

BULLETIN

ROBIT PLC CUSTOMER MAGAZINE 1/2022

Smooth drilling on Lake Ontario

Rototec helps drive
the Green Shift

Robit GB:
Decades of
DTH excellence

Robit

DEAR READER,

For a while, it seemed that 2022 could be a return to the so-called normal life after the coronavirus pandemic. Sadly, the war raging in Ukraine has upended the situation in many ways again. Uncertainty in the operating environment has increased, but we are not letting this slow us down. At Robit, we continue to make major investments and significantly increase production capacity to ensure the continuity of our customers' operations.

We want to make sure our customers are successful. It often means close cooperation, either directly with the customer or through our distributor. As a result, our customers get the kinds of solutions that best serve them. A case in point is the development work at the Kittilä gold mine – read more about it on page 7.

Responsibility and sustainability are also key concepts in our business. Our goal is to build sustainable partnerships with both distributors and customers who share the same principles with us. We will do our best to drive the green transition in close cooperation with our stakeholders; a good example is Rototec, a manufacturer of geothermal wells – more on this on page 6. We have also published our sustainability targets and roadmaps. You can read more about them on page 15.

I wish all Bulletin readers a very successful year!

Arto Halonen, *Group CEO*



IN THIS ISSUE

Editorial	2
Smooth drilling on Lake Ontario	4
Rototec accelerates the green transition	6
Problem-solving in the depths of a gold mine	7
Robit GB's roots go back 50 years	8
A lasting marriage in the Spanish market	10
Robit Rbit sets the bar for TH button bits	11
Hilla's training diary	12
Get to know: Janne Soininen	14
Robit and sustainability: Making good progress	15

Robit Bulletin is the customer magazine of Robit Plc.

Editor-in-Chief: Jari Silver

Text and layout: Mainostoimisto Värrikäs Oy

Print run: 2 000

Printed at: Ulonen Offset Oy

The next issue will be published in the second half of 2022.

Robit celebrated a few seasoned veterans joining the corporate alumni. From the left: Harri Sjöholm (Chairman of the Board), Kari Juntunen, Juha Niskanen, Jorma Juntunen and Arto Halonen (Group CEO).





SMOOTH DRILLING on Lake Ontario

Wolfe Island sits at the northeastern end of Lake Ontario, at the entrance to the Saint Lawrence River. The Canada–US border runs immediately to the south of the island, leaving it on the Canadian side. A ferry connects the island to the city of Kingston, Ontario.



The ferry channel is kept ice-free in winter by bubbles pumped through an underwater pipe.

A popular destination for nature lovers, Wolfe Island's resident population tends to double or triple in the summer. For years, the ferry has been running near or even over capacity during the busy seasons. That's why the Ontario Ministry of Transportation launched a major improvement project in 2020. Its goal is to replace the old ferry with a new, larger one, which requires significant upgrades at both ends of the ferry line: Kingston Dock on the mainland and Marysville Dock on Wolfe Island.

The General Contractor for the Marysville Dock project is Facca Inc. from Lakeshore, Ontario. A family business now in the fourth generation, Facca has built a reputation as one of the premier civil construction contractors in Ontario over several decades. They perform all the foundation work, and most of all other work on the Marysville Dock project with their own forces.

"We have been doing our own deep foundation work – piled foundations and sheet piling, some drilled shafts in earth – for about 15 years now. However, this job is only the second for which we've performed hard rock drilling of this scope, and the first we've done completely with our own forces", says P.Eng. **Steven Gardonio** of Facca.

On their Down the Hole hammers for the project, Facca has used both the Robit DTH Prime system and the Robit Steel Fist system, supplied by Pinnacle, Robit's Canadian distributor. Through their extensive piling expertise, Pinnacle's **Mitch Yorston** and **Jim McPhail** have also provided valuable technical support for Facca.

"We're putting in about 1,800 m of caisson with the Primes through a mixture of clay, sand, and till, with 250-ish meters of that socketed into the very strong (approaching 200 MPa UCS) limestone bedrock."

"There are a total of 87 caissons on the contract, some more than 27 meters in length. Nine were first installed on a dolphin from our barge with technical assistance from Pinnacle. This work went so well that we decided to purchase from Pinnacle the drill setup required – Down the Hole hammers and associated – and the remaining caissons were installed at the main ferry dock", Steven explains.

"With the Steel Fist, we've been drilling some of the more difficult of the approximately 220 toe pins embedded 2.4 m into the bedrock."

"We've been extremely happy with the performance of our equipment from Pinnacle and Robit bits. All drilling is full RC, and the process of drilling overburden – soft to hard clay and dense glacial till – from inside of the pre-driven pipe piles and locking into the ring bit at depth has not been an issue at all.

"Often, we can lock into the rings without halting rotation, very smooth, as was the drill-through process. Same for the Steel Fist, we've managed to drill material out from piles without rotation so as to not engage the wings and lock into the shoulder at depth, saving us significant time. We realize this is unorthodox, but it's been working for us", Steven says.

The CA\$70M ferry dock project is still very much in progress. If everything goes as anticipated, Wolfe Islander IV, the new state-of-the-art, fully electric, zero-emission ferry – first of its kind in Canada – will start operating between the new Kingston and Wolfe Island docks in November 2023.

Rototec accelerates the green transition

Carbon neutrality is a globally accepted goal to minimise the negative effects of climate change, in which energy production plays a key role. The current military crisis in Europe is a reminder that nations should also strive for maximal energy self-sufficiency. Geothermal energy provides one promising, cost-effective path toward achieving both goals.

In Finland, the growth of geo-energy has been rapid in recent years. One of the key actors in the sector is Rototec, Europe's largest geo-energy company with more than 60,000 energy wells drilled. Founded in 2007, Rototec has grown strongly in Finland and operates also in Sweden and Norway.

While geothermal energy has long been a popular energy source for single-family houses, Rototec is focusing more on supplying geo-energy for large properties such as hospitals, shopping centres, and factories.

A geothermal system requires one or more bore wells, drilled to a depth of 150–250 metres, depending on the amount of energy required. Robit has been supplying Rototec with drilling tools since the early years of the company.

“Robit, as a big domestic manufacturer, was a natural choice for us. 99% of the holes we drill are four-inch wells and Robit has a comprehensive line of tools for that. Currently, all our drill bits are from Robit,” says **Hannu Puolitaival**, Technical Director at Rototec.

The fruitful, mutually beneficial cooperation spans back more than a decade and focuses on customer-oriented service.

“Over the years, we have worked closely together to develop drill bits to better meet our needs. We test the products, and share our experience and comments with Robit for further development. One of Robit's assets is their agility: after our feedback, they can produce new, improved prototypes at a fast pace for testing. Of course, the fact that they have domestic manufacturing helps too,” Hannu says.

“Another strength is that Robit can make small batches. If we'd need, say, five units of a particular new drill bit for testing, that poses no problem. Not all manufacturers can do this,” says Hannu, and adds one more thing: “I have especially liked the fact that Robit has a dedicated person managing all communication with us. It makes our cooperation seamless and straightforward.”

Problem-solving in the depths of a gold mine

In the winter of 1986, a road construction job was underway in Kittilä, Finnish Lapland. Some rock was blasted, and out of curiosity, a geologist working nearby decided to examine the boulders – and found something. Today it is the site of the largest gold mine in Europe.

Gold was found in several boulders, and the Geological Survey of Finland began prospecting the site. The deposits turned out to be quite rich. More than twenty years passed until gold mining finally began in the Kittilä mine; first in an open pit in 2008, and underground a couple of years later.

Since 2012, mining in Kittilä has been exclusively underground. Today, Agnico Eagle Finland extracts some two million tonnes of ore each year, with annual gold production of around 7,000 kilograms.

Since May 2021, Robit has been supplying drilling tools to the Kittilä mine under a long-term contract. This includes, among other things, a turnkey drillmaster service, including a sharpening service. Robit supplies the products from their consignment stock, located 350 metres underground in the mine.

In Kittilä, Robit is dedicated to finding ways to cut costs per drill meter in cooperation with the customer. When the need arises, tailor-made products can be developed to meet the customer's needs. A case in point is cable bolting, a common method used in underground mining to reinforce the rock before extraction.

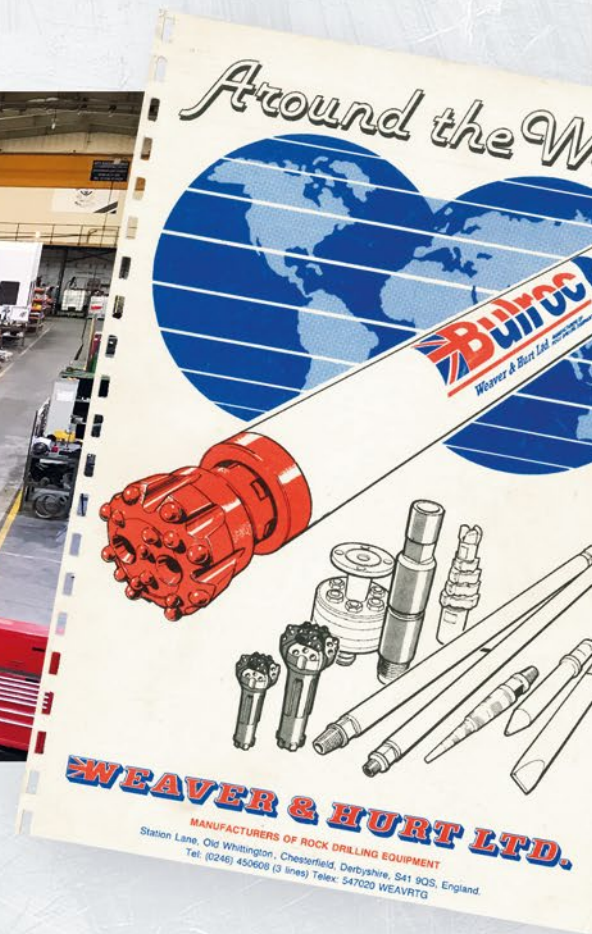
"Cable bolting posed some problems. The drilling gear did not work properly in broken rock; the flushings escaped into the rock fractures and the drill bit would get stuck," says **Kimmo Kangas**, Sales Manager at Robit.

"We suspected that the problem was caused by the side flushing of the bit. Our customer tried what would happen if you welded the side flushing shut – and it helped. We then made a series of bits at the Lempäälä factory that were modified in the same way," says Kimmo.

Robit's R&D Engineer **Mika Koskinen** was closely involved in the development work. "The results improved, but not quite enough. We discussed this with the bolting rig operators, trying to figure out what to do next. Based on the mining company's views and our own design ideas, we developed the second iteration of the bit, which was substantially different. It finally solved the flushing problems, and drill meters began to reach excellent levels," says Mika.

The new high-performance drill bit has been in use at the Kittilä mine since early 2022. Plenty remains to be drilled, as the mine is expected to operate until 2034 with the current ore reserves and production volumes. By then, new deposits may well be discovered in the course of prospecting.





Robit GB's roots GO BACK 50 YEARS

Operating out of Chesterfield, Robit GB Ltd is the UK branch of Robit. The UK Midlands-based manufacturing plant is currently known within the Robit group for the design and manufacture of large scale Down the Hole drilling consumables. However, the company comes from humble beginnings.

Ben Price, Senior Design Engineer & Mick Wagstaff, Managing Director, Robit UK

The company, then branded 'Weaver and Hurt' was incorporated with limited status in October 1973. With shares in the company split 50/50 between John Hurt and Tony Hawkins, Weaver and Hurt operated out of small premises in Chesterfield, providing a whole variety of drilling consumables to the market, ranging from dust collectors to drill rods, to shock absorbers, to Down the Hole hammers.

John Hurt always had personal aspirations of owning a Lamborghini sports car. The brand and company that had been created were so successful that soon after it began, John's wish was fulfilled. He owned his Lamborghini sports car. Falling in love with the badge on his new car, John decided to name a product after it. Taking the bull from the logo and the rock from the industry, the Bulroc name was born.



No. of Company 133419 (No registration fee payable)

THE COMPANIES ACTS 1948 TO 1967

Declaration of compliance

Pursuant to Section 15(2) of the Companies Act 1948

Name of Company WESTER AND HURT Limited

I, John A. Hurt
of 10 Willow Crescent,
Charlston,

Do solemnly and sincerely declare that I am (see note (a) below) officer named in Article
of Association and Director of

of Wester and Hurt Limited

And that all the requirements of the Companies Act, 1948, in respect of matters precedent to the registration of the said Company and incidental thereto have been complied with. And I make this solemn Declaration conscientiously believing the same to be true and by virtue of the provisions of the Statutory Declarations Act, 1935.

Opposite left: the Chesterfield factory today. | Opposite right: a Bulroc DTH catalogue cover from the 1970s. | Above left: The "fathers" of the Bulroc hammer in World Mining Equipment magazine, mid-80s. | Above right: The birth of Weaver and Hurt Ltd, 1973.

The first of the company-owned DTH hammers offered to the market in 1976 was the Bulroc hammer. It had great success and became renowned in the industry for its performance. From this success, the company developed and offered a whole range of sizes of the Bulroc hammer to the drilling industry.

Later, in the mid-80s, further DTH hammer development was undertaken and Weaver and Hurt began to offer reverse circulation hammers to the mineral and exploration industry. The Bulroc hammer range was a hit, and the catchy name then became the brand.

In August of 1989, the name Weaver and Hurt was no more, with the company rebranding as Bulroc. For the years that followed, the product range was restructured and streamlined, with the newer Hyper DTH hammers also being added to the product portfolio.

Bulroc fruitfully invested their efforts into large scale drilling and piling, and the larger scale 18, 24 and 33-inch hammers were created. Particular success was had in the Hong Kong and Asian markets – so much so that Bulroc opened a local distribution branch in Hong Kong, named Bulroc Asia.

The hammers, working alongside the in-house designed shock absorbers, overburden systems and button bits, made the name Bulroc synonymous throughout the industry as one of the leaders in rock drilling equipment.

Acquired by Robit in 2016, Bulroc eventually changed their name to Robit GB Ltd in November 2018. In the

years following the acquisition and integration into the group, the local product range was harmonised. This reflected what the newly enlarged Robit group wanted to offer, but also the products which better reflected the facilities at Robit GB.

Maintaining capacity within the Chesterfield factory was paramount, with projects being carried out to not only insource to Chesterfield the currently outsourced Robit products, but to also evaluate the market and look for opportunities to grow the offering. An excellent example of this is the original Robit overburden systems. Previously outsourced to a local company in Finland, the GB team worked tirelessly to be cost-competitive in manufacturing and sourcing to bring this product range in-house.

Meanwhile, the reliable Robit GB hammers are still performing well in the field. In a recent project, with a local drilling and high profile end customer, the Hyper 181 powered a Finnish designed overburden system to a Robit record, 115 metres in depth.

Alongside where Robit want to be in the market, the rapidly changing climate, and customer requirements, Robit GB are driving forwards to development and growth. With attention being paid to the products and services, and inevitably leading to the modernisation of in-house tooling, techniques and processes.

With the help and input of all employees, Robit GB will continue to grow and thrive in the developing Down the Hole market.

A LASTING MARRIAGE in the Spanish market

A Coruña is a city at Europe's westernmost edge, in the northwestern corner of the Iberian Peninsula in Galicia, Spain. It is home to Suministros Guillemet, a company specializing in drilling and earthmoving consumables for the Spanish market.

Founded in 1986, Guillemet's mission is to offer the best quality to their customers in mining and public works. Guillemet's owner **Hector Blanco** discusses their long-term relationship with Robit.

How long has Guillemet been representing Robit? How did it all start?

It all started with a dinner and a handshake about 20 years ago. We were three people at that dinner, and ever since then, we have been distributors of Robit all across Spain. Our cooperation continues to this day – as a strong marriage, I would say.

How is the “marriage” working after all these years?

Wonderfully. Robit's steels and designs are top-notch. Robit is today the number one brand in drilling consumables. They are always bringing out new designs to the market that extend the product life. This saves the end customer a lot of costs in drilling, fuel, filters, and equipment maintenance in general.

What are some of the typical Robit tools used in the Spanish market? In what sectors?

We have clients in underground mining, open-pit mining, quarries, public works, and well drilling. We typically use R25 to RG60 (diameters 33—152 mm) Top Hammer tools in underground, open pit, and public works. And if we had to go up to planet Mars, that would be no problem either!

What kind of feedback are you receiving from clients regarding Robit's tools?

Fabulous. In fact, at the last Metal Mining fair in Seville, all the people who came to our booth congratulated us on the quality of the bits and rods. I would say 99 % are happy with the Robit brand in Spain.

How is Guillemet positioned in the competition in Spain – what are your strongest assets as a company?

Our main asset is undoubtedly the Top Hammer, where we have a market share of 60–65 %. As for Down the Hole, we're just starting and, as you know, all beginnings are slow but surely it will be a key asset for us in the near future too. To support this goal, we are hoping to see Robit extend their DTH stock in Europe.

Hector
Blanco



Guillemet's home town is best known for the Tower of Hercules – the world's oldest lighthouse still in use.



ROBIT RBIT

sets the bar for TH button bits

Robit has been designing and manufacturing high-quality button bits in Finland for decades. Our in-house group of experts is committed to continuously improving all our products; in recent years the key focus was given to our emblematic Top Hammer button bit. The first, all improved Rbit bits were first introduced in late 2020. Now, the entire Rbit range is finally ready to conquer the market.

Phase one: the large Rbit

The first step was to redesign the larger end of the button bit range (60 to 152 mm). The Rbit concept introduces several improvements: a new transition face improves the transfer of percussion energy into the rock; a smart button layout maximizes rock contact and energy distribution; better flushing allows faster penetration; wider retrac grooves allow more space for a better flow of cuttings.

Rbit bits also come in heavy-duty versions, providing even more drill meters in more abrasive rock conditions. All these new features are implemented for both Flat Face and Drop Center models.

Phase two: the smaller Rbit

The second step was to implement the Rbit concept also into the smaller bits also (32 to 57 mm). In addition to the earlier improvements, some new ones were introduced: enhanced flushing through computational fluid dynamic simulation (CFD), optimized flushing grooves, as well as heavy-duty versions for the all-around S bit.

Superior performance

Field-tested thoroughly across the globe, the Rbit is yet another proof that we are driving the development of the drilling consumables industry, going deeper with more speed and force. Thanks to a faster penetration rate, Rbit bits offer lower cost-per-meter and lower total drilling costs for Top Hammer drilling.

Needless to say, the Rbit bits are all made of 100% recyclable steel and finished with water-based paint. The superior steel grade and a fully automated production line guarantee consistent quality across the range.

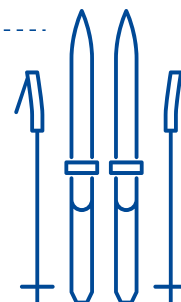


Spring 2022

HILLA'S TRAINING DIARY

"As of this writing, winter is over and so is the race season. Overall, the season was a success and I was able to raise my level steadily in many areas. My main goals were the Nordic Junior World Ski Championships and the Adult Finnish Ski Championships. In the spring season, the race schedule got pretty tight. Here's a summary of the main events."

A corporate supporter of sports, Robit signed a sponsorship and cooperation agreement in 2021 with Hilla Niemelä, one of the most promising young skiers in Finland. In the previous issue, Hilla started keeping a training diary for our readers. Here is the second part: a summary of spring season 2022.



January

Jan 8–9: Finnish Championships in Imatra.

The classic-style 10 km was a solid, ascending performance that brought me 9th position, my best in adult Finnish Championships. The next day, I narrowly missed the qualification mark in the sprint heats.

Jan 14–15: Finnish Junior Championships in Keuruu.

Finished fourth in classic-style sprint. However, I was pleased I finally got to do a proper sprint race. The fourth place was nothing to cheer about, but the next day's freestyle 6 km brought me the first Finnish Championship medal! I came in third.

Jan 18–19: Finnish Cup in Vantaa. Freestyle 5 km, 13th place. Ok result, but I wasn't totally happy with the day's vibe.

February

Feb 4–5: Qualifying races in Vuokatti. The freestyle sprints were great, won every heat from qualification onwards. It felt super good to succeed in the freestyle sprint exactly when I needed to! However, the classic-style 10 km on the next day was a big failure due to snowfall: the ski was way too low and didn't glide on the soft snow. That's skiing for you...

Feb 19: U23 World Cup sprint. In the time trial, I was 13th, which was OK. The margins were really small. Sadly, one of the competitors fell in front of me and I missed the "lucky loser" spot by 0.2 sec. However, half an hour before the semi-finals started, I was told that the girl in front of me was disqualified, so I went straight through to the semi-finals. I quickly started to warm up and changed back into my race suit and made it in time. Less than optimal preparation, but I was really happy to make it to the semi-finals. In the final results, I was 12th.

March

Mar 12–13: Junior Finnish Championships in Kuopio.

The freestyle 5 km was a disappointment, all the more so as I had been really looking forward to it. The conditions were challenging and my skis didn't help much. The classic-style 20 km the next day was a decent fight, although hydration was a bit off due to reflux. Finished 8th.

Mar 19–20: Scandinavia Cup in Iceland. An exotic experience all around. The first day's races were cancelled due to 30 m/s winds, but that was a good thing – because my bag got left behind in Denmark and I had no sportswear for the day. The freestyle sprint, postponed to Saturday, was tricky: the conditions were really soft and I am much more at home on hard snow. The 15 km freestyle on Sunday was a struggle: I had to ski alone upwind, but it was a nice experience anyway.

April

Apr 1–3: Finnish Championships in Rovaniemi.

Good performance in the 5 km freestyle race, 14th in the results. After Kuopio, a solid freestyle race felt good. On Saturday, I won bronze in the relay team. I did the opening leg and it was a bit of a fumble: I crashed with a competitor and got my skis and poles badly tangled. Luckily, the rest of my team made up for it! On Sunday, a difficult classic-style 30 km. The first 15 km went alright, but then my triceps cramped up so badly I couldn't use my arms anymore and my placing went down like a brick. I was happy though that I managed to finish as it was the last race of the season.

A new training period is already well underway – and I'm more than motivated to grow even stronger and tougher for the next season!

Get to know **JANNE SOININEN**



Janne Soininen joined Robit at the beginning of June 2022 as Director, Global Manufacturing. He had held similar positions at Sako for several years. Janne's family includes a wife, a 9-year-old daughter and a 4-year-old son, as well as a Jack Russell terrier named Luci, who is already retired. In his spare time, Janne enjoys hunting, fishing, jogging and padel.

You've already had a long career in similar positions in another company. How did you end up with Robit?

The main reason was exactly that long history with the same company. The industry and the role were interesting, and I was looking for similar roles in different environments. So when I spotted this vacancy at Robit, not applying was really not an option. Robit is a company I have known for a long time, so the decision was quite easy in the end.

What's your job description as Director, Global Manufacturing?

I'm responsible for manufacturing at Robit's facilities in Finland, Korea, Australia and the UK, in cooperation with local teams. The agenda will include a wide range of operational and policy development, to enable profitable growth, as well as safety and quality issues, and to some degree harmonizing manufacturing processes by applying best practices.

Are you bringing some new ideas or approaches?

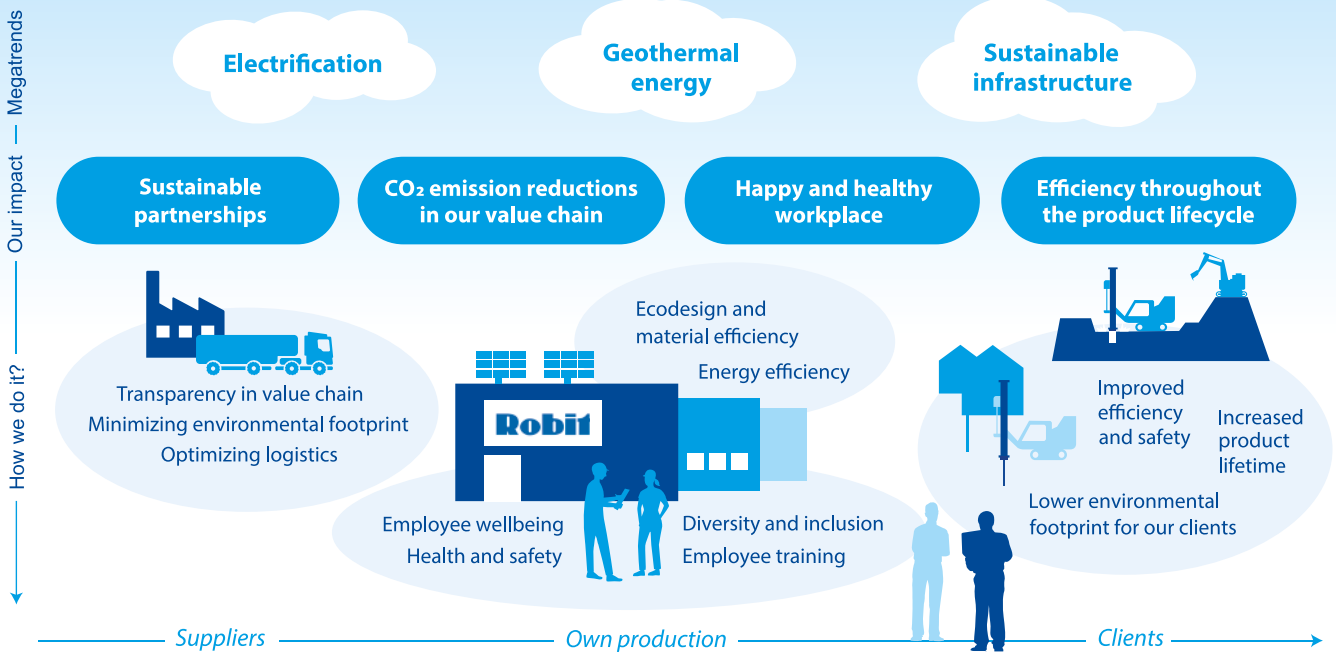
My initial focus will certainly be on creating the conditions for manufacturing to make the right amount of products at the right time. Timely deliveries from subcontractors as well as the smooth operation of machinery are key to this. Some improvement needs have also emerged at various stages of the supply chain, and solutions to these will be explored together.

After a couple of weeks of experience, how do you find Robit's corporate culture?

The culture seems quite open and nice in every respect. You can ask for advice, and people are happy to tell you about their roles and responsibilities. I have also had the opportunity to spend some time on the shop floor, which has further strengthened my perception of a good company culture overall.

What's the industry outlook for the coming years from your perspective?

I believe the current megatrends provide a good basis for Robit to grow profitably. The challenge, and at the same time the potential competitive edge, will certainly be ensuring availability and reacting to market changes. If we don't have full visibility into potentially lost business due to availability issues, it is crucial to be able to offer customers products that meet their needs at the right time.



Robit and sustainability: making good progress

In 2021 Robit implemented a thorough ESG (Environmental, Social, Governance) account project, launching an ESG roadmap and related targets. The roadmap focuses on four key themes.

1. Sustainable Partnerships

We will develop sustainability and operational performance in the value chain through long-term partnerships. We will work with partners who share similar principles and targets. We provide sustainability compliance documents for our stakeholders and are asking our distributors and suppliers to commit to our ESG principles.

2. CO₂ Emission Reduction in Our Value Chain

While we can directly reduce our CO₂ emissions, improvements can also be achieved through indirect effects and by influencing external stakeholders. We have built a CO₂ calculation tool to recognize emissions caused by our operations. Our 2020 carbon footprint as per the GHG Protocol was 3.383-ton CO₂e, or 36.9-ton CO₂e per million € of net sales. We have also decided to increase the share of green energy used in production, first implemented in our Australian factory in 2021.

3. Healthy and Happy Workplace

We support employee wellbeing and competence development. *We respect everybody* is a key Robit value we actively communicate to our personnel. Our HSE team coordinates occupational safety activities. Building

diversity and inclusion is a natural part of our culture as we have people from dozens of nationalities. We have introduced internal communication channels for various purposes such as weekly feedback, informal discussions, strategy-level topics, as well as a whistleblower channel as required by law.

4. Efficiency Throughout the Product Lifecycle

This theme has to do with **material efficiency** in product design and production; using **efficiently sourced materials** from sources that share our ESG vision; **increasing product lifetime** through training and value-adding services; and **reducing waste** in customer operations. We can streamline our customers' drilling operations through energy efficiency and by optimizing tool use. We train our staff and distributors to better identify the best products for their end-users, thus supporting them to drill more efficiently. We support our customers to improve energy savings and product lifetime. Our R&D pays special attention to material and drilling efficiency; the Rbit button bit and Prime casing system upgrades are great examples.

In a future issue we will take a closer look at how we are performing against these targets!



Robit proudly presents:

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