
BY PLASTICS BY 25 PER CENT.**

governments to save around 70 billion US dollars on waste management over the next 20 years. This scenario would also yield a reduction of greenhouse gases by 25 per cent and create around 700,000 new jobs, according to the study.

These attractive outcomes are not based on future technological developments. Rather, they call for the use of solutions and techniques that are already available today, such as reducing plastic consumption, using substitutes for plastic where possible, adapting product designs, increasing plastic recycling activities and reducing waste exports.

Big brands are showing the way.

The annual report of the New Plastics Economy shows that things are already moving in the direction of a circulating model for plastics. The report lists various well-known companies as examples of recent progress. Unilever has announced that it will reduce the use of new plastic in packaging by 50 per cent, while Mars and PepsiCo intend to use 20 per cent less by 2025. Around 70 per cent of the signatories of the Global Commitment pledge to eliminate disposable straws, plastic bags and sooty plastics and to reduce the amount of PVC in their packaging by around 80 per cent.

A choice that isn't.

The conclusions that Pew Charitable Trusts (PEW) and Systemiq derive for the “everything-as-before” scenario in “Breaking the Plastic Wave” should shake everyone up. It wouldn't just mean that the amount of plastic waste in the oceans would almost triple by 2040. In addition, waste management costs would rise to some 670 billion US dollars and manufacturers would have to pay collection and disposal fees totalling



**CHANGING THE PLASTIC SYSTEMS
BY 2040.**



-70 billion USD – government cost **+700 thousand – Jobs**

100 billion dollars – in a business that is already suffering from very low margins. Along with many other negative factors, doing nothing would also increase greenhouse gas emissions, which in turn affect the health of the planet and humanity.

All hands on deck.

“Breaking the Plastic Wave” not only analyses possible scenarios, but also provides concrete starting points for all the individual actors to alter their use of plastics. Since systemic change should be the preferred scenario, the proposals also pursue this goal. The measures depend on where a company operates in the supply chain and whether it operates in a strong or weak economic environment.

In their study, PEW and Systemiq recommend that plastic manufacturers and processors focus more on recycled plastics and recyclable products. The study also advises that these

THE ORGANISATIONS BEHIND THE QUOTED STUDIES:

Pew Charitable Trusts (PEW) is a nonprofit organisation based in Philadelphia, PA. It has been using evidence-based, impartial analysis to solve current challenges for over 70 years. PEW is currently active in 46 countries and actively runs 40 projects and campaigns.

Systemiq Ltd. is a Certified B Corporation with offices in London, Munich and Jakarta. The company was founded in 2016 and is involved in several system-change initiatives related to plastics and packaging.

The New Plastics Economy is being promoted by the Ellen MacArthur Foundation with support from the UN Environment Programme. In 2018, it launched a global commitment initiative to which around 400 companies have committed at various levels. The project aims to reduce the amount of plastics sent to landfills.

-0.4 billion – GHG emissions (tCO₂e)

-1.3 trillion USD – cost to business

-219 million metric tons – virgin plastic production

-24 million metric tons – plastic leakage

companies actively promote a 100 per cent recycling rate for their plastics, even in countries where there is no corresponding legal obligation for manufacturers.

by at least a third through new recycling and delivery models and greater use of substitute materials. Waste management and the manufacturers of paper and compostable materials should also play their part in changing the system.

WASTE MANAGEMENT COULD CONSUME 670 BILLION US DOLLARS BY 2040 IF EVERYTHING STAYS THE SAME.

The goal can be achieved together.

Both the annual report of the New Plastics Economy with its global commitment and the study by the Pew Charitable Trust and Systemiq point to great opportunities for sustainable improvements in how we use plastics. However, both expert bodies come to the conclusion that all actors have to act together and have to do so very quickly.

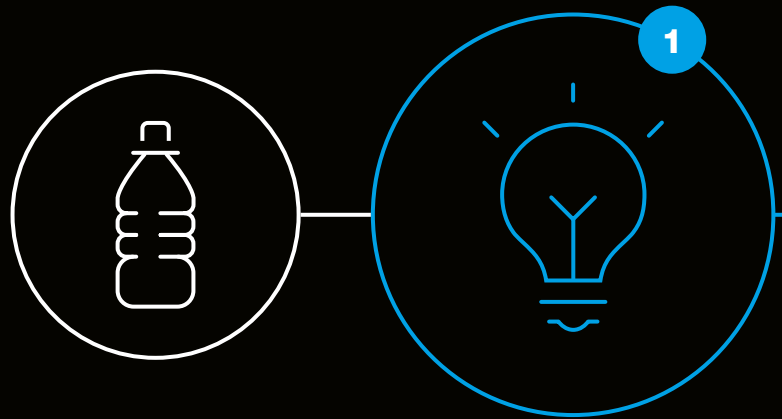
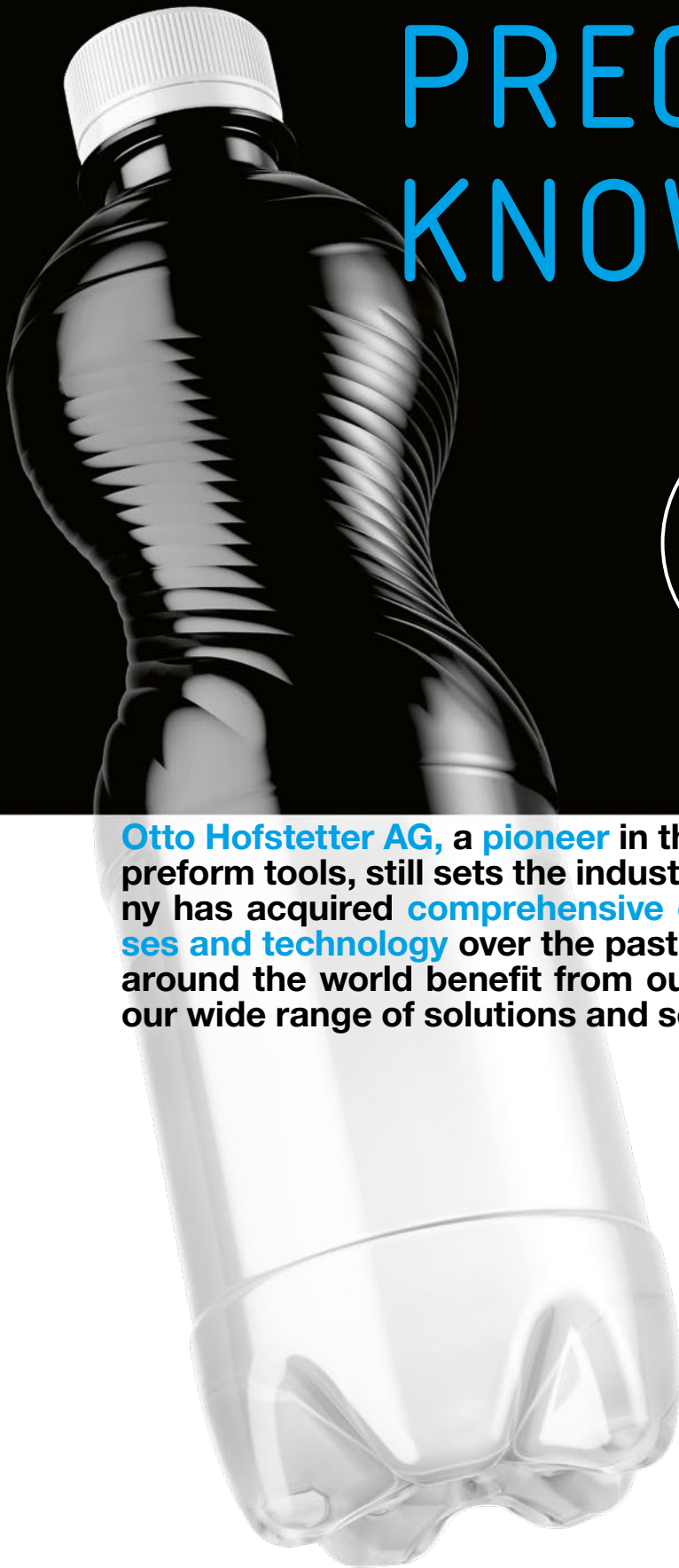
Brand owners of fast-moving consumer goods (FMCG) products and retailers generally should, according to the recommendations in “Breaking the Plastic Wave”, initiate the turnaround in plastic usage and reduce their plastic consumption

The Pew Charitable Trusts: www.pewtrusts.org

Systemiq Ltd.: www.systemiq.earth

The New Plastics Economy: www.newplasticseconomy.org

PRECIOUS KNOWLEDGE.



Otto Hofstetter AG, a pioneer in the design and manufacture of PET preform tools, still sets the industry benchmark. This Swiss company has acquired comprehensive expertise in PET preform processes and technology over the past forty years. And today customers around the world benefit from our know-how, our innovations and our wide range of solutions and services.

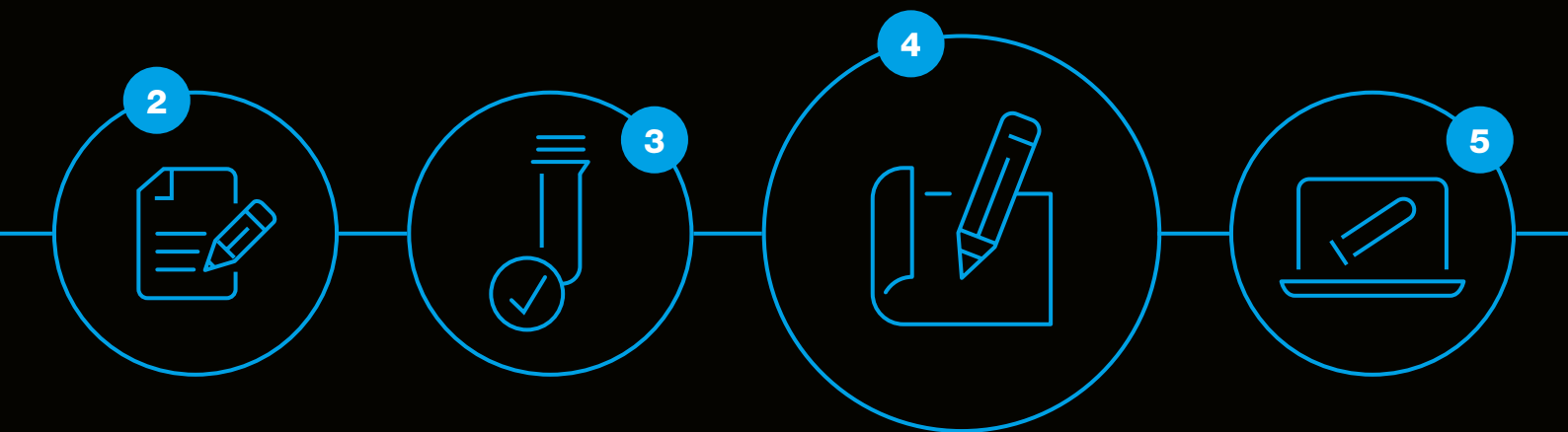
In 1977, Otto Hofstetter AG produced its first injection mould for PET preforms. The customer was the Continental Can Company, which had been commissioned by two well-known American beverage brands to find a capable tool manufacturer. The resulting design was twelve PET moulds with 16 cavities producing preforms for two-liter bottles. The preforms had a wall thickness of four millimetres, weighed 62 grams and were produced with a cycle time of 30 seconds.

Know-how accumulated over decades.

More than four decades later, PET bottles are used around the world and produced in countless variations. Almost one in every seven PET containers produced to date has been made with a preform from Otto Hofstetter AG. And the pioneer toolmaker for PET preforms, Otto Hofstetter AG, has continued to develop and innovate.

EVERY DETAIL HAS
AN IMPACT
ON PROFITABILITY.

PRECISION CAN BE
MEASURED,
BUT IT'S PRIMARILY
A PHILOSOPHY.



The experts at Otto Hofstetter AG have continuously expanded their knowledge of tool design. Our extensive knowledge about the entire PET production process, the materials in demand on the market and the complete product cycle for PET containers all combine to deliver enhanced profits to our clients, the world's PET producers and fillers.

Our knowledge adds value.

Otto Hofstetter AG makes its extensive knowledge base and its decades of experience available to its customers. It offers a range of services for the production of PET preforms, which, according to the needs of the project partners, can start with the design of the container and extend to monitoring the quality of the preforms coming off the production line. Customers can choose which process steps should benefit from the know-how of the specialists from Switzerland. Experience gained from thousands of projects shows that the earlier we get involved in a project, the greater the possibilities we have to make the process leaner and more efficient, which can decisively influence the weight and quality of the preform, thereby saving valuable time and money.

Safety right from the start.

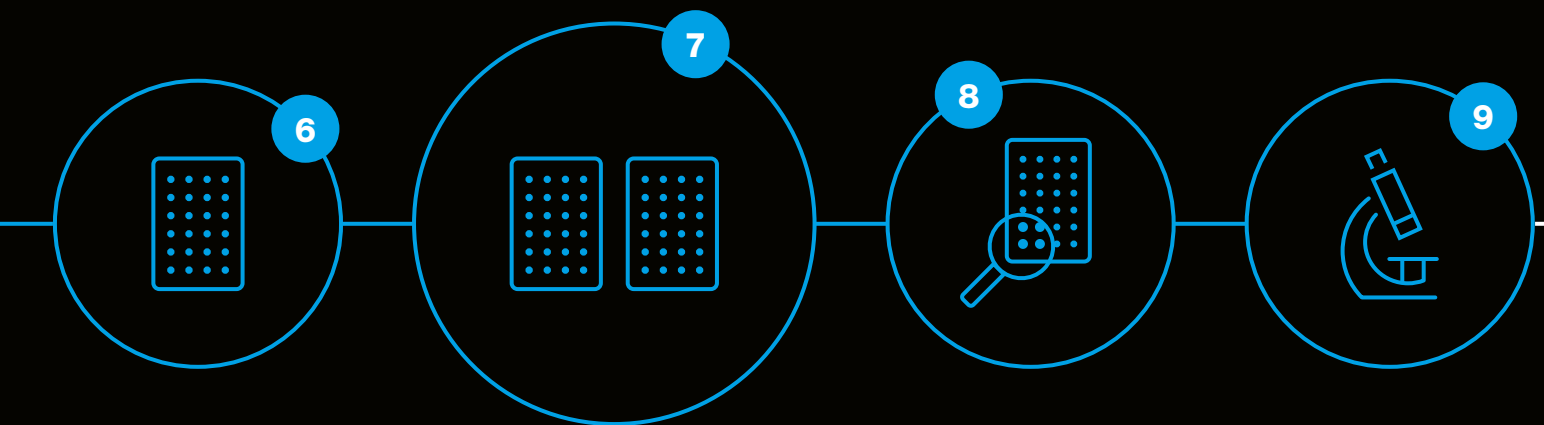
Otto Hofstetter AG's full range of services for the production of PET preforms begins with clarifying the customer's needs. Our experienced engineers can then best support the project with their technical know-how. They can draft detailed preform proposals and optimise them if the customer or the blow moulding machine supplier bring in ideas for refinement. As a further service, Otto Hofstetter AG builds sample moulds and produces test preforms, with the final production conditions simulated as precisely as possible. These test preforms are delivered to the customer for further fine-tuning, be it to determine blowing behaviour, filling or even for consumer tests. If the preform and the blow mould fit perfectly, the way is clear for the construction of the series mould. Preforms are produced on each finished series tool, the quality of which is thoroughly checked. Together with the results of the tests, the optimised injection mould is then delivered to the customer.

Added value at every step.

Otto Hofstetter AG takes customer support very seriously, offering a comprehensive range of services. Here, our advantages are clear: Our total process know-how helps us optimise every step of the preform production line, reducing construction time and saving costly resources.

ONLY PROVEN
QUALITY PROVIDES A
SENSE OF SECURITY.

THOSE WHO UNDERSTAND
THE ENTIRE PROCESS
CAN ASK THE IMPORTANT
QUESTIONS AT THE START.



1) Our advice can add value at every stage of a project. We have often seen that, depending on the requirements, it may make sense to involve our Swiss specialists when a prototype of the planned PET bottle has been developed. This enables important benchmarks to be set for the future quality of the preforms and the bottle. Information about the desired neck shape, the target weight and, if possible, the bottle design are absolutely essential to the optimal design of the preform.

2) Technical optimisation demands two distinct skills. On the one hand, our engineers develop a proposal for the required preform based on the targets defined in the preliminary discussions. Then, based on the performance data of the machine on which the preform will be produced, the experts on the Otto Hofstetter AG team calculate the cycle time to be achieved. Preform design and cycle time calculations are transmitted to the customer.

3) If a preform already exists that a manufacturer wants to produce in the future with a mould from Otto Hofstetter AG, our know-how can also provide value-adding ideas. The preforms and the associated specifications are checked in detail by our toolmakers for possible optimization. It is not uncommon at this stage to find opportunities to improve the

quality or efficiency of the preform. For example, for a well-known German distributor, small corrections to the geometry of the preform resulted in a weight reduction of 1.55 grams, which, over the course of a year, meant a savings of around 5000 tons of plastic.

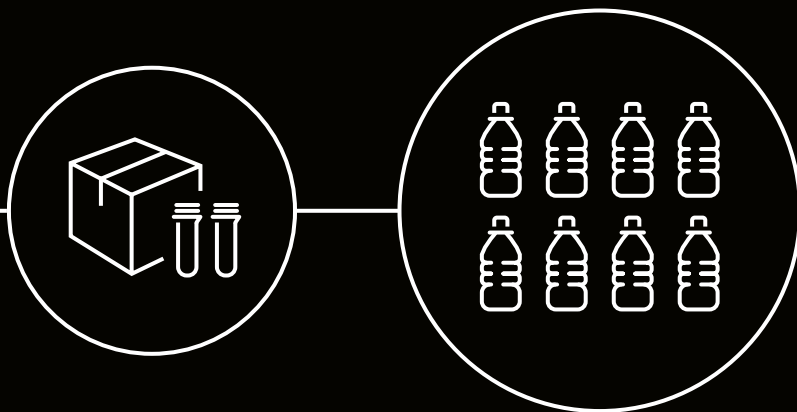
4) The provisional preform goes to the blow mould machine manufacturer for testing. In this important project step, it can be wise to involve the developer of the preform directly. In this way, no important information is lost and queries can be clarified directly between the experts.

5) The final drawings of the preform are produced by Otto Hofstetter AG's engineers after receiving feedback from the blow moulding machine manufacturer. Every angle, rounding, cone and taper is calculated and defined to the nearest hundredth of a millimetre.

6) In the next step, in order to **sample the preform**, the mould inserts are manufactured and built into a standard, pre-existing mould. Depending on the number of samples required, a sampling mould consists of two to 16 cavities. These tests are mostly carried out in the Otto Hofstetter AG Service Centre in Switzerland. The same granulate later used

COMPREHENSIVE PROCESS AND TECHNOLOGY CONSULTANCY EXPERTISE MEANS:

- HIGH-QUALITY, COST-EFFECTIVE PRODUCTS
- EFFICIENT PROJECT DESIGN PROCESSES
- LONG-TERM SAVINGS



in series production is used and the factory conditions are simulated as closely as possible. Depending on the further course of the tests, the samples' production run can be a small series or several thousand pieces.


7) Manufacturing the production mould commences when all tests have been carried out successfully and all target values for quality and performance have been achieved. The production of the tool follows a clearly structured and proven process. This ensures that the project is completed efficiently and within the agreed time frame. The result is a preform mould that has the well-known quality of an Otto Hofstetter AG solution.

8) After completion, every new injection mould is put through its paces. This can be in the test centre at our headquarters in Uznach or at a cooperating machine manufacturer. The preforms produced during the tests are also carefully checked.

9) The quality assurance of the preforms involves a three-step process. The geometric dimensions are checked using a high-precision optical measuring device. The preforms are also visually assessed. Every little abnormality or flaw is identified and reported by experienced inspectors. The collected test results are examined. If all quality parameters meet the requirements, the results of the inspection go to the customer together with the finalised mould. These services are available to customers during the entire production period of a preform.

This is how we make sure our customers get the best, most efficient PET mould possible. At Otto Hofstetter AG only one standard applies: complete customer satisfaction.

ALWAYS FORWARD.



Andrea Ochsner has been a receptionist at Otto Hofstetter AG's headquarters for five years. At one time or another, most customers and partners have spoken to her on the phone, but not all of them have met her personally. We correct that in this interview. She presents her favourite place in the Uznach region and tells us what's important to her in her private and professional lives.

You take incoming calls and pass them on to colleagues, send documents or spare parts, ensure that warranty cases are processed quickly and use all of your experience and manual skills to ensure that every part of a mould meets our well-known quality standards. If Otto Hofstetter AG couldn't fully rely on these employees every day, the company simply would not have become one of the world's leading manufacturers of moulds for the production of PET preforms and plastic packaging today.

Inform is launching a new series profiling these important employees who day in and day out reliably contribute to the company's success quietly in the background. The portrayed colleagues reveal their favourite place in the Uznach area, explain why it's so special and otherwise let us be a part of their lives.

When does a customer come into contact with you?

In most cases, it's when he or she calls us. I can answer some questions directly for the customer; others I forward internally to a colleague. In the case of customers who have not yet been assigned a contact person or who no longer have their name present, I enquire about their needs and help them out as much as possible. This means that many customers and business partners know my voice, but have no picture of me.

Your official title at Otto Hofstetter AG is receptionist.

What does this work include?

My workplace is the reception desk, where I can usually be found. However, my area of responsibility consists of a diverse mix. Processing the mail as well as maintaining, checking, accounting for and recording invoices, processing warranty cases, archiving contracts and compiling and sending mailings such as our customer magazine Inform, for example. I also look after the apprentices during their time at reception, a task based on trust that I was very happy to take on.

What roles do you have outside of your job?

On the one hand, I'm the mother of two children. Since my daughter and son are grown and are leaving home, of my role as mother is currently being redefined. A difficult and sometimes painful process, but with the certainty that I will continue to play a major role in my children's lives. In addition, the changes give me more freedom for my other two roles: life partner and athlete.

What kind of sports do you do?

I currently spend a lot of time kitesurfing. My partner encouraged me to take this up a few years ago and it has since become my passion. In winter, I snowboarded almost every weekend. That has now decreased somewhat, since kite-surfing is possible in warmer areas even in winter. Basically I'm someone who wants to move. Sitting around and doing nothing is not my thing.

You selected the Richterswiler Horn for the interview.

Why is this place special for you?

Water is my absolute favourite element, and not just for surfing on it. Even as a child, I was a water lover. Our neighbours had a swimming pool where I could be found every day for hours. Later we had a boat and we were out on the lake as often as

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possible. That's why water is central to me when it comes to choosing my favourite place. I only recently discovered the charm of Richterswil's Horn. I stopped here by chance and immediately got excited. The atmosphere of this small park on the water is unique.

Why are you so fascinated by water?

Being on or in the water is the greatest thing for me. No matter whether it's a lake or sea. For many years I enjoyed the privilege of living with a view of the lake. It's fantastic to see the mood change on the water almost by the minute. Depending on the sun, the clouds or the wind, the colour of the water changes and with it the whole landscape around it. The colours of the sea are just as appealing. It can range from the lightest azure blue to almost black.

You say you like to be in the water. What effect does it have on you?

I just find it very pleasant. I enjoy lying in the water and drifting. It feels like I'm being gently carried by the water in the truest

ANDREA OCHSNER

Andrea Ochsner has been with Otto Hofstetter AG for five years. Her official title is receptionist. In addition to her professional commitment, she is the mother of two adult children, has a loving partner and does a lot of sports in and with nature.

sense of the word. There is a feeling of comfort and security. This is probably the reason why I like to swim a lot and often, with the positive side effect of increasing my stamina at the same time.

"WATER SEEMS TO ME AS IF I AM BEING GENTLY CARRIED BY IT IN THE TRUEST SENSE OF THE WORD."

Andrea Ochsner

The wind plays an important role in kitesurfing. Does it also have a special meaning?

With kitesurfing, I had a lot of respect for the wind at the beginning. Depending on its strength, wind can deliver a concentrated charge of energy. And I respect that. During the preparations, I feel a little tense. But once I'm on the water, endless enthusiasm replaces the initial uncertainty. Compared to earlier, I notice that the respect is growing and, for example, I'm not constantly looking for bigger waves or higher speeds. But it should always remain a challenge. Otherwise it would be boring. And I dread that.

It sounds like you keep trying to redefine your limits. Is that true?

That's always been the case, and now with kitesurfing too. I made my first attempts a good four years ago. Now I am going to Holland or Denmark in a camper with my partner, always looking for new surfing spots. I no longer spend winter holidays in the snow, but in warmer climes on the water. The conditions are always new and therefore it's always a challenge.

You speak of respect for wind and waves. How important is security to you?

I feel like I know my limits. When it comes to kitesurfing, I remain realistic and ready to admit to myself that I'll stop if the wind is too strong or the waves are too high. When I think back, security and, above all, a sense of responsibility, took on new a meaning on the day my daughter was born, a feeling that now changes with the years.

Switzerland is considered a safe country. Could you imagine living somewhere else?

Compared to many other countries, it seems to me that we are very privileged here in Switzerland. Still, I could well imagine setting up my tent somewhere else. Water, wind and waves would certainly be a strong argument for doing that. But at the moment it doesn't look like this will be an issue anytime soon. And until then I'll be enjoying the many advantages that Switzerland and the region of Lake Zurich have to offer.

You consider it important to be challenged. To what extent does this apply to your work at Otto Hofstetter AG?

What I do, I do correctly. This applies to both my private and my professional life. At the same time, it is important to me to resolve an issue in a way that suits everyone. I also like to stand up for others when the situation demands it. For example, when a customer urgently needs information but cannot reach his contact person. It can happen that I burst into a meeting and put the colleague on the phone with the customer. Basically, I prefer when a lot is going on. Routine and passivity are not for me. I want to be challenged.



What does it mean to you to work at Otto Hofstetter AG?

I consider it a privilege. My work is valued and I feel respected as a person. I also suspect that my superiors trust me, which in turn makes me feel good. In addition, Otto Hofstetter AG enjoys an excellent reputation among its customers. That motivates me to do my part to ensure that all visitors feel welcome from the very first moment.

"MY WORK IS VALUED AND I FEEL RESPECTED AS A PERSON."

Andrea Ochsner

There are now over 200 employees in Uznach. Do you feel the same as the people who visit you?

Absolutely. At the reception I am of course a bit away from the business and am not in the picture about every detail. I can make up for this shortcoming during the morning round delivering post. I think communication with each other also works very well and we really support each other. In Sascha Bigler, I have a direct superior who is very open and who takes time for us.

Where do you see the strengths of Otto Hofstetter AG?

It works collaboratively from the first to the last moment in the project. Everyone works together for the best result for the customer. For me, this has a lot to do with motivation, communication, tolerance and respect, and it doesn't just stop after a tool has been delivered. We are always there for our customers when they need us.

What wish do you have in connection with your job?

To be challenged: new tasks, new people. As little routine as possible and rather more than less work. I want to learn new things and expand my horizons. I see this as an opportunity for myself to grow personally and to keep improving. There is hardly a challenge that I reject from the outset.



TOTALLY SWISS.

 **Otto Hofstetter**

A FAMILY OWNED SWISS COMPANY.

OUR INJECTION MOULDS FOR PET AND PAC FEATURE CRAFTSMANSHIP THAT IS UNIQUELY SWISS. OTTO-HOFSTETTER.SWISS

