

LEM

Life Energy Motion



Annual Review
20 | 21

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Welcome

For all of us around the world, this past year has been immensely challenging both professionally and personally. The COVID-19 pandemic has put huge strains on public health systems, government finances, diverse economic sectors, education and societal norms and behaviors. Today in May 2021 we can happily identify some positive trends thanks to the rapid deployment of new vaccines, the adoption of new technologies, the support of government programs and the sheer adaptability of humanity to such challenges. At LEM we have come through this pandemic in better shape than we could have foreseen thanks largely to the engagement of our employees, and the long-standing relationships with our customers and suppliers.



Indeed, the past year has underlined some fundamental strengths of our company: the diversity of our business across sectors and regions, with balancing investment cycles and customer demand, and exposure to both mature industries and novel technologies. Thanks to our recognized heritage and market leadership, even in this exceptional year, we maintained a steady flow of orders, robust margins, a strong balance sheet and healthy cash flow. Moreover, LEM's long-term prospects are driven by mega trends such as energy efficiency, CO₂ neutrality, mobility and automation, all of which remain paramount for society's progress beyond the pandemic.

Resilience and agility

The theme of this year's Annual Review is "Resilience and Agility". The first quality is the ability of an organization, system or person to adjust to and respond readily to adversity – which our teams demonstrated amply by continuing to meet customer and supplier challenges, showing huge commitment in difficult circumstances. Resilience is also perseverance – and LEM kept clearly focused on its strategic priorities despite the disruptions to everyday operations. The attribute of agility is the power of moving swiftly and easily, thinking and drawing conclusions quickly – and our teams showed this by working smarter, adapting to new ways of remote collaboration, and identifying new processes which will benefit us and our customers for the future.

We are pleased to share with you the experiences during the pandemic of six LEM team members across different regions and functions – wonderful examples of stamina and flexibility. And there is an insightful conversation with the two newest members of our Executive Committee as they recount their reasons for joining the company, their experiences of the past year, and plans for success.

Culture & talent for growth

Far from being mature, the current sensor market is forecast to grow by about 8% CAGR. Products are undergoing significant evolutions, driven by new applications and technologies. To ensure we capture and manage this global growth we are making the organization more agile, with decentralized decision making closer to the customer and increased speed to market. We are developing and recruiting the best

global talent with new competencies to deliver this growth potential. As market leader in several applications of electrical measurement, our employees enjoy intellectual challenges, diverse pathways and global career opportunities. The company is committed to ensuring that its talent acquisition and development strategies are as broad-based as possible, recognizing that diversity and inclusion brings many benefits. We are proud that 36% of management positions are held by women and are committed to raising this proportion.

In 2019 LEM began its program to continually develop a constructive High-Performance Culture which underpins how we all think, behave and communicate personally and collectively. Over the past year, we have identified four groups of key "LEM Blue Behaviors" which all employees should aspire to embrace and enact, whatever their function or seniority.

Successful new product launches from R&D investments

For the second consecutive year we launched ten new products. These are strong evidence of success from our strategic R&D investment rate of about 9% of sales over the past few years. Indeed, customer demand has been exceptional for two products: the DC meter for charging stations for electric vehicles, and the HMSR integrated current sensor for both drives and solar power.

In Geneva and Lyon we are focused on long term research and innovation around new applications, while in Beijing and Sofia new products are developed for specific customers and applications. This is leading us from a traditional, electromagnetic sensors company into a broadened business of various integration levels, still centered around sensing. It is to our advantage that we produce for customers in the industry and automotive segments, which allows us to leverage synergies to produce larger systems, modules and semiconductors. We continue to invest in new technologies and talents which provide the agility to master the value chain from the design function to the full sensor and customer application.

Robust results

Our financial results demonstrate even in these unprecedented times that LEM's business is resilient, and we were able to quickly adjust our operations and expenditures. Sales in the financial year 2020/21 totaled CHF 301.0 million, a slight decline of 2.3%, but up 0.4% at constant exchange rates. EBIT increased to CHF 60.9 million from CHF 58.3 million, yielding an improved EBIT margin of 20.2%. We posted a net profit of CHF 55.6 million, with an encouraging net profit margin of 18.5%.

Our balance sheet is strong and we continue to generate healthy cash flow. For the year 2020/21, the Board of Directors proposes an increased dividend of CHF 42 per share, taking into consideration the company's robust performance this year and its financial strength.

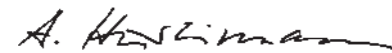
Strategic focus

Mega trends drive demand for sensors, give multiple opportunities to leverage LEM expertise and ensure a sustainable long-term business for all our stakeholders. Despite the turbulence caused by the pandemic, we remained focused on our strategic priorities and were persistent in execution to the highest standards. We are strengthening our technology leadership, delivering new solutions for customers, improving our quality systems and operational excellence, investing in and broadening our talent capabilities, and building a High-Performance Culture. In short, we are making sure that LEM is fully able to move swiftly and exploit the growth opportunities we see across multiple sectors and regions. Although there have been delays due to the pandemic, we hope to make significant progress with the new production plant in Malaysia in the coming year, and look forward to moving into our new headquarters in Geneva in 2022.

Looking ahead, we believe that our business has adapted well and coped with the challenges of the pandemic, but COVID-19 will undoubtedly continue to impact our customers and our business in the coming year. There are also headwinds caused by supply chain shortages and ongoing trade disputes. We do benefit from a diverse global footprint, but like many businesses today our progress is strongly linked to the growing markets in Asia. It is pertinent to note that while much of the world's attention has rightly been focused on dealing with the pandemic, there remain the underlying challenges of climate change, and this is a key area where LEM is making its mark.

Thank you

On behalf of the entire Board of Directors and the Executive Management, we thank our shareholders for the confidence they have placed in us. Special thanks go to our employees worldwide for their outstanding commitment and responsiveness in managing the exceptional challenges of the past year. Our performance is also the result of the deep and trusted relationships we have developed over years with customers, suppliers and business partners. We are proud that we continued to meet their needs, and could also bring to market several new products which have been so well received. We hope you enjoy this Annual Review and will appreciate the evidence of LEM's "Resilience and Agility", as we focus on supporting society's transition to a sustainable future.



Andreas Hürlimann
Chairman of the Board of Directors



Frank Rehfeld
Chief Executive Officer

life

There is no doubt that over the past year, life as we had known it at LEM was disrupted by the pandemic. Many of us were affected personally by the virus, and all of us had to adjust to new ways of working. Our resilience was proven many times over. And we appreciated more than ever the human understanding and trust among our teams, customers and suppliers.

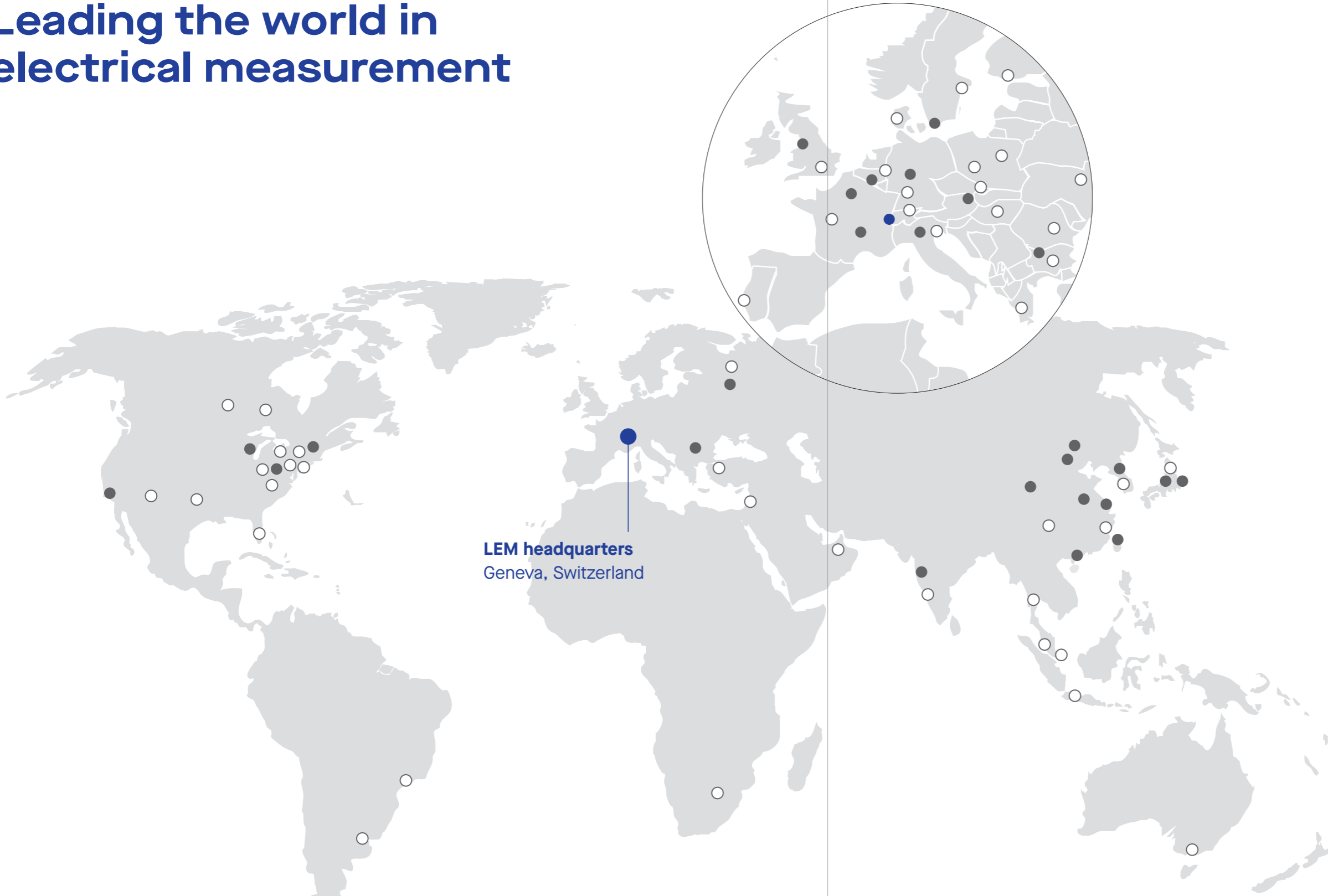
energy

We established virtual communication immediately, becoming more efficient and transparent. Around the world, LEM teams came together to ensure that our business partners' needs were met rapidly. We launched new smart solutions to optimize our customers' systems and continued to invest for the future.

motion

The extraordinary circumstances allowed us to identify future business opportunities. We used the challenges of COVID-19 to work smarter, adopt new ways of thinking and act quickly. This has set new processes into motion, many of which will benefit our stakeholders and the company for years ahead.

Leading the world in electrical measurement



LEM headquarters
Geneva, Switzerland

Sales
R&D
Production
Customization

	Sales	R&D	Production	Customization
Europe				
Geneva, Switzerland	●	●	●	
Frankfurt, Germany	●			●
Vienna, Austria	●			
Brussels, Belgium	●			
Randers, Denmark	●			
Paris, France	●			
Padova, Italy	●			
Skelmersdale, UK	●			
Lyon, France		●		
Sofia, Bulgaria	●	●	●	
China				
Beijing	●	●	●	
Shanghai	●			
Shenzhen	●			
Xian	●			
Hefei	●			
Taipei, Taiwan	●			
North America				
Milwaukee, Wisconsin	●			●
Columbus, Ohio	●			
Amherst, Massachusetts	●			
Los Angeles, California	●			
Rest of world				
Pune, India	●			
Seoul, South Korea	●			
Tokyo, Japan	●			●
Tver, Russia	●			●
Agents/Distributors				
	○			

A leading company in electrical measurement, LEM engineers the best solutions for energy and mobility, ensuring that our customers' systems are optimized, reliable and safe.

Our 1,500 people in over 15 countries transform technology potential into powerful answers. We develop and recruit the best global talent, working at the forefront of mega trends such as renewable energy, mobility, automation and digitization.

With innovative electrical solutions, we are helping our customers and society accelerate the transition to a sustainable future.

Financial results

Resilient financial performance

Sales in the financial year 2020/21 totaled CHF 301.0 million, a decrease of 2.3% compared with the previous year. However, our constant currency sales growth was +0.4%, with the Automotive segment accounting for most of this positive like-for-like growth. Overall, this was a resilient performance in the context of the COVID-19 pandemic and global economic slowdown. It is testament to how our teams responded to the challenges, to our customers' appreciation for our products, and our reliability as a partner.

LEM's diversity of applications across multiple sectors of the global economy provides a steady flow of orders and a prudent spread of risk. We also benefit from a good geographic spread of business. China became even more important this year with 38% of total sales (32% in 2019/20), Europe 30% (32%), North America 10% (12%) and the rest of the world 22% (24%). Sales increased notably in China (+14.6%), driven mainly by demand for solar power and electric vehicles (EV), while all other regions witnessed a decline in sales as they took longer to adjust to the pandemic: Europe (-7.1%), North America (-18.6%), rest of the world (-10.1%).

During the financial year 2020/21, orders were up by 12.3% at CHF 362.0 million compared with CHF 322.4 million, reflecting solid demand in the Industry segment (+5.3%) while the Automotive segment (+38.2%) was boosted by the continued switch to EVs. The full year book-to-bill ratio reached 1.20, up from 1.05.

Gross profit was down slightly by 1.5% at CHF 140.6 million, while the gross margin improved again to 46.7%. This is 30 basis points better than in the prior year, with increased supply chain costs offset by improved purchasing efficiencies and other improvement programs.

We remain vigilant with overheads, and managed to reduce total SG&A costs by CHF 3.9 million to CHF 52.6 million, or 17.5% of sales compared with 18.3% last year. This decrease reflects reduced marketing and travel expenses and changes in working practices.

We continued to maintain investment in research and development (R&D), up slightly at CHF 28.2 million, or 9.4% of sales, up from 9.1%. Our investment continues to bear fruit with another ten new products launched successfully this year. This long-term strategy will ensure LEM has the right new technologies and applications for customers, as their businesses are increasingly driven by renewable energy, mobility, automation and digitization.

EBIT for the year 2020/21 improved by 4.4% to CHF 60.9 million from CHF 58.3 million, mainly due to the improved gross margin and reduction in SG&A discussed above. Our reported EBIT margin was up at 20.2% compared with 18.9%, in line with guidance.

Key figures 2016/17 to 2020/21

in CHF millions

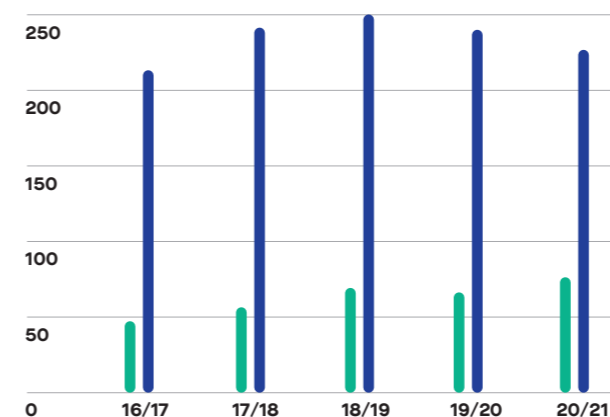
	2016/17	2017/18 ¹	2018/19	2019/20	2020/21
Orders received	271.2	319.7	320.5	322.4	362.0
Book-to-bill ratio	1.03	1.06	1.00	1.05	1.20
Sales	264.5	301.2	321.6	307.9	301.0
Gross margin	123.6	138.9	146.5	142.7	140.6
In % of sales	46.7%	46.1%	45.6%	46.4%	46.7%
EBIT	55.8	63.1	64.8	58.3	60.9
In % of sales	21.1%	21.0%	20.1%	18.9%	20.2%
Net profit for the year	44.6	54.4	52.4	60.7	55.6
EPS basic (CHF)	39.11	47.76	45.97	53.27	48.79
Dividend per share (CHF)	35.00	40.00	42.00	40.00	42.00 ²
Operating cash flow	52.8	54.1	53.5	73.6	50.9
Investing cash flow	-13.2	-15.1	-14.8	-14.7	-13.5
	31.3.2017	31.3.2018¹	31.3.2019	31.3.2020	31.3.2021
In CHF millions, %					
Net financial cash / (debt)	12.8	12.6	4.5	10.2	-1.6
Shareholders' equity	90.5	111.6	113.1	117.4	131.9
Equity ratio (in % of assets)	60.7%	60.0%	60.5%	51.0%	49.9%
Market capitalization	1'064.8	1'812.6	1'459.2	1'210.7	2'082
Employees (in FTEs)	1'453	1'527	1'477	1'497	1'481

¹ Restated financial statements

² Proposal of the Board of Directors to the Annual General Meeting of Shareholders on 24 June 2021.

Sales per segment

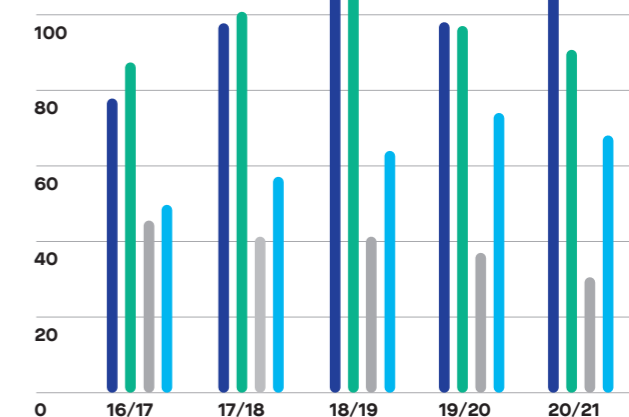
in CHF millions



● Automotive segment ● Industry segment

Regional sales breakdown

in CHF millions



● China ● Europe ● North America ● Rest of world

Our sales performance attests to the breadth of our product portfolio, our reliability as a partner and how we responded to the challenges of COVID-19.

Net financial income was effectively zero, with financial expenses offset by foreign exchange gains. The Group tax expenses of CHF 5.3 million represent a tax rate of 8.7%. This outcome was mainly due to non-recurring tax benefits, which if excluded would result in an underlying rate of 17.4%.

We posted a net profit for the year of CHF 55.6 million, down from CHF 60.7 million last year. However last year's net result was largely boosted by a non-recurring positive tax impact of CHF 14.0 million from the sale of technical IP from LEM Intellectual Property SA based in Fribourg to LEM International SA based in Geneva and to LEM China. This year's net profit margin thereby decreased to 18.5% compared with 19.7%, although excluding the positive tax impact the net profit margin last year would have been 15.2%.

Cash flow from operating activities was CHF 50.9 million (-30.9%) and free cash flow was CHF 37.4 million (-36.4%). This decrease is mainly due to two factors: we have higher receivables outstanding from strong Q4 sales, and we deliberately built-up inventory in anticipation of supply chain shortages.

Our balance sheet remains strong with practically zero net debt. As of 31 March 2021, total assets increased to CHF 264.4 million. Shareholders' equity reached CHF 131.9 million, representing an equity ratio of 49.9% (51.0% as of 31 March 2020).

Improved dividend

Based on the results for 2020/21, our performance in adapting to the COVID-19 pandemic and the long-term fundamentals for the business, the Board of Directors proposes a dividend of CHF 42 per share (CHF 40 for 2019/20), payable on 06 July 2021. The proposal follows LEM's dividend policy of distributing significantly more than 50% of its consolidated net profit to shareholders and corresponds to a payout ratio of 86.1%, up from 75.1% last year.

Cautiously optimistic outlook

The dramatic impact of COVID-19 on the world economy has been well reported, although the actual outcome for the past year was better than many predicted. The IMF consistently upgraded its forecasts as the pandemic has evolved, and its bi-annual World Economic Outlook in April 2021 forecast an increase of 6.0% for global GDP in 2021 and 4.4% in 2022. However, there is a significant difference between Advanced Economies and China compared to other Emerging Market and Developing Economies, with the latter group unlikely to benefit from vaccination programs as rapidly. The IMF identifies a number of factors which will determine economic performance: the efficacy of vaccines against new variants of the virus, the effectiveness of policy actions to limit persistent economic damage, the evolution of financial conditions and commodity prices.

Beyond these, there are two specific factors which are likely to impact LEM's business: shortages and supply chain blocks for components such as semiconductors, and the ramifications of ongoing trade disputes.

LEM's business does benefit from geographic and sector diversity. Our operations in China (accounting for 38% of sales and 65% of production) were back up and running nearly at full capacity by the end of March 2020. However, a substantial portion of our China production is destined for export, and therefore is dependent on demand from other economies as they adjust to the pandemic.

Despite this challenging environment, it is important to remember the fundamental long-term prospects for LEM remain strong, driven by mega trends such as renewable energy, mobility and automation. We see this particularly in the demand for our new products in solar power, EVs and e-mobility.

We are maintaining our key projects of investing in a new production plant in Malaysia and a new global headquarters in Geneva. We continue to invest in R&D at between 8-10% of sales, ensuring we leverage new technologies. We are improving the efficiency of production, while also empowering our global sites with full capabilities in R&D, operations, sales and quality management. This is making our organization more agile, increasing our speed of execution and reducing the time to market.

We have been encouraged this year by the steady demand for our products and how the organization has responded so well to such exceptional circumstances, and we are cautiously optimistic for the future. However, we must recognize that the impacts of the pandemic will reverberate across markets and society for many months if not years, and thus our progress is not entirely in our own hands.

Our leading market positions across diverse regions and sectors result in robust margins, a strong balance sheet and healthy cash flow.

9.4 %

R&D investments
% of sales

20.2 %

EBIT margin
% of sales

55.6 m

Net profit
18.5% of sales

Industry segment performance

A reliable agile partner, we continually reinforce strategic alignment with key players and thought leaders in our industry, adapting to client demands across markets. Despite the varied global economic impacts from COVID-19, Industry segment performance remained resilient, thanks to our broad portfolio of applications and new launches. We thus continue to maintain significant market share in our business segments.

Powerful

Steadfast

Global industry market – quick rebound

The contraction of economic growth in 2020 due to the pandemic was unprecedented in its speed and synchronicity. After an abrupt slump in the first half of 2020, global manufacturing rebounded in the second half. Indicators suggest that manufacturing and trade are back to pre-pandemic levels as of April 2021. The near-term growth outlook for global manufacturing remains positive, although at a slower pace (source: IMF).

The J.P. Morgan Global Purchasing Managers' Index registered a sharp easing in the global downturn in June 2020, while output and new orders both rose throughout the third quarter of 2020 and new export business expanded for the first time in over two years in September. By the end of 2020, global manufacturing production saw rates of growth and new orders remain among the strongest seen over the past decade. The index rose to a ten-year high as growth of output, new orders and employment gathered pace in March 2021 (source: IHS Markit).

Against this unsteady global economic backdrop, Industry segment performance remained resilient, thanks to our broad portfolio of applications and new launches. We thus continue to maintain significant market share in our business segments. Although COVID-19 interrupted global supply chains, we were proud to deliver to our customers on time throughout the year.

We are adapting to important and accelerating changes across markets, such as higher power densities, the electrification of mobility, digital disruption, smart grids and distributed energy resources. We won new designs and accelerated the production of new sensors, such as the DC meter and integrated current sensor (ICs) models.

LEM delivers steady performance

Sales in the Industry segment decreased by 6.3% to CHF 225.2 million in the financial year 2020/21; at constant exchange rates the sales decrease was 3.7%. Orders improved by 5.3% to CHF 267.8 million, resulting in a full year book-to-bill ratio of 1.19. The mid and long-term drivers for renewables are growing stronger thanks to major policy and technology shifts. Sales in China increased by 8.5% due mainly

to renewable energy, which is particularly encouraging in such a tough competitive market. China remains our most important single country, representing 35.3% of Industry sales. However, there were significant declines in other regions. Sales in North America decreased by 16.4%, due to the many closed businesses while in Europe sales dropped by 11.4% due to the low demand for rail transport and reduced investment in test benches. Sales in the rest of the world decreased by 13.5% due to the weak traction business in India and lower investment in renewables and drives in Korea. Japan saw a difficult first half year, but started to recover in the second half thanks to investments into robotics. EBIT decreased from CHF 50.4 million to CHF 49.4 million while the EBIT margin slightly increased from 21.0% to 21.9%.

Drives and welding

Sales in the drives and welding business dropped only marginally by 1.5% to CHF 98.0 million, principally due to the strong recovery from China, Japan and Korea in the second half year. Automation and energy savings applications are the main growth drivers for our sales. We still continue to receive very positive feedback on the introduction of our new product family of ICs for small drives and robotics.

Renewables

Sales in the renewables business grew by 3.6% to CHF 81.6 million with customers from the Chinese and European solar industry producing for the world market. With solar as the most stable type of green energy, we continue to grow strongly in China due to the country's heavy investment in solar applications and our new ICs family. Sales in Europe and the US remained steady, mainly due to our products for grid monitoring and the certified DC meters for the German market. Wind activity remains weak in most regions. We continue to build a pipeline of smart grid projects and won some designs with new products.

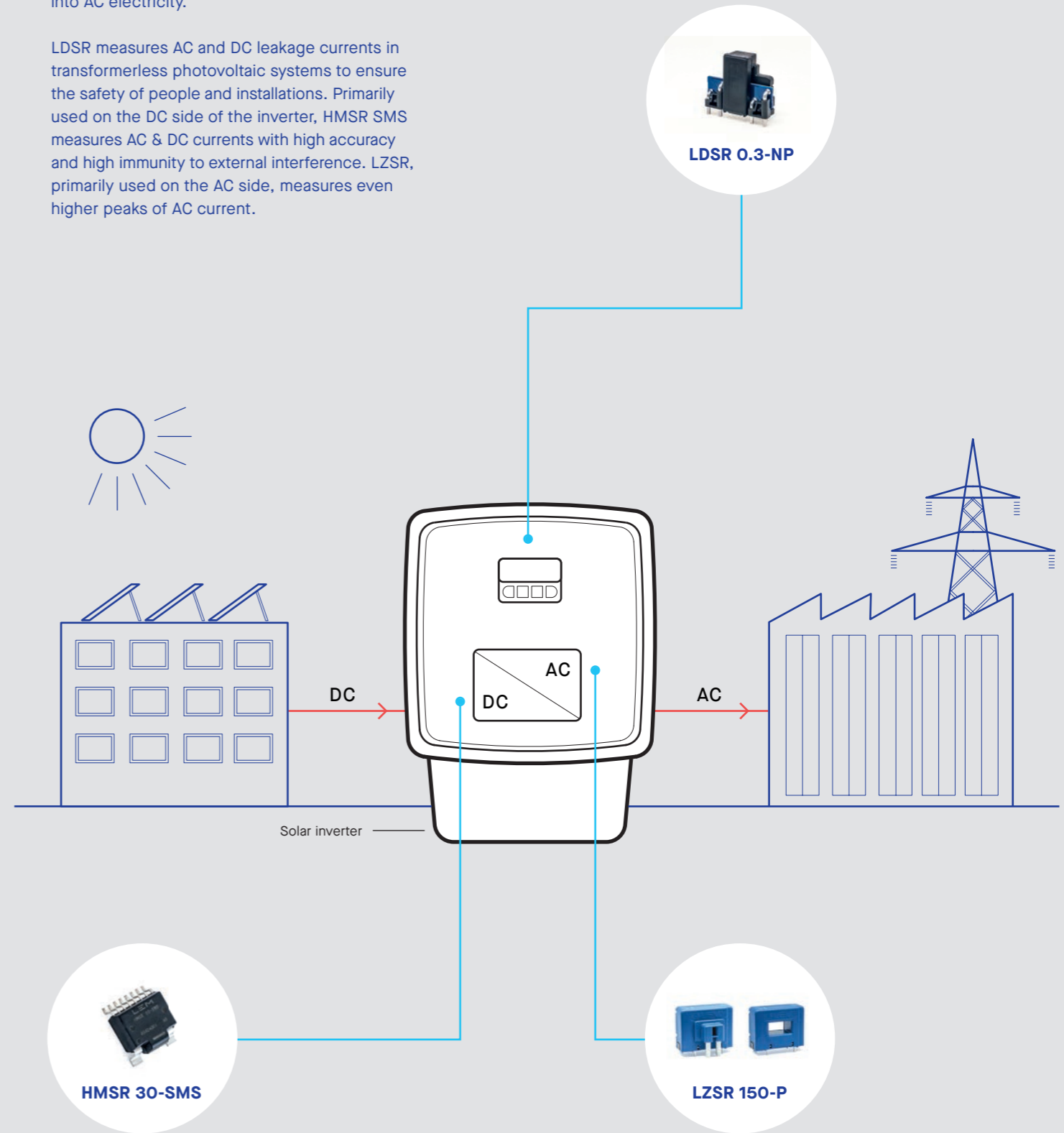
Traction

Sales are down by 25.5% to CHF 38.0 million. COVID-19 reduced the global demand for rail traffic immensely, leading to lower investments in our traction and trackside businesses in India, China, Russia and the US.

Solar inverter

Every house with a photovoltaic system needs an inverter to convert the solar DC electricity into AC electricity.

LDSR measures AC and DC leakage currents in transformerless photovoltaic systems to ensure the safety of people and installations. Primarily used on the DC side of the inverter, HMSR SMS measures AC & DC currents with high accuracy and high immunity to external interference. LZSR, primarily used on the AC side, measures even higher peaks of AC current.



Industry segment performance

High precision

In the project-driven high-precision business, sales declined by 31.0% to CHF 7.7 million. As hospitals and the wider health care community focused on containing COVID-19, investments in MRI scanners decreased. The pandemic also led to a lower investment in test bench applications. Still, our most recent product line, the IN family, continues to be well received by customers thanks to its superior performance.

Moving into new markets

Our DC meter for charging green cars was launched in 2020/21 and has seen a serious ramp-up in Q4 of this financial year. The DCBM offers a high level of integrated functions, with a reliable and certified solution for billing electricity for fast charger users. With the official DC meter qualification and certification granted by the German Physical Technical Federal Institution PTB, LEM is one of the first to introduce integrated functions and a certified software solution for billing electricity for fast charger users. We shall continue to invest in the DC metering with the aim of offering our solutions in other European markets.

to enter the highly promising medium voltage switch-gear business. We offer a broad variety of secondary cables and connectors.

LEM accelerated its efforts for ICs by preparing the launch of a large portfolio of smaller current sensors in addition to the existing HMSR, a miniature current sensor manufactured on semiconductor processes, and GO series of chip-based sensors. The new family of ICs stands out with a high agility of application, such as robots in logistics, EV chargers and heat pumps, and allows us to penetrate new low-power, high-volume applications such as air conditioners, drones and e-bikes.

LEM organization – an agile and reliable partner

At LEM we pride ourselves on being a reliable partner for our customers, across all phases of a project, wherever and whenever the customer needs our products and expertise. The qualities of resilience and agility came to the fore during the pandemic, and we are proud of how all our global teams collaborated and adapted to new ways of working.

We continuously strive to achieve and reinforce strategic alignment with key players and thought leaders in our industry. This includes technical product roadmap synchronization, but also the implementation of advanced and most efficient logistic processes for seamless delivery around the world to guarantee best service levels and timely delivery at best cost.

Outlook

The Industry segment continues to be impacted by the pandemic and we are expecting new trade tariffs in the first semester of 2021. As markets start to accelerate, supply chain reliance remains the biggest challenge. This will inevitably impact our ability to deliver and sales in the first half of the coming financial year. However, LEM benefits from a portfolio which is well balanced geographically and across applications. Our order book on heritage and new products is in very good shape, which will lead to further market share gains. We expect new opportunities in grid monitoring and EV charging systems in the US, which might be accelerated by the new US government administration.

In the following pages there is an interview with an expert from ABB about E-mobility infrastructure and where our DCBM fits into this fast-developing landscape.

In the drives business, we are moving from current transducers with analog output to digital outputs. For our smart grid projects, we finalized the development and ramp-up phase of the ARU outdoor Rogowski and AI-P1A Rogowski new integrator. Both products have seen large orders and are leading our growth in the low voltage market. We continue to develop other sensors based on the Rogowski technology

Industry sales 2020/21

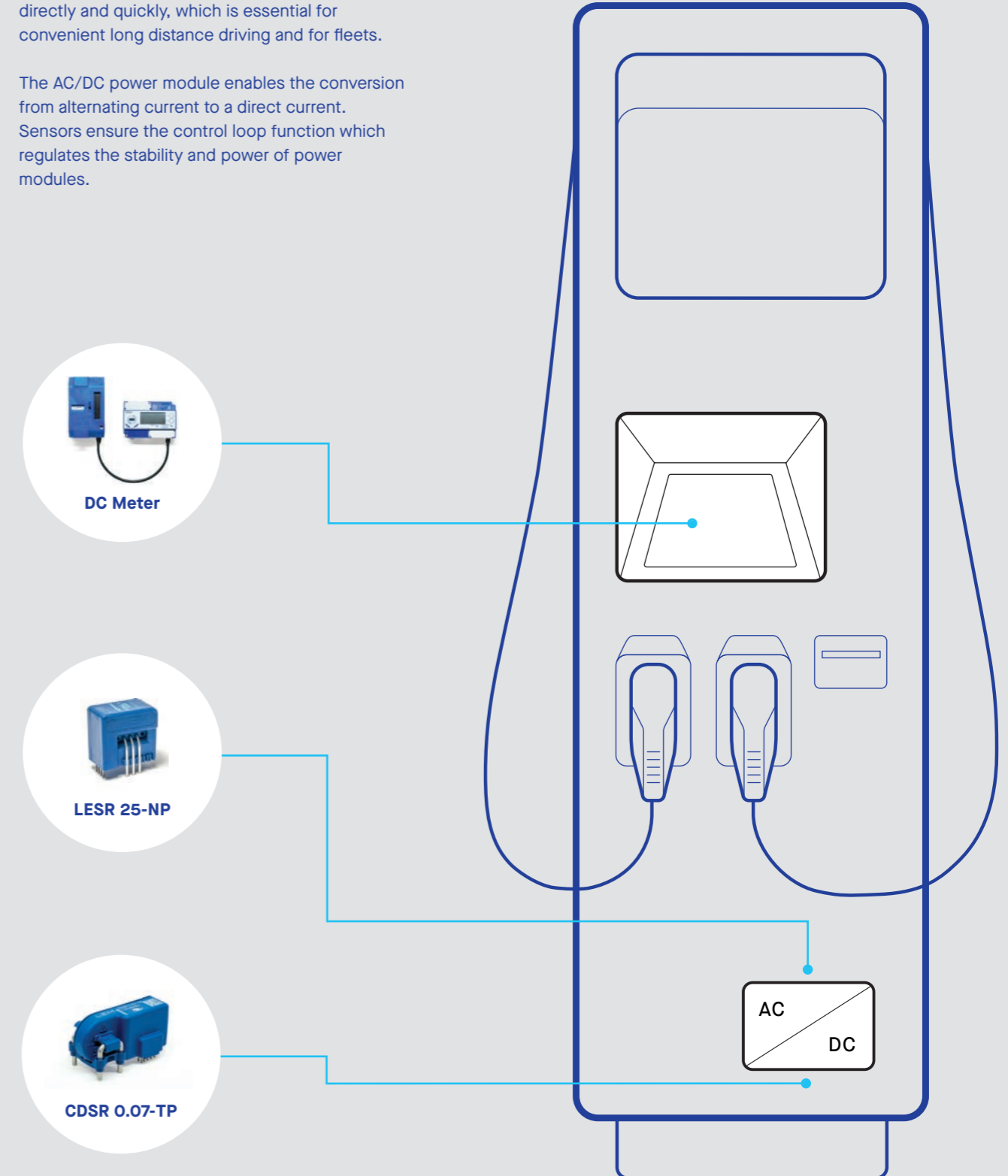


● Drives and welding	98.0 m
● Renewables	81.6 m
● Traction	38.0 m
● High precision	7.7 m

DC fast charging station for electric vehicles

DC fast chargers provide power to the car battery directly and quickly, which is essential for convenient long distance driving and for fleets.

The AC/DC power module enables the conversion from alternating current to a direct current. Sensors ensure the control loop function which regulates the stability and power of power modules.



E-mobility infrastructure

Electric car drivers want to go long range on a full battery and recharge quickly and conveniently. At the right price. New technologies in battery development and charging infrastructure are key to success. Whoever finds the best solutions will win the market. The race is on. Niek Knapen, expert in EV infrastructure, explains.

Speed

Stamina



Interview with Niek Knapen, Supply Chain Manager / Strategic Sourcing, ABB E-mobility Division, Eindhoven, The Netherlands

Interviewed by Eleanor Close Kraft, Process AG, Nick Miles, CPC

History

Thank you for this opportunity to talk about my favorite subject.

To understand the future of electric vehicle infrastructure (EVI), it is helpful to take a look at the past. People tend to forget that the first cars ever developed more than 100 years ago in Europe were electric.¹ At the beginning of the 20th century, about 38% of the cars being sold were electric.² The Baker Electric Roadster (US) had a range of up to 100 miles (324 kilometers) with the old lead batteries in 1911. So the advantage of electric cars was known from the start. There's only one disadvantage of the electric car – the lack of infrastructure.

Electric cars were used in the cities but not in the countryside because it did not have electricity for charging. But for combustion engine cars, although developed later, a horse and carriage with a big tank of gasoline could go to a small village where a car could refuel.

The initial problems with electric vehicles in the previous century are, to a certain extent, the same as those we are faced with today. How can we increase the range? How can we decrease charging time? What does an optimal EV infrastructure look like?

There's only one disadvantage of the electric car – lack of infrastructure.

Consumer perspective

1. We are finally beginning to master EV performance and implement charging infrastructure on a large scale. What is key to success?

If you look at the modern electric car, the battery is the most expensive part. The one who has the battery with the highest range per kilowatt and the lowest cost of the battery per kilowatt will win the market.

In 2010 the lithium ion battery cost about \$1000 per kW. In 2012 Tesla developed a battery with a different chemistry that cost about \$800/kW, so the battery in a 85kW Tesla was around \$65,000. Since then, prices of lithium ion batteries have dropped more than 85%. Whereas the market average is \$137, in 2020 battery prices of below \$100 were cited for the first time.³ This price breakpoint means it will be more economical to build an electric car than a combustion engine car. The forecast is for the battery price to drop to \$60–65/kW by 2025, through economy of scale and further technological development.

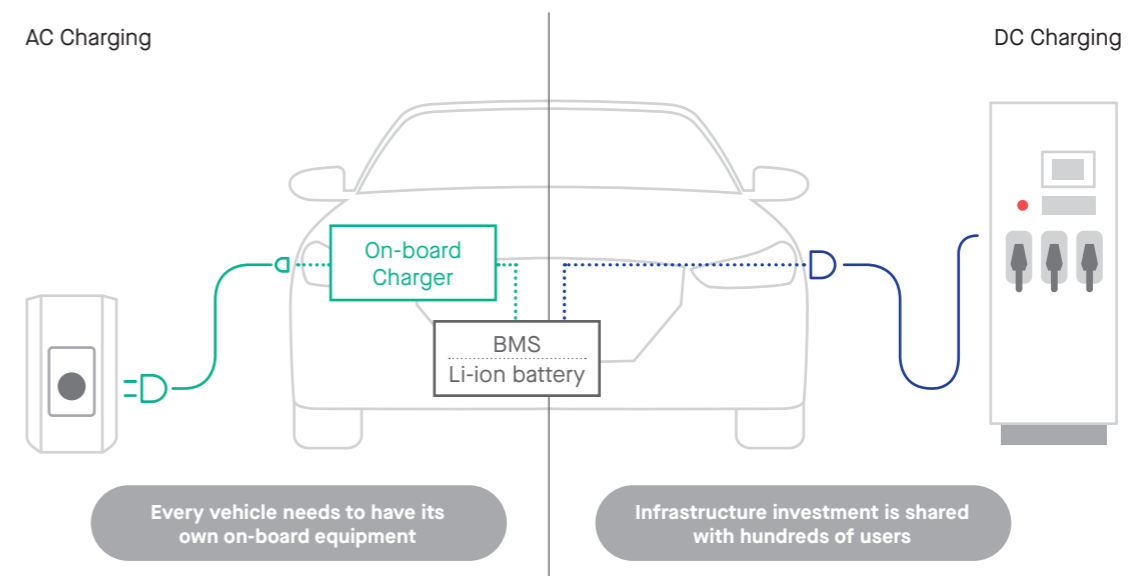
2. The battery is key. What more can you tell us about battery development?

First, from a price point of view the electric car is on the verge of a complete breakthrough. You can buy an EV for less than €50,000 that has a very acceptable range of 400–500 kilometers. There is only one disadvantage, and that is that charging takes time. Second, there's the battery density. The whole drive towards EVs started in 2009 with Tesla and 2010 with Nissan. Since then, lots of companies were spending billions of dollars on batteries to create the "golden goose" or winning chemistry of batteries. Current energy density of batteries is about 200-250 watts per kilogram (Wh/kg). Forecast for 2025 are batteries with energy density of up to 1,000 Wh/kg.

Battery development will continue and will affect where batteries are used. First, in EVs. Second, in e-buses for urban public transportation. And third, in electric trucks used for distribution. This will also go pretty fast. At a certain point, batteries will be used in airplanes. 15–20 years from now we will see commercial flights for regional destinations. For longer distances, the batteries are still too heavy.

AC charging versus DC charging

On-board versus Off-board equipment



Source: ABB, EV Infrastructure Product Group presentation, Niek Knapen, January 2020

Developments in charging

3. Let's move on to the technical side of charging. What are the developments?

Up until a couple of years ago, all electric cars used AC current for charging. AC current goes to the car, and an on-board charger converts it to DC and then the battery is charged. Whereas DC charging takes the entire process of converting AC current into DC outside of the car. This removes weight (and cost) from the car and creates a public charging station with the same standard to be used by any car.

With high-power charging today, a car with 90kW of battery can be charged in 15 minutes. Some claim that new batteries, even solid state, will allow charging in 10 minutes. However, that requires a battery with 1,200V.

The one who has the battery with the highest range per kilowatt and the lowest cost per kilowatt will win the market.

1 www.energy.gov "The History of the Electric Car"
2 Encyclopedia Britannica, "Early electric automobiles"
3 BloombergNEF "Battery Pack Prices Cited Below \$100/kWh for the First Time in 2020, While Market Average Sits at \$137/kWh"

Public and commercial car charging – Use cases

Charging service should match charging application and demand

Public and commercial EV charging			
AC destination	DC destination	DC Fast	DC High Power
3–22 kW	20–25 kW	50 kW	150 to 350 kW+
4–16 hours	1–3 hours	20–90 min	10–20 min
<ul style="list-style-type: none"> – Office, workplace – Home – Multi family housing – Hotel and hospitality – Overnight fleet – Supplement at DC charging sites for PHEVs 	<ul style="list-style-type: none"> – Office, workplace – Hotel and hospitality – Parking structures – Dealerships – Urban fleets – Public or private campus – Sensitive grid applications 	<ul style="list-style-type: none"> – Retail, grocery, mall, big box, restaurant – High turnover parking – Convenience fueling stations – Highway truck stops and travel plazas – OEM R&D 	<ul style="list-style-type: none"> – Highway corridor travel – Metro ‘charge and go’ – Highway rest stops – Petrol station areas – City ring service stations – OEM R&D

Source: ABB, EV Infrastructure Product Group presentation, Niek Knapen, January 2020

4. Could you explain the benefits of AC charging and DC charging?

This is where different kinds of charging service comes in. AC charging takes longer but works fine at the office, or overnight at home or a hotel. For shopping, higher capacity is needed to charge up faster. On the highway, the goal is to charge fast and drive on, so this is where DC charging is critical. An 800V battery can charge with 350kW in about 10–15 minutes.

What would it mean to the grid if we all drive EVs? It will harmonize, or balance out, power production and power usage. When you charge during the night, there is an abundance of energy and consumption is low. When you charge during off-peak hours of the day, electricity from solar and wind can be used. This could be a big benefit for our total electricity grid.

5. How would you describe your experience working with LEM on the DC charger?

In terms of EVI development, charging is happening more and more in public places. Germany is the first country to develop strict standards on power delivery to consumers i.e. you know for sure how much you are paying for the exact power you have charged.

With LEM, we have developed a DC meter device that we can build into our chargers to accurately measure how much power is delivered and communicate this to each customer.

It is very important for us to have a partner with full understanding of the sensor and measuring technology used for the specific application we are talking about here. For all DC applications – from 24kW to soon above 1 mW of charging – we need a measuring device that is accurate and measures within the norms and standards that have been set. LEM did a good job in delivering a device that fulfills these requirements.

6. Can you tell us more about the standard set by Germany? Will this be used elsewhere?

While France and other countries are still looking into new standards, they will probably adopt the German VDE at 90% with small modifications. It will be a ripple effect by country, not imposed top-down by a European regulator, but rather bottom-up from the market. This happened with trains. If a standard has been developed and works well, I expect it to be adopted by other EU countries, and possibly as a similar standard worldwide.

Markets and infrastructure

7. What can you tell us about charging infrastructure in Europe? There seems to be a lack of chargers in historic cities. Will this change?

With electric buses in London, the last thing they wanted to do was to install these big pantograph systems in the old city center. They considered it ugly. So they adopted bigger batteries to charge buses overnight at the depot. Design is important to Europeans. We try to hide our chargers in discreet cabinets or put them out of sight. We are getting more and more requests for special design features for bus chargers.

Historically, over the past couple of centuries, wealth in Europe shifted from the south to the north. With the new technologies, EVs are booming in the northern countries but lagging in the southern because their electricity grids are not up to scale and need a lot of investment.

8. What can you tell us about IONITY and ELAM?

The chicken and the egg story: EVs or EVIs? Tesla realized more than anyone else that without a charging infrastructure you will not sell your car. IONITY is a consortium of multiple companies. The project will install a cross-European infrastructure able to charge up to 350kW. That’s why we are participating by supplying our charger with the LEM DC meter for this network.

ELAM (Electrify America) in the US was different. VW negotiated to have their penalty for the diesel scandal serve as investment into charging infrastructure. This became the ELAM project, a consortium set up by VW to roll out and manage this national infrastructure, so that with a CCS (Combined Charging System) standard car you can drive coast to coast. ABB delivers the chargers.

9. From your experience what is the difference in adaption and potential of EV in the US and Europe?

In Europe manufacturers believed the EV should be a small car only used for driving around cities: small battery, short range, local use. Tesla and the Asian companies had a different philosophy. Tesla envisioned a big car, a sedan, with at least 350 km range. It was pushed by celebrities in the US and soon everyone wanted to drive a Tesla. By the end of 2015, they had 1/3 of the market share for \$100,000+ cars in the US. This scared the European manufactures. However, the EU very early saw the need for standardized charging and connectors, and is way ahead of the US in this respect. President Biden’s infrastructure plan will have to roll out and harmonize charging to make sure that at every charging station you can use the connector you need.

10. What are the lessons from China?

Europe did a good job with subsidizing at the beginning. China did this as well. It is extremely important to have government support and investments in the new technology. China obviously does this in a huge way. Europe could do much more to help support the technological development. If we are capable of developing a super battery with for example a 10kW/kg and no one else can produce and make it at an economical price – we will win. I would not be surprised if China comes out with it first.

Thank you for the discussion. I’ve been working 11 years in this business. E-mobility infrastructure is my favorite subject.

If we all drive EVs, it will harmonize power production and power usage. This could be a big benefit for our total electricity grid.

Automotive segment performance

The 2020 global car market was hit hard by the pandemic, with an output drop of 16.1% to 74.6 million units. The significant shift to electric vehicles continued, now standing at 5% of global output. LEM's strategic focus on electric and hybrid powertrains underpinned our growth, with total sales up 12.2%, driven mainly by China. During the pandemic our Automotive teams have met all the challenges posed by our customers and our suppliers.

Dynamism

Persistence

Automotive segment performance

Market dynamics strongly influenced by COVID-19 and electrification

The global vehicle production output in 2020 dropped sharply by 16.1% to 74.6 million units, owing to the disruption caused by the pandemic across the industry and the lockdowns that gripped consumer demand in key global economies for several months. The crisis particularly hit market demand and production during the first semester, with many automotive carmakers having shut down operations in the US and Europe, and to a lesser extent in Asia. The sector saw a sharp recovery during the second semester, heralded by China where carmakers resumed operations earlier than in Europe and the US.

In response to this unprecedented situation, governments in Europe have put in place more ambitious subsidy programs to support consumer demand for electric vehicles (EV), while China's subsidy scheme has been extended for another year until 2022. These measures helped further accelerate the electrification of the industry, with EVs representing nearly 5% of the global production output in 2020 versus 3% in 2019. Despite the crisis, EV production doubled in Europe to reach 1.3m cars, matching the levels of China, while they remained broadly stable year-on-year in Japan/Korea (369,000 units) and the US (500,000 units). Conversely, the global production of conventional cars further declined by 16.1% to 74.6m units.

Strong recovery driven by EV demand

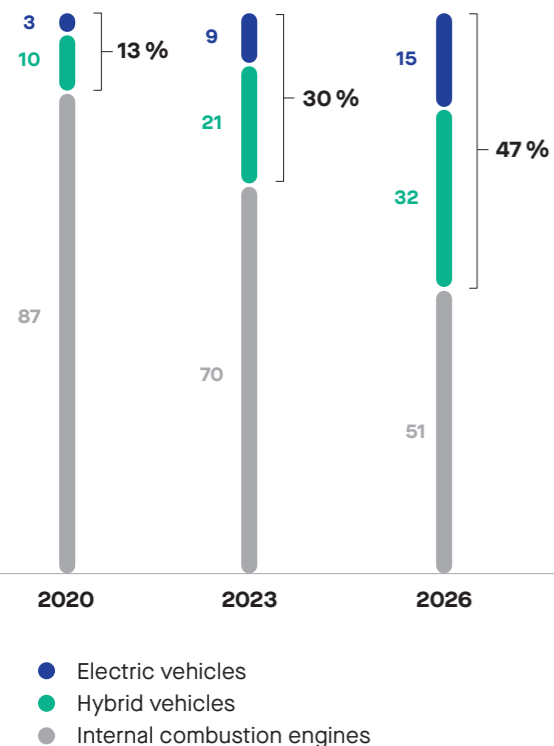
Full year 2020/21 sales in the Automotive segment totalled CHF 75.7 million, an increase of 12.1%. At constant exchange rates, sales improved by 14.8%, which is significant given the shutdowns during the first phase of the COVID-19 pandemic. The Q4 sales of CHF 22.9 million (+64.5%) are the highest quarterly sales yet achieved by the business.

With the acceleration of the deployment of EV platforms by carmakers, our products have been designed in for several vehicles which entered production in 2020.

Our largest market China performed excellently, with sales up +32.2%, driven by consumer appetite for EVs and the launch of several new vehicles. We benefit from a leading market position, and LEM is well positioned to capture growth opportunities unleashed by the government's ambition to achieve 25% electrified cars by 2025. It is worth noting that our operations in China have been operating at 100% since April 2020.

Europe continued its strong growth (+63.5%), as manufacturers (OEMs) ramped-up their production operations. Carmakers are under significant pressure to achieve the CO2 emissions targets for new car fleets, and we see significant investments to launch new electric or hybrid-electric car platforms.

New car production – propulsion share



Source: IHS Markit 2020

¹ Electric vehicles (EV), defined as plug-in hybrids and battery electric vehicles but excluding traditional hybrids

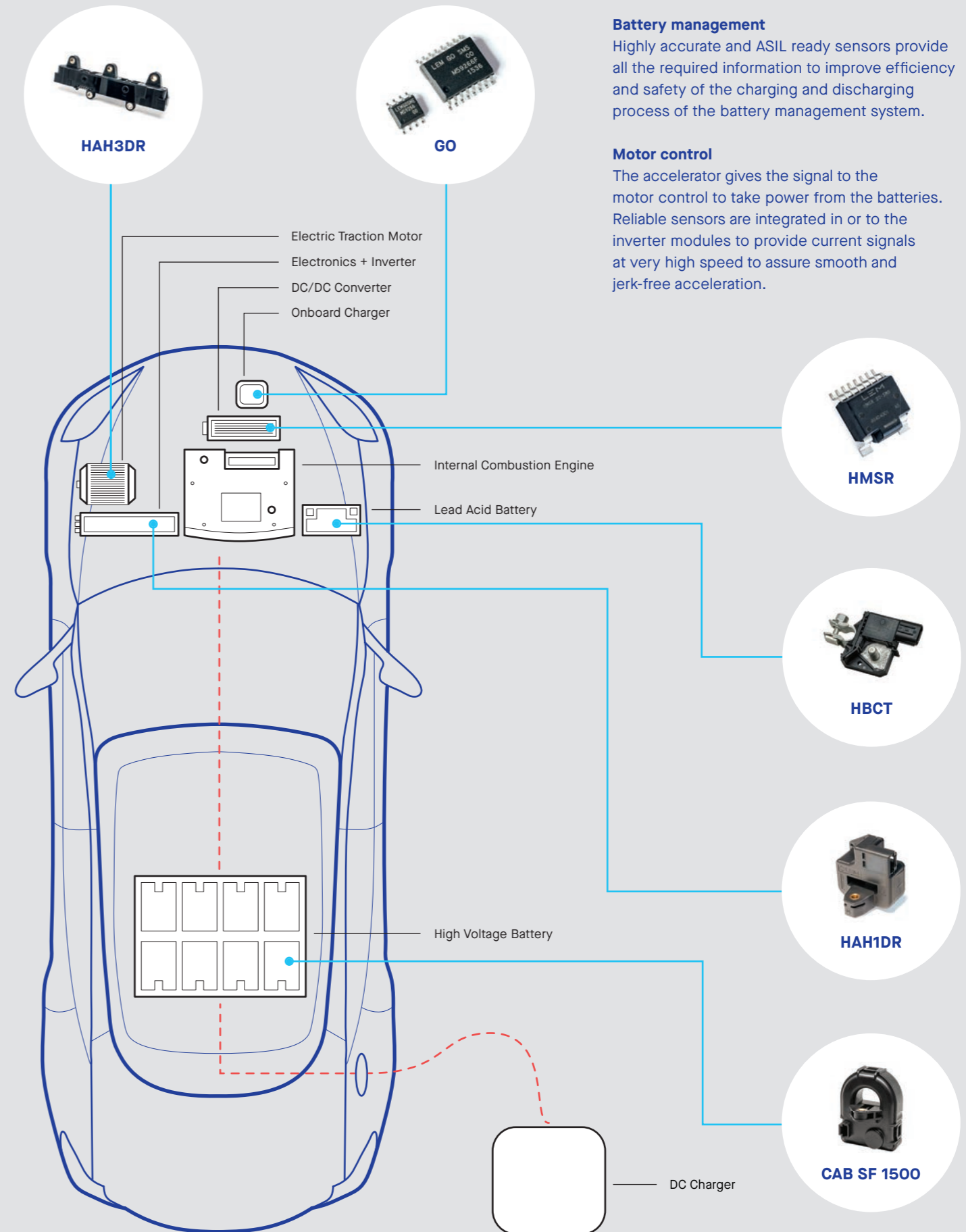
Hybrid electric vehicles / Electric vehicles

Battery management

Highly accurate and ASIL ready sensors provide all the required information to improve efficiency and safety of the charging and discharging process of the battery management system.

Motor control

The accelerator gives the signal to the motor control to take power from the batteries. Reliable sensors are integrated in or to the inverter modules to provide current signals at very high speed to assure smooth and jerk-free acceleration.



Automotive segment performance

Well positioned to capture growth on green cars

The green car sector now represents more than 80% of the Automotive revenues, reflecting LEM's strategic focus on electric and hybrid powertrains. Analyzing our sales performance by the different businesses underlines this dramatic shift:

Battery management

We are offering intelligent battery sensors for start/stop architectures combining a unique know-how on current sensing technologies together with our expertise acquired on lead acid battery technologies.

For the full year 2020/21 sales grew by 1.7% to CHF 45.7 million, reflecting the US reduction in 12V demand offset by the increase in demand for high voltage products.

Motor control

Our sensors for power inverter applications provide flexibility to Tier 1 and original equipment manufacturers (OEMs) in their design, with solutions that can be implemented on various subsystems such as: gate driver boards, power modules, integrated busbar and standard busbar mounting.

For the full year 2020/21 sales grew by 35.0% to CHF 26.7 million, with strong demand spurred by EVs.

Charging system

This new product range is offering dedicated technologies to support transfer energy subsystems from AC to DC and DC to DC with high and low voltages applications.

For the full year 2020/21 sales grew by 16.1% to CHF 3.4 million due to continued momentum for battery electric and hybrid vehicles.

Constantly adapting our portfolio roadmap to the latest technology trends

LEM works with the industry's trendsetters to stay abreast of the latest technological trends and develop solutions that deliver superior value in our customers' applications.

The electrification of the automotive powertrain is reshuffling the industry following three main trends: functional integration, physical integration and higher power density. LEM is developing an ambitious product roadmap by investing significant R&D efforts in two directions.

First, we are building an Integrated Current Sensor (ICs) portfolio to address the need for ever higher integration of the current sensing function in battery management systems, power modules or power conversion systems. GO and HMSR are the two first building blocks of this roadmap.

Second, we are collaborating with leading carmakers and Tier 1s to develop complex modular solutions featuring a high level of mechanical integration and functions. Modules include additional features (hardware and software) beyond a standard sensor.

LEM resilience and agility

During the past year, our Automotive teams have amply demonstrated their resilience and agility. They have met all the challenges posed by our customers and by our suppliers. We pride ourselves on being reliable partners, striving to achieve the highest levels of product quality and project execution.

Sensor integration levels



Source: Strategy Engineers; AVL

Our products are also resilient, designed to operate under demanding conditions and comply with the most stringent testing procedures for vibration and temperature. In addition, our solutions enable our customers to reach the levels of system safety required under international norms of functional safety regulations, such as ISO 26262. We continuously work to create and maintain a highly collaborative mindset by nurturing tight relationships with key actors across the value chain: research institutes, integrators, engineering companies, Tier 1s and OEMs are our main stakeholders.

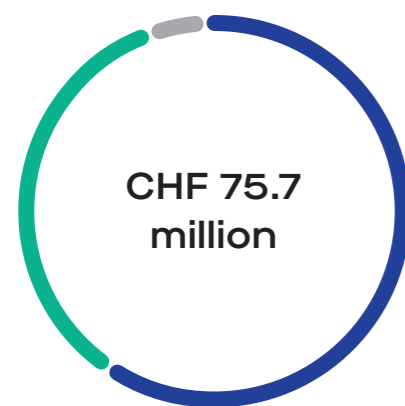
Outlook

The pandemic has caused very significant disruption to the global economies and the long-term effects are yet to be fully seen. This crisis has hit the automotive market, compounding the structural changes linked to electrification, forcing all actors of the value chain to adapt and accelerate the implementation of new solutions to the market. We expect the short-term outlook to remain tough, with the pandemic sending shockwaves through supply chains, illustrated by the global shortage of semiconductors affecting the whole automotive industry. However, we are confident about the long-term outlook. The strong demand for electric vehicles is a driving force for the sector and all major actors are clearly committing significant investments to this fundamental transformation of the market.

As we emerge from the COVID-19 crisis, the automotive industry is pivoting sharply to an electrified future. The increase in electric vehicles is already disruptive. Opportunities will come to the organizations that are most aware, knowledgeable, and proactive.

IHT Markit "Pivoting to an Electrified Future – The Automotive Industry Amps Up" April 2021

Automotive sales 2020/21



- Battery Management 45.7 m
- Motor Control 26.7 m
- Charging Systems 3.4 m

Trends, technology, R&D

The current sensor market is expected to grow about 8% annually until 2025, driven by mega trends such as renewable energy, mobility and digitization. Producing for both the industry and automotive segments enables LEM to develop larger systems, modules and semiconductors. We continue to invest in new technologies and in our highly skilled R&D teams. LEM launched ten new products again this year.

Creative

Resolute



Mega trends drive long-term growth

Our growth is driven by mega trends such as renewable energy, energy efficiency, reliable energy, distributed energy, mobility, automation and digitization. They drive demand for sensors, give multiple opportunities to leverage LEM expertise and ensure a sustainable long-term business for all our stakeholders.

Based on IHS data and our analysis, the current sensor market is expected to grow from about CHF 2.6 billion in 2020 to CHF 3.9 billion in 2025. Our strong heritage is Industry applications where we are market leader and have significant growth potential, while our fastest growing sector in the long-term is Automotive applications. Far from being a mature market, current sensing products are undergoing significant changes, driven by new applications and technologies. These fast-changing markets will lead to pricing pressure, shorter product lifetimes, quicker return on investments and will require companies to be more agile.

We are developing smarter sensors with data processing, safety with self-diagnostics, and added value with embedded software to achieve real time computation, which accelerates information transmission and decision making in the system.

LEM has opportunities thanks to the switch to electric powertrains, the miniaturization of components and the adoption of integrated current sensors. Across both Industry and Automotive applications, we see demand for additional functionalities towards current transmission and digital information.

Technology trends

Ever higher power densities drive new current sensing technologies

The power density is the amount of power generated per unit volume of the motor. The more powerful the motor in a smaller envelope, the higher the power density. Increasing power density is therefore a critical factor to increase performance, as space constraints are present in virtually all industry and automotive applications.

Two technologies are enabling a step-change in levels of power density: Silicon Carbide (SiC) and Gallium Nitride (GaN). These allow higher switching frequencies and thus are very well-suited for industrial applications where performance is key.

The increased demand for small sensors, capable of handling high levels of power density, led to the emergence of integrated current sensors over the last decade. Integrated current sensors (ICs) measure the primary current line directly through surface-mounted integrated circuit (IC) and became a technology of choice for industrial and automotive applications thanks to their ability to sense high currents while using a very compact footprint.

Digital is disrupting energy and mobility usages

Smart grid and autonomous driving are two major disruptions led by digital revolutions to bring smarter, greener and more efficient ecosystems. This is creating a lot of data, communication and the need for artificial Intelligence. At LEM we are developing smarter sensors with data processing, safety with self-diagnostics, and added value with embedded software to achieve real time computation, which accelerates information transmission and decision making in the system.

The electrification of vehicles opens new applications to current sensors

By 2028, 50% of annual car production will be using hybrid and electric powertrains. In addition, electric and hybrid vehicles require a higher number of current sensors than combustion powertrains, spurring an exponential growth for the demand of sensors: from about 125m of current phases measured in 2020, LEM estimates that the market will grow more than 4x, to reach about 450m in 2028.

LEM believes on-board chargers (OBC), DC meters and DC/DC converters will play a key role in energy distribution and management of hybrid and electric powertrains. OBCs provide the means to recharge the battery using an AC socket at home or from a charging station. DC/DC converter translates high voltage coming from the battery to a lower voltage which is then used for various on-board applications (A/C, electric power steering, etc.).

DC metering is becoming mandatory in the EU and the US markets, as regulators want customers to pay only for the power load of the battery of the vehicle, net of power line losses. Detecting current leakage is an important side application for DC metering, bringing a protection for customers in case of a malfunction of the charging station. Ever higher power levels (up to 800V) place the battery system as the heart of the hybrid and electric powertrains. Accurate battery management systems that can measure the state of charge (SoC) and state of health (SoH), have become increasingly important to ensure the driver has access to reliable information on the remaining driving range, and that the battery cells are well maintained to protect the battery life.

More stringent safety standards pave the way for autonomous driving

Automated driving functions are realized with interconnected systems using Automated Driving Assistance Systems (ADAS). Those systems are replacing part of a driver's usual decisions keeping him and others safe from hazards. To maintain this level of safety, ADAS are implementing functional safety defined by the ISO 26262 standard. We are introducing this standard to offer the strongest safety functions to our customers using LEM sensors in electrical vehicles powertrain systems such as battery, motor or power converters.

Smart grid, a new market for current sensing solutions

Our energy system is undergoing a radical transformation, as millions of electric vehicles hit the road and terawatts of renewable energy capacity are installed. These changes are essential to decarbonize our energy system but are creating significant challenges. First, wind and solar energy's intermittent nature force grid operators to provide flexibility to the system. Second, the rapid growth of Distributed Energy Resources (DER) is decentralizing the distribution network, increasing the complexity of its operation. A smarter grid is thus needed to reliably integrate intermittent renewable energies and DERs.

LEM provides sensors that measure electrical parameters along the network, allowing grid operators to monitor, control and automate the grid operation. LEM offers best-in-class solutions for the ever-increasing demands of utilities and equipment manufacturers.

Ongoing R&D investments

In 2020/21 we continued to invest in R&D to assure long-term growth. Four main trends prevail in driving our investments: strong global demand for electromobility; measurement of energy flows in smart grids; requests from Automotive customers for functional safety through third-party certification; and demand for tailored solutions in high volume applications.

Our investments are split into near-, mid-, and long-term projects, such as developing building blocks for the next decade. Long term research and innovation around new applications is performed by our R&D sites in Geneva and Lyon. In Beijing and Sofia new products are developed for specific customers and applications.

This is leading us from a traditional, electromagnetic sensors company into a broadened business of various integration levels. Examples are the HMSR and the DC meter for charging stations. The HMSR is an integrated current sensor (ICs) which includes a high-performance ASIC, a micro ferrite and the benefits from a specific overmolding method ensuring high isolation in a very small package. The DC meter has an intelligent ethernet interface and a high integration level into the customer product. Both products, launched in 2020, have seen a fast ramp-up and are a success story of our collaborative work approach.

Our R&D team provides a diversified skillset to deliver the best product. It is to our advantage that we produce for customers in the industry and automotive segments, which allows us to leverage synergies to produce larger systems, modules and semiconductors. This gives us the agility to master the value chain from the design function at an IC level all the way up to the full sensor and customer application. An example is the development of the DC meter, where we involved alpha customers early on and quickly provided prototypes for customer feedback. Our broad skillset also led us to produce functionally safe sensors to protect customer products and users from higher system and vehicle malfunction. As a result, dedicated products in the automotive segment have been certified by an external third party and are thus functional safety compliant.

Development across sites, teams and segments

We slightly increased our R&D investment from CHF 28.0 million in 2019/20 to CHF 28.2 million in 2020/21 and continued to contract R&D resources to support projects.

In Lyon we develop products for smart grid, traction, DC metering for EV fast charging stations, and automotive battery management systems. Our talent demonstrated great agility this year. The R&D site manager in Bulgaria moved to Lyon to lead the R&D team. In turn, the position in Sofia was filled with an expert from the local Technical Customer Support team. In Lyon, one of our talents from the embedded software team took on a new role with R&D innovation in Geneva. The Lyon position was filled with an external hire.

The Geneva team is becoming our leading hub for innovation and advanced engineering for products going into drives, residual current detection, high precision and semiconductors. We continued to strengthen the semiconductor team with a mix of industry veterans and internal talents.

R&D teams in both Geneva and Lyon focus on new and advanced technologies, such as embedded software and validation, predevelopment of technologies and innovative applications of our products, including algorithms for intelligent battery management. Therefore, we have a dedicated innovation team on both sites, which is working with universities and technical institutions. In Lyon we are building up our automotive software development team, while in China and Bulgaria we continue to execute major locally customized projects, such as open loop sensors in Beijing and Rogowski coils in Sofia.

Technical focus and product launches

We are running product projects in the areas of automotive battery management, integrated current sensors for renewable energy applications, drives and traction.

With the production start of the HMSR in summer 2020, we are executing an ambitious roadmap in this domain by significantly increasing our capabilities in the area of IC packaging, IC testing, characterization and applications.

We launched a weather resistant outdoor ARU Rogowski coil and a digital integrator. Multiple Rogowski sensors for different applications are in the pipeline, such as a hard molded version. In our traction business we updated existing products via testing and validation to be compatible with new standards, and in China we engineered new sensors for trackside monitoring. Building on our successful launch of the 400 AMP DC meter for fast charging stations last year, we are now designing sensors at lower ranges, such as at 100 AMP. This will allow our customers to charge their EVs in convenient locations at an economical speed of two to three hours. We also continued to further extend our residual current detection solutions.

We further enhanced our battery management system family with a broader CAB product portfolio, including a functional safety certified version of CAB 1500 SF.

Our efforts were recognized by the granting of 3 patents, 1 utility model, and 18 designs.

Our significant investments in R&D over recent years continue to bear fruit. In 2020/21 we launched 10 products.

Outlook

In 2021/22, the investment in our R&D capabilities will remain stable. In Automotive we will focus on compact packaging of products, improved performance, enhanced features and functionalities, as well as reduced volume. In Geneva, new residual currents will be in the pipeline and we will work on a new product architecture. Our team in Lyon will continue to extend the DC meter portfolio and begin with onboard traction projects. In China, we'll be focusing on new transducers for high current levels in solar applications, on trackside applications, and on a compact split core transducer. Our Bulgaria team will be in charge of growing the Rogowski portfolio.

Product launches 2020/21

Product	Segment	Application
DCBM-400	Industry	EV chargers
DCBM-600	Industry	EV chargers
CDSR	Industry	EV chargers
HMSR	Industry	Drives, Renewables
ARU	Industry	Smart grid
AI-P1A	Industry	Smart grid
ART-SP102	Industry	Smart grid
TOP-90	Industry	Trackside
CAB 1500 SF	Automotive	Battery management
HC16F	Automotive	Motor control



HMSR

New generation high insulated integrated current sensor. Product family provides a robust, compact and very accurate solution for measuring DC and AC currents in all highly demanding, switching power applications for commercial, industrial.



DCBM

A fully certified electricity meter for use in automotive fast DC Charging Stations. Consisting of a modular architecture (sensor unit and meter unit) for optimal installation into the customers application.



CAB 1500 SF

Open loop fluxgate technology sensor delivers superior accuracy and offset performance. Complies with stringent ISO26262 ASIL C metrics. Highly accurate current measurement for automotive battery management systems, to extended driving range.



HC16F

Unique open loop Hall-based sensor with measurement up to 1,600 Amp. Suits all architectures up to 1,000 V. Compatible with surface-mounted and through-hole assembly processes. Highly versatile solution for motor control applications.

Culture, talent & values

The COVID-19 pandemic revealed the true strengths of the LEM culture. Our teams responded with resilience and agility, and with a heightened focus on customer needs. Several employees recount their inspiring stories, and the two newest members of the Executive Committee share their insights. We are strengthening the links between our values, behaviors and the way we develop and attract talent.



Agility



Resilience

Conversation

Two relatively recent arrivals at LEM and members of the Executive Committee, **Rebecca Cullinan**, Senior Vice President Industry, and **Rodolphe Boschet**, Chief Human Resources Officer, share their perspectives on the company today and the road ahead.

1. What motivated you to join LEM?

Rebecca Cullinan (RC)

It was time to try something different after over 20 years in the automotive sector. That business historically is very driven by cost pressures, with huge investments, and is associated with a poor track record in pollution management, although there is the recent pivot to EVs. I was attracted by LEM's role in the development of electrification, renewable energy and its contribution to a more sustainable economy.

And what about the experiences you could bring to LEM?

Indeed, I felt that the experience, skillsets and process methods I had learned in large multinationals could have a bigger impact in a smaller company such as LEM. Meeting with my future colleagues, I was enthused by their description of the company being at cross-roads of markets and technologies, moving both upstream and downstream. Moreover, it became clear that the company has a global mindset, and has ambitions to scale its impact.

I was enthused by my colleagues' description of the company being at a cross-roads of markets and technologies, by their global mindset and ambitions to scale LEM's impact.

Rebecca Cullinan

And did the fact that LEM has a big presence in China play a role, given your personal heritage?

Well actually I have spent most of my professional life working in Europe (laughing), so this was more an opportunity for me to play catch up on the growth of China. But I do bring a Chinese mindset and focus on speed!

Rodolphe Boschet (RB)

I would echo Rebecca's motivations for joining. Having worked in the healthcare sector for many years, it is important for me to have a real purpose in what I am doing (especially for my children). So LEM's contribution in enabling a more sustainable economy was a key factor in my decision. And yes, there was also the attraction of joining a more "human sized" company, where you can feel the impacts you have with decisions, and in a shorter time frame. Third, the company is going through a transformation as it seizes many opportunities for growth; we are evolving the culture, diversifying the talent, introducing processes and systems for scale. Finally, in the selection process I was impressed by the diversity of thinking amongst the team – dialogue is encouraged.

2. The word transformation ...does that resonate with you Rebecca?

RC Absolutely. The world itself is going through a transformation, with 50% of our electricity due to come from renewables by 2050. The businesses we supply have to adapt dramatically – both industry and automotive. For LEM we have to adapt our technologies, products, processes and people to the markets and environment.

3. And of course, COVID-19 has been a transformational experience for the company. How have your teams coped?

RC Actually, things turned out a lot better than I expected. We are a conservative company, so the concept of home-office was quite radical. It meant that our ways of managing people had to change, we had to trust and empower them more. It soon became obvious that people were really motivated, could manage themselves, and their output was great. However, communication became even more important – personal conversations rather than just email. And many of us do miss the interface with

colleagues over a coffee or tea. In short, we have now proven that this flexibility of both on site and home-office does work well for the future.

RB Personally, I started my role at LEM in quarantine so that was a special experience (laughing); seriously it was a pretty efficient way to get immersed into the company with documents and systems learning! The first priority has to be the safety and well-being of the people. Some really miss the workplace, so we had to build in flexibility. Second, we had no choice but to become more creative and take risks, in order to serve customers and suppliers whom we just could not meet physically. We run many global projects, so as Rebecca said, that meant extra efforts on communication. Leaders had to do things differently. For example, taking care of their team members and their personal well-being. Actually, as part of our culture journey, there is a formal process now for "checking in" and "checking out" with people on team calls, to cover this aspect.

4. Given the pandemic, the theme of this year's Annual Review is Resilience + Agility. Can you share your own understanding of these words, and give an example in practice from the past year?

RB First of all this year has shown that LEM's positioning and business model were extremely resilient despite the turbulences. It is the same for our people, because we know that our customers need us and we take what we do seriously, it gives us the strength to overcome some of the headwinds created by the pandemic. Because of our size and the intimacy we have with our customers, it is easier for us to react and adapt to a changing environment such as the one we encountered in the past months.

RC Resilience in Chinese is 忍, it means to put a knife on your heart. The pandemic situation has taught us many valuable lessons including to realize the quality of our employees. In the day to day operations at site level, we have witnessed the dedication of our employees to continue producing, delivering to the customers despite the difficulties of lockdown and spread of the virus. There has been no stop of production at any site during the pandemic, our operational teams have reacted well to extreme stress in the supply chain. The remarkable result of LEM in

2020 was assured by the resilience and agility from a worldwide team.

5. You mentioned the Culture Journey. This company-wide process started in 2019. Where is LEM now?

RB Well, we have clearly defined and communicated the business rationale which requires an evolution of LEM organizational culture, we call it the "story" of LEM. And this has created much enthusiasm and creative ideas with discussions at all levels in the organization. So now we have defined the so called "LEM Blue Behaviors" which, we believe, will help us drive more innovation and make us more agile so we can bring even more value to our customers. We are currently in the process of embedding the LEM Blue Behaviors in our HR processes from talent acquisition to the way we incentivise performance. Alongside this goes training and practicing, such as asking, giving and receiving feedback. And there is role modelling, starting at the top with the ExCo – we have to keep each other accountable, and be respectful in the manner we do so.

And Rebecca what has been your personal experience of this Culture Journey?

RC As I mentioned earlier, I come from over 20 years in the automotive sector – this is a tough business, with a focus on efficiency and giving orders. So my natural style of behavior was rather more aggressive than constructive. Now I have learned that there are different ways to get better results, welcoming the diverse perspectives of the team, listening better. And with regard to the "WE", our team has certainly grown with better dynamics and a feel for how best we complement each other. Lastly for the "IT" we are much better aligned across all of LEM on our purpose and strategies, with a common approach for both the Industry and automotive segments.

6. Culture is also driven largely by the type of talent in a company. What do you look for when hiring new members of LEM?

RB Well, the first thing to observe is that the perfect employee does not exist! I think there are 3 key attributes: firstly, we are effectively working in a team sport, so you have to be a team player. Next, individuals who want to have an impact, are conscious of the major issues facing the economy and society,

We have defined the LEM Blue Behaviors which will help us drive innovation and make us more agile so we can bring even more value to our customers.

Rodolphe Boschet

and really appreciate how LEM fits into that bigger picture. And thirdly, we need people who want to learn, want to be challenged, and have the humility to grow and add value, whatever their initial role here.

RC I look at it from the perspective of success factors. Given our heritage of being market leader, the businesses we are in and where we want to grow, LEM must be first to market with any new products. So that means the 2 key attributes for employees must be a focus on innovation and being customer and service driven.

And so as LEM is transforming with new technologies and markets, is that where you hunt for new talent?

RB You are right, we like to find talent with exposure to the new customers and markets we are targeting, and of course we are building competencies for ICs (Integrated Current Sensors).

7. You mentioned success factors. How do you measure success in your particular functions?

RC Classically in any business it would be the revenue growth rate and its profitability. However, these are actually the outputs and consequences of doing the right things. So ultimately for us it is do we have a satisfied customer? And can we sustain the customer relationship to become a long-term partner for many years? Coming from the automotive sector, where the focus is on efficiency, speed and cost-cutting, and essentially one competes on price, it was quite a change for me at LEM. Here, I have learned the intrinsic value of the company is the customer focus, designing solutions together, doing whatever

the customer wants, being flexible and going the extra mile. All this results in customers who are willing to pay for this added value, and deep relationships over 20 years. These partnerships plus our portfolio of over 2,000 product references really does provide a significant barrier to entry for competitors.

RB For the Human Resources function, we have 3 focus areas for measuring success: firstly, employee attrition rate – we need to prevent and learn from why people leave. Then in terms of employee engagement, there is a bi-annual survey, with action plans on improving communication around strategy and organizational efficiency and we measure our progress through spot surveys. And another metric is the on-time delivery of talent, alongside the % of positions being filled internally as we encourage employees to grow and support their development.

8. You have both spoken glowingly about the many positive aspects of joining LEM. What can the company do better?

RC Given part of the theme of this year's Annual Review is "Agility", I think we can still improve further that attribute. By this I mean we can adapt better to market needs, and be faster. Also we should be more rigorous, for example in the design and consistent application of processes.

RB I agree with you about rigour. As we transform from an SME to a company with greater global scale, then we should be able to achieve 80% of output through standard processes, rather than re-inventing every time. And that leaves 20% for keeping the entrepreneurial spirit, being agile, and creating value. We need to strike the right balance.



Rebecca Cullinan

Senior Vice President, Industry



Rodolphe Boschet

Chief Human Resources Officer



Frank Rehfeld

Chief Executive Officer



Andrea Borla

Chief Financial Officer



Rainer Bos

Senior Vice President, Automotive

Culture and talent for growth

Organization fit to capture growth

Our industry is changing fast and being shaped by several technology breakthroughs. So is LEM: we are making the organization more agile to ensure we capture and manage global growth to 2025. LEM is made of the expertise, talent and leadership of the 1,500 people working relentlessly to bring customers the best solutions. Our organization is evolving towards a decentralized model where the headquarters are responsible for strategy, setting standards, innovation and coordination. Decision making will become increasingly decentralized as capabilities are being deployed at each site in R&D, operations, sales and quality. With these changes, LEM is increasing speed and agility while reducing time-to-market.

LEM offers people a significant purpose and opportunity to make an impact on society, working at the forefront of mega trends such as renewable energy, mobility and sustainability.

Human resources function designed to enable growth

At LEM, Human Resources is a strategic business partner, committed to maximizing sustainable global growth by building organizational capability and a work environment where diverse talent can thrive. The HR function has four key pillars: being an employer of choice, attracting and developing ready-now talent, continuous improvement of the function, and delivering operational excellence. These pillars connect the company's values and behaviors with its overall purpose and sustainable growth strategy.

Employer of choice

We are developing and recruiting the best global talent with new competencies to deliver the growth potential of the company. LEM offers people a significant purpose and opportunity to make an impact on society, working at the forefront of mega trends such as renewable energy, mobility and sustainability. We are a high-quality global employer, human-sized with a collaborative culture. As market leader in several applications of electrical measurement, our employees enjoy intellectual challenges, diverse pathways and global career opportunities.

Resilience & agility during COVID-19

Over the past year, all of us have had to adjust to the extra-ordinary consequences of the COVID-19 pandemic. Our teams have delivered outstanding performances, ensuring "normal service" for all our customers and delivering projects on time, while learning and integrating many new ways of working. This required not only new technical and digital skills, but also adaptation of management and leadership styles. A very positive benefit of the pandemic has been the improvement in communication across functions, and a greater appreciation of how both planned and spontaneous communication by leaders can make a real difference to team performance. On the following pages there are some inspiring stories by employees from different functions and regions about how they demonstrated resilience and agility to overcome the challenges of COVID-19. It is in times of pressure that one discovers the true worth of an organization's culture, and how a sense of purpose enables people to be truly engaged, performing above and beyond the stated parameters of a job description.

During the year we completed our bi-annual employee engagement survey. This showed some very encouraging results such as confidence in senior management, pride to work for LEM, team spirit and professional development where results are significantly above global average and more importantly where we continue to improve year over year.

Progress towards a High-Performance Culture

In 2019 LEM began its Culture Journey program, starting with the Executive Committee. It has been adopted by all senior management teams, and cascaded across the company with the engagement of internal Culture Ambassadors. Our goal is to continually develop a constructive High-Performance Culture to underpin how we all think, behave and communicate personally and collectively. Over the past year, we have identified four groups of key "LEM Blue Behaviors" which all employees should aspire to embrace and enact, whatever their function or seniority:

- Innovation and continuous improvement mindset
- Customer orientation and growth mindset
- Team player mindset
- Player/Learner mindset

Within these groups, specific behaviors have been identified, and are being integrated into individual development plans, performance assessment systems, and talent acquisition processes. It is already clear that a Constructive Culture will help current employees achieve their full potential and enjoy their experiences, as well as attract the right caliber of new talent to ensure LEM achieves its strategic goals.

High performance culture model



Source: sum people all rights reserved, 2020

Diversity and inclusion

As LEM adapts its organizational structure to meet the demands of its customers and seize the growth opportunities of the various mega trends, there is a need to diversify its talent base across different regions, product applications, technologies and support functions. The company is committed to ensuring that its talent acquisition and development strategies are as broad-based as possible, recognizing that diversity and inclusion brings many benefits.

LEM provides equal opportunity to all qualified individuals. The share of female employees is 54% in the overall workforce. However, given the historically high share of engineering positions in product development, sales & marketing and management, the share of female employees in the non-production related activities is 29% which was a slight decrease compared to the previous year. We actively seek female candidates in order to increase their share in the higher qualification positions, and there has been significant progress in markets such as China where many engineering graduates are women. In December 2019, we welcomed our first female member of the Executive Committee with Rebecca Cullinan as new Senior Vice President Industry. Several global responsibilities such as purchasing, supply chain, quality, finance and reporting, and group controlling are headed by female employees. LEM has several key female managers in China (Finance, Purchasing, Quality, and Supply Chain) and in Bulgaria (General Manager, Purchasing, Human Resources, and R&D). Last year 36% of management positions were held by women which represents a significant increase compared to the previous year.

During 2019 the Geneva site conducted an in-house equal pay survey following a new disclosure requirement by the Swiss government. The analysis, which was verified by an independent body, showed that men and women earn the same salary for equivalent positions.

Ready now talent

A committed workforce is essential for LEM's lasting success. To this end, we support our employees to attend regular leadership and job-specific training and develop their personal skills. Our aim is to continue to invest 1.5% of total group salary costs for reskilling or upskilling with an increased focus on web based / remote delivery to adapt to the new normal. We are committed to developing our people through job rotation, global projects, international mobility and promotion. In the last year, internal talents filled 70% of positions requiring the management of teams. The implementation of the LEM Job Architecture in 2021 will provide a clearer career framework so each employee can co-create their own career path within our company.

New talent

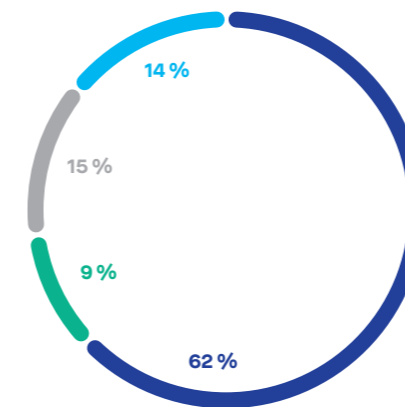
We are continually looking for new talent who wish to make a difference and have a concrete impact on society. We offer a multicultural, human-focused working environment allowing self-fulfillment in a growing and challenging context. We are focused on hiring core competencies in new markets such as smart grid, semiconductors and embedded software as well as in the fastest growing area of e-mobility. In addition to technical competences, new recruits should demonstrate qualities such as humility, entrepreneurship, continuous improvement mindset, innovation and ambition.

Employee analysis

	31.03.2021	31.03.2020
FTE		
Permanent employees	1'297	1'376
Temporary employees	135	109
Trainees	16	12
Total	1'448	1'497
Women in overall workforce	54%	54%
Women in non-production related activities	29%	31%
Women in management positions	36%	30%

Workforce by activity

1'448 total employees



- Operations
- Admin & Logistics
- R&D
- Sales & Marketing

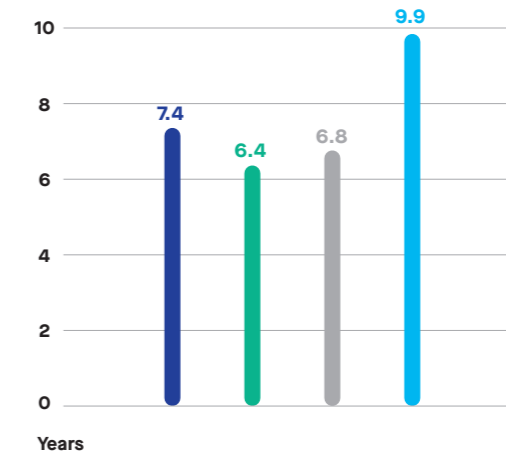
Health and safety

We continue to enhance health and safety at the workplace. The most important measures include systematic health and safety training for newcomers, annual evacuation trainings and signage in all areas. All sites have a clear evacuation plan in place. We perform regular internal and external audits to analyze the effectiveness of the measures and the development of improvements.

In regard to COVID-19, we strictly followed the hygiene measures and social distancing rules communicated by the local authorities across all our sites. In Beijing and Sofia, production quickly resumed at full capacity in April after the initial shutdowns. In Geneva there was a three-month period when production was reduced, but this resumed at 100% in November. We provided hand sanitizers and protective masks, deployed additional cleaning of door handles and handrails, asked people at risk to stay at home, and issued employer certificates for cross-border commuters. In Geneva, we mobilized a crisis management team, which met frequently to monitor the situation at the Geneva site and to follow the guidelines provided by the local and national

Average length of service

1'297 permanent employees



- Operations
- Admin & Logistics
- R&D
- Sales & Marketing

health authorities as well as the WHO. Globally, we also adapted our way of working to make sure employees could work efficiently from home or split their time at the office. We provided additional equipment where necessary, implemented new communication tools such as Microsoft Teams and shared best practices on how to lead remote teams with our people leaders so they could adapt to this new environment.

Stories of resilience and agility



Dina Stampasidou
Finance Manager, Europe & Tech France (R&D)

Working from home during a pandemic is a testament to LEM's agile workforce. Last year, our finance department integrated remote digital solutions, streamlining communication and enabling global participation. Interactive dialog via daily face-to-face meetings encourages brainstorming and problem-solving. While adapting to Germany's COVID-19 restrictions as Finance Manager of LEM Europe, I accepted the additional responsibility to oversee, forecast, and budget the LEM Tech France R&D entity. This unique situation has forced our department to reevaluate existing processes and integrate new procedures that will remain in place. Although the global economy is experiencing new challenges, I am extremely happy and proud to see our LEM team quickly adapt and overcome these difficulties together without any significant disruptions.

COVID-19 created the most volatile, uncertain, complex and ambiguous environment we've ever seen. None of us was prepared for it. On 13 March 2020 Bulgaria declared a state of emergency; the same day LEM announced my new assignment as General Manager of LEM Bulgaria. In the context of the pandemic shock in the organization, it was difficult to protect people's health and ensure business continuity without the support and commitment of the whole team. Customer orders didn't cease, and we managed to stay operational. In fact, we didn't stop a single day. By year end we reverted back to normal operations and met most Key Performance Indicators for the site. It was clear that in a period of crisis the team unites with a common goal. Our new mission is to support business growth by becoming a LEAN culture leader of the LEM Group. We focused on how, after the pandemic, we will improve faster to become a really high-performance team. Training is now completed, and the team is prepared. We have the critical mass to make the change. Specific projects are defined and by mid-year we will show first results.



Verka Alexieva
General Manager & HR Manager, Bulgaria



Jinwoo Park
Sales Manager Automotive, Korea & Rest of World

Last year's unexpected crisis impacted all of our customers. In such situations, I believe the most important thing in a crisis is to see the whole situation. We had to be flexible and act quickly. LEM Automotive has one plant in China which I could not visit, but our supply chain team supported us 100%. I communicated our situation transparently with all our customers on a weekly basis to help them make informed decisions. I did the same with our supply chain team, of course. This was possible because of long-standing relationships between LEM and our customers. The global sales network also helped us see the development of our products so we could adjust and support each region very flexibly. We are a small company, but we are a global company. This is one big advantage of working at LEM. For Automotive, quick electrification of vehicles is changing the business situation constantly, but opportunities are increasing. It's like walking on fragile ice, but that's business. I enjoy the challenge.

Due to the impact of the COVID-19, the support team from LEM headquarters was unable to come to China for equipment debugging. To ensure smooth transfer of the HO Tester2 project, our colleagues in Geneva made a detailed video to explain the operation of the equipment. They also introduced the use of virtual reality or VR glasses for this purpose. The core members of our project team in China carefully studied the video materials as well as use of the VR glasses in advance. Due to a flight problem, the planned arrival of the equipment was delayed for a week. Once here, the team members worked nonstop to solve the programmable logic system controller (PLC) problem. The flexibility and dedication of team members enabled us to quickly verify the equipment and deliver samples to the lab for inspection. In the debugging process, we found the root cause of the high scrap rate of the insulation test, corrected the pin length, and reduced this type of scrap rate to 0%. Mass production began one week ahead of schedule.



Liu Zhihua
Operations Manager China

During this crazy year, we worked on the new LEM DC meter, to comply with PTB (National Metrology Institute of Germany) certification for DC charging stations. Production was planned for December 2020, so together with the R&D and sales teams, we suddenly had to readdress our work process. It was a mindset change for us. We shared information between all the teams to be really agile and to respond quickly internally and to the customer. This strengthened relationships between LEM, our customers and our suppliers. It was important to bring more transparency to all the teams: to have the same understanding to avoid any mistakes, and to have a clear objective in the end. We found an approach to accelerate the process with support from our customers and from colleagues at LEM including purchasing and supply chain. The new DC meter was launched on schedule as planned, with full certification. It is a big success for LEM. We are expecting a high level of market share for this product, and the forecast for the future is excellent. The market is really booming.



Mathieu Béguin
Product Manager Industry, Geneva



Song Xiaoyang (Chloé)
Supply Chain Manager, China

During the Chinese Lunar New Year holiday, China entered COVID-19 lockdown. On February 7th, we initiated weekly online COVID-19 reviews for our sales teams to understand the supply side and communicate with our customers, and for our sourcing and supply chain teams to understand the customer side. We were bridging end-to-end communication, which we shared with the whole LEM organization. During the mainland shutdown, international customers had priority. As the global situation changed, we allocated more resources to our domestic market. In August 2020, a major Industry customer doubled their order. With top management's support, we set up a special squad in China to organize all resources, from supply to production. Everything ran just-in-time to shorten process lead time. And we delivered on time. During the 2nd wave in Europe, a Covid-caused labor shortage stopped production at a supplier in France. With great effort by our sourcing, sales and R&D teams, we validated a local supplier in record time and secured delivery. Integration of the LEM supply chain streamlines processes between automotive and industry, resulting in flexibility of resource allocation and improvement in cost efficiency.

Our behaviors and values

Our behaviors

The LEM team is made of the expertise, talent and leadership working relentlessly to bring customers the best solutions. We have identified 4 groups of LEM Blue Behaviors which all employees should aspire to embrace and enact, whatever their function or seniority:

1 Innovation and continuous improvement mindset

3 Team player mindset

2 Customer orientation and growth mindset

4 Player / Learner mindset

Our values

Our core values are the beliefs we share – and the spirit and intent of everything we do:

We are customer driven

All our activities are driven by the desire to provide best quality service.

We commit

We set our goals high and take responsibility for all our actions.

We operate with integrity

Our relationships with co-workers, customers, suppliers, partners and the investor community are based on openness and fairness.

We strive for excellence

No matter how good our products, services, process and results, we are dedicated to making them better.

We value teamwork

Teamwork is more than just working together, it is bringing out the best of everyone's strengths.

We lead innovation

By thinking out of the box, we adapt to tomorrow's requirements.

Board of Directors



From left to right: François Gabella, Ilan Cohen, Werner C. Weber, Andreas Hürlimann, Ueli Wampfler, Ulrich J. Looser

François Gabella
Member of the Board of Directors,
Member of the Strategy Committee

Andreas Hürlimann
Chairman of the Board of Directors,
Chairman of the Strategy Committee,
Member of the Nomination and
Compensation Committee

Ilan Cohen
Member of the Board of Directors

Ueli Wampfler
Member of the Board of Directors,
Chairman of the Audit and Risk
Committee

Werner C. Weber
Member of the Board of Directors,
Member of the Strategy Committee

Ulrich J. Looser
Member of the Board of Directors,
Chairman of the Nomination and
Compensation Committee,
Member of the Audit and Risk
Committee

Responsibility

We believe that sustainable and ethical practices create long-term value for all key stakeholders in society and assure the longevity of businesses. Our success stems from operating within a clear value system, following best practice principles and standards, together with the close monitoring of environmental, social and governance (ESG) key performance indicators (KPI).

LEM Code of Conduct

The LEM Code of Conduct (CoC) is our key document. It reflects the United Nations Global Compact, global environmental standards and our core values. It is a binding document for employees and business partners, such as suppliers and consultants, whose compliance we regularly audit. Every LEM employee receives e-learning training on the CoC, including instructions and case studies, and signs it.

United Nations Global Compact

Since 2006 we adhere to the Ten Principles of the United Nations Global Compact (UNGC), which are driving global action to achieve the Sustainable Development Goals by 2030. These principles, which relate to human rights, labor, environment and anti-corruption, are embedded in every aspect of LEM, from our strategy to our actions. As we do every year, we provided an update on our progress to the United Nations which is available on LEM's and the UNGC's website. In addition, we follow the best practice policies of the Universal Declaration of Human Rights and the UK Bribery Act.

Our success stems from operating within a clear value system, following best practice principles and standards.

Environmental standards

The trends to sustainable energy sources and electromobility are two of LEM's key growth drivers. Our accurate sensing solutions give our customers a competitive edge in energy management solutions. For example, LEM sensors' high accuracy directly impacts the battery pack size of an electric or hybrid-electric car, and hence improves car weight and energy consumption.

All our production sites are ISO 14001:2015 certified, an environmental certification which we renew regularly. Our production activities are compliant with REACH (European Regulation for Registration, Evaluation, Authorization and Restriction of Chemicals), RoHS (Restriction of Hazardous Substances) as well as conflict minerals reporting and obligations. LEM regularly publishes updates to its standards and reporting on our website. All LEM manufacturing sites apply waste sorting and treatment solutions. For each new product, we develop an environmental profile before launch, which includes recyclability rate and material saving compared to previous or equivalent models.

LEM Code of Conduct

Ethics Human rights Business practices

United Nations Global Compact
– UN Sustainable Development Goals

Environmental standards
– Preserving the environment
– Protecting human health
– Utilizing natural resources rationally

We recognize the importance of making a meaningful contribution within our organization and to keep score of our environmental, social, and governance (ESG) performance.

ESG performance

With our sensors for energy efficient applications, we contribute to a more sustainable and responsible world. Equally, we recognize the importance to make a meaningful contribution within our organization and to keep score of our environmental, social, and governance (ESG) performance. This is why we started collecting key performance indicator (KPI) data since 2015. Our ambition is to continually develop our internal capabilities and sustainability initiatives, and to report transparently on our progress.

Environmental

We measure our environmental footprint through the consumption of power, water, and fuel, the CO₂ emissions from air freight, continuous compliance with ISO 14001, and the number of supplier audits conducted.

Power, water, and fuel consumption are measured by the total numbers of sensors sold, as all of them are directly output related. Gasoline is used for our company cars globally, mainly by our sales teams, and also to back generators during power shortages in China. We disclose CO₂ emissions from air freight, as this is the main mode of transportation to get our products to our customers.

Our four production sites comply with the ISO 14001 standard. Every year, we audit suppliers based on their ESG performance and make sure that our ESG principles are well cascaded across our supply chain; this is our standard procedure before we accept a new supplier.

Since 2015, the KPIs for freight emissions as well as fuel and water consumption have shown a positive development and we maintain the ISO 14001 certification due to consistent processes. Globally, we reduced our water consumption in our production sites. The global COVID-19 pandemic reduced our fuel consumption, especially in China, and represented a challenge to our on-site supplier audits. We reduced freight emissions, as we are increasingly using transportation with a lower CO₂ footprint.

Social

It is our goal to foster a culture that encourages professional development, equal and fair treatment, and that nourishes and empowers every individual. We want to be a company where every employee can feel safe to be creative, innovative, and thrive with their personal talents.

We make sure that our employees are not subject to discrimination based on characteristics other than inherent factors required for the job. We reconfirm that our Geneva site was audited for its gender pay gap in 2019, demonstrating that women and men earn the same salary for equivalent positions (see chapter Culture, talent and values). To help our talent prosper, we encourage them to seek professional development. However, due to COVID-19, we had to reduce our on-site training days in 2020.

Governance

We want our employees to act based on our CoC to make sure that our values are well understood across all sites, cultures, and positions. This is why we ensure all employees sign the CoC upon their arrival and require them to take an e-learning. The test was launched in mid-2017, is based on 12 questions and has to be retaken every three years. For the year 2020, 77% of our employees with more than six months at LEM have taken this test. As a logical consequence of COVID-19, fewer training programs for CoC and other subjects were conducted on site.

ESG Key Performance Indicators

	2015	2016	2017	2018	2019	2020	2020 vs 2019
Environmental							
Power consumption (kWh)/total numbers of sensors sold	0.152	0.149	0.141	0.144	0.156	0.151	-4%
Water usage (L)/total numbers of sensors sold	0.65	0.72	0.63	0.49	0.51	0.38	-24%
Petrol usage (g)/total numbers of sensors sold	1.25	1.21	0.89	0.85	0.90	0.72	-20%
Freight emissions in tons of CO ₂	N/A	N/A	N/A	7'618	7'577	6'520	-14%
Production sites with ISO 14001	100%	100%	100%	100%	100%	100%	✓
Number of supplier audits	38	36	55	46	44	32	-27%
Social							
Discrepancy between salaries of men and women*	N/A	N/A	N/A	N/A	99.7%	99.7%	✓
Number of training days by external companies	287	410	571	366	908	420	-54%
Governance							
Code of Conduct signed by our employees	93%	89%	93%	96%	97%	97%	0%
% of employees trained on the Code of Conduct	N/A	N/A	N/A	63%	84%	77%	-8%

All years are 12 month calendar periods
*100% = no discrepancy, Geneva site only

Information for investors

Contact

Andrea Borla (CFO)
Phone: +41 22 706 12 50
E-mail: investor@lem.com

Number of registered shareholders

	31.3.2021	31.3.2020
1-499	1'195	1'048
500-4'999	49	50
5'000-49'999	6	5
50'000 and more	2	4
Total	1'252	1'107

Shareholders by category

In %	31.3.2021	31.3.2020
Institutional shareholders	44.3	48.7
Private individuals	25.2	25.6
LEM employees, managers and board	6.5	6.6
Treasury shares	0.1	0.0
Nonregistered shares	23.8	19.1
Total	100.0	100.0

Share information

Symbol	LEHN
Listing	SIX Swiss Exchange
Nominal value	CHF 0.50
ISIN	CH0022427626
Swiss Security Number (Valor)	2 242 762

LEM share

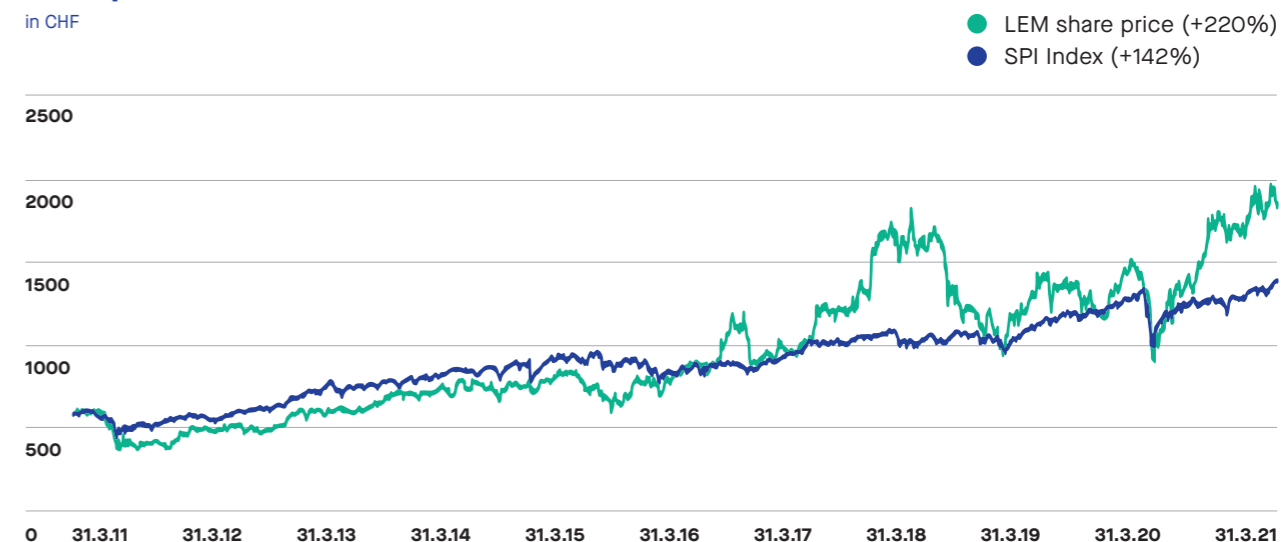
In number of shares, CHF	2020/21	2019/20
Number of shares	1'140'000	1'140'000
Year high ¹	1'998	1'520
Year low ¹	980	850
Year-end ¹	1'826	1'062
Average daily trading volume (shares) ¹	1'343	1'041
Earnings per share	48.79	53.27
Ordinary dividend per share ²	42	40
Market capitalization as per 31 March ¹ (in CHF millions)	2'082	1'211

¹ Source: SIX

² Proposal of the Board of Directors to the Annual General Meeting of Shareholders for 2020/21

Share price development LEM HOLDING SA (LEHN) compared to SPI

in CHF



Source: Bloomberg

Financial calendar

1 April 2021 to 31 March 2022

24 June 2021	Annual General Meeting for the financial year 2020/21
1 July 2021	Dividend ex-date
6 July 2021	Dividend payment date
28 July 2021	First-quarter results 2021/22
8 November 2021	Half-year results 2021/22
4 February 2022	Third-quarter results 2021/22
24 May 2022	Year-end results 2021/22
30 June 2022	Annual General Meeting for the financial year 2021/22
5 July 2022	Dividend ex-date
7 July 2022	Dividend payment date

Leading the world in electrical measurement, LEM engineers the best solutions for energy and mobility, ensuring that our customers' systems are optimized, reliable and safe.

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Concept and text
LEM
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Conseils SA, Genève
Process AG, Zurich

Design
Process AG, Zurich

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Xiao Nan, Shanghai in
collaboration with Process
Shanghai
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