xfab

20 ANNUAL
21 REPORT

WE ARE X-FAB

YOUR SPECIALTY FOUNDRY
FOR THE ANALOG WORLD

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Dear stakeholders,

On behalf of the board of directors of X-FAB Silicon Foundries SE, I have the pleasure to submit to you the annual report for the year ended December 31, 2021, which has been prepared in accordance with articles 3:6 and 3:32 of the Belgian Code on Companies and Associations (BCCA).

Another turbulent year lies behind us, again filled with lots of challenges, though quite different to the year before. The coronavirus pandemic continued to have an impact on our lives, but with the vaccines that had become available we were fortunate to have an efficient means of reducing the spread of the virus as well as the individual risk of a severe Covid-19 infection. I am grateful for everyone's contribution in containing the pandemic by complying with the pandemic-related code of conduct and by getting vaccinated. Thanks to the exemplary behavior of our employees across all sites there have been no coronavirus outbreaks at X-FAB. Given the unprecedented demand we experienced during the entire year, this was all the more important.

In 2021, X-FAB recorded revenues amounting to USD 657.8 million, which is an increase of 38% against the previous year and an all-time high in the Company's history. Revenues in our core markets – automotive, industrial, and medical – came in at USD 525.1 million, up 43% against 2020. Growth was mainly driven by the accelerating electrification in automotive and industrial, which pushed the demand for X-FAB's silicon carbide technology as well as supporting applications required in electric vehicles. The pandemic as a catalyst for the widespread use of digital health care led to an increased demand for fast and reliable testing as well as point-of-care devices to the benefit of X-FAB's medical business.

Annual automotive revenues came in at USD 331.7 million, a 41% increase compared to the previous year. The electrification of mobility is accelerating, which has been a major growth driver for X-FAB's automotive business. Not only did global electric vehicle sales almost double in 2021, the electronic content of electric vehicles is also three times as high compared to internal combustion engine cars. We are offering the full range of technologies required: from SiC to high-voltage CMOS and on-chip high-voltage isolation. With this, X-FAB is spot on to benefit from the transition to electric mobility in the long term.

The need for sustainable energy also fueled growth in industrial with applications ranging from smart metering to power conversion and charging infrastructure. Additionally, our expertise in sensing, transmitting, and actuating is strongly in demand due to megatrends such as Industry 4.0 as well as the trend to make cities and buildings smart. In 2021, we recorded industrial revenues of USD 145.6 million, up 50% year on year.

The strong demand for our SiC technology resulted in a 61% growth of total SiC revenues to USD 33.8 million in 2021. I am very pleased about the feedback we receive from customers stating that X-FAB's SiC line delivers quality and yield that is clearly above industry average. This is the perfect foundation to grow this business further – in line with the needs of our customers.

Our medical business developed strongly and the trend to take advantage of semiconductor technologies for innovative medical solutions remains unbroken. In 2021, X-FAB recorded medical revenues of 47.9 million, up 43% against the previous year. We support a great variety of medical applications – from personal medical devices, such as temperature sensors or glucose meters, to x-ray or ultrasound applications and, finally, lab-on-a-chip devices, the latter being the main growth driver for our medical business. It is exciting to see what these complex lab-on-a-chip applications are capable of: DNA sequencing, virus or sepsis detection, allergy testing, or cancer cell sorting – reliable, fast, and with a high throughput. We are experiencing a digital transformation in medicine, which will significantly improve prevention, diagnosis, treatment, and monitoring of diseases, and X-FAB is perfectly positioned not only to support this change but also to benefit from it in the long term.

The pipeline for new projects in 2021 was also well filled, reflecting the great interest in X-FAB's technologies. Full-year prototyping revenue set a new record of USD 89.3 million, which is a growth of 32% against the previous year and an indicator for future growth.

Demand was exceptionally strong throughout the year with full-year bookings totaling USD 868.4 million. On the one hand, this was certainly related to the pressure resulting from the worldwide chip shortage, but on the other hand it shows how well we are placed with our expertise and experience in a variety of specialty technologies that enable solutions to respond to the challenges of our time, first and foremost the need for greener energy to mitigate climate change.

The huge demand throughout the year by far exceeded what we would have been able to supply in the short term. As a consequence, it was necessary to allocate capacity to customers. For more than 90% of what we produce X-FAB is the sole source, and we are well aware of our responsibility toward our customers who rely on us. It has therefore been of utmost importance to ensure customers receive the minimum quantities required to avoid supply chain disruptions. At the same time, our focus has been on execution excellence and productivity improvements to increase the wafer output of our factories. This included the elimination of production bottlenecks as well as the hire of additional staff to manage the high order volume. In 2021, we kicked off various investment projects across all sites tailored to increase capacity. Most of the new equipment ordered in 2021 will gradually become available in the course of this year, which will bring wafer output up significantly.

Mainly driven by strong top-line growth, profitability improved considerably in 2021. Full-year EBITDA went up 154% year on year with an EBITDA margin of 23.3%. Other contributing factors were the favorable business mix with 80% of revenues in our core markets but also the achieved natural currency hedging of our business, which makes X-FAB's profitability largely independent from exchange rate fluctuations. On the other hand, rising costs for raw materials, spare parts, electricity, and transportation created a headwind on profitability, and X-FAB will pass on the increased costs due to inflation as well as expansion activities.

The escalation of the conflict between Ukraine and Russia has marked the beginning of 2022. We strongly condemn the aggression and military action by Vladimir Putin and the Russian government and support all sanctions that are in place. While we cannot fully exclude potential supply disruptions, we do not expect this crisis to have a major impact on our business. After the close of 2021, there were no other major events that would require disclosure.

The world is faced with manifold societal challenges: climate change, a pandemic, and growing populations, which will have an impact on the way we live and work in the future. While it is hard to predict where this path of change is going to take us, it is certain that innovative technological solutions will be at the heart of it. I take pride in how our capabilities and expertise enable smart solutions to tackle these challenges, and I am confident that X-FAB is perfectly placed to continue to be a sustainable high-growth business going forward.

My sincere thanks go to all X-FAB employees for their dedication in meeting our customers' needs and to our customers, investors, and business partners for the trust they place in us.

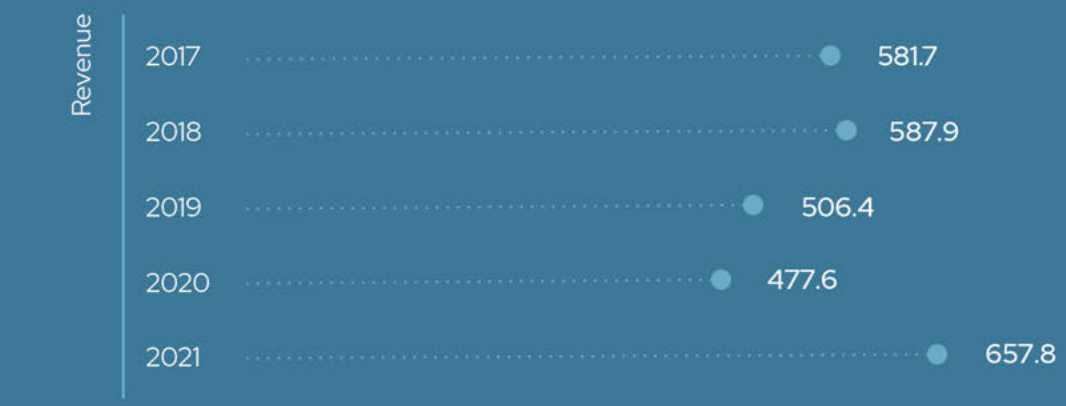
Best regards,
Rudi De Winter
CEO

ENSURING

SUSTAINABLE SUCCESS

Specialty foundry for analog/ mixed-signal semiconductor technologies with strategic focus on automotive, industrial, and medical markets

Key financials 2017 – 2021 in USD million:



Our fab locations

Erfurt, Germany
Dresden, Germany
Itzehoe, Germany
Kuching, Malaysia
Corbeil-Essonnes, France
Lubbock, USA

3. OUR CULTURE

Diversity at X-FAB

Since its inception in 1992, X-FAB has grown to become a global company with a strong presence in Europe, North America, and Asia with more than 4,000 employees spread all over the globe. At X-FAB, you will find an international and diverse working environment. Our employees represent about 45 nationalities and have varied cultural backgrounds. This makes working at X-FAB an inspiring experience – across borders and cultures. Nonetheless, we are well aware that our customers expect excellent products and services independent from nationalities and locations.
It is therefore essential to enable our employees – no matter where they are located or come from – to collaborate successfully.

What are we striving for?

OUR VISION
To be the foundry of choice for the analog world.

OUR MISSION
We are fully engaged to be the foundry of choice for the analog world by focusing on innovative solutions and manufacturing excellence that meet customer expectations, enabling long-lasting success for all our stakeholders.

Guiding us to success

Strong values build the basis for the success of X-FAB, the way we work together, and how we interact with each other and with our stakeholders. At X-FAB, we put our clients and customers at the center of what we do, and our values of integrity and respect, teamwork, commitment, and innovation are guiding us every day to live up to being a customer-oriented company.

X-FAB's values are an integral part of corporate life. New employees are introduced to X-FAB's values in a half-day Vision & Values workshop, and X-FAB's performance management process, designed to encourage regular exchange between employees and supervisors, draws attention to how the values are being realized in our daily work. And last but not least, our values are visible everywhere in the company.
In 2021, X-FAB introduced newly designed posters that are displayed at all sites to visualize X-FAB's values and to thank our employees.

Fig 3.1: Posters displayed at all sites to visualize the X-FAB values and to thank our employees

That's X-FABulous!

Real people, real stories – X-FAB's recently launched employer branding campaign puts the Company's most important asset – our employees – in the spotlight. They represent the success of the X-FAB team and the values that they demonstrate on a daily basis. From our website to social media to local advertisements, across all channels you can "meet" members of the X-FAB team from all sites with various professional and cultural backgrounds. This not only spurs motivation and identification internally but also helps us to attract new talent.

X-FAB aims at being an attractive employer and a fun company to work for – something that is never complete. It is an ongoing effort, especially with view to constantly changing framework conditions. As part of a continuous improvement process, X-FAB conducted its third Barometer employee survey in 2021. The direct employee feedback helped to identify strengths as well as areas for improvement that are being worked on with dedicated global and local teams.

INNOVATION

We reinvent ourselves constantly with regards to new products, services and business processes.

4. OUR BUSINESS

The specialty foundry business model

X-FAB is one of the world's leading specialty foundry groups for analog/mixed-signal semiconductor technologies with a clear focus on automotive, industrial, and medical applications. As a specialty foundry, X-FAB provides manufacturing and strong design support services to its customers that design analog/mixed-signal integrated circuits (ICs) and other semiconductor devices for use in their own products or the products of their customers. As a **pure-play foundry** X-FAB does not have its own IC products, but manufactures them based on designs created by its customers or third parties in cooperation and mostly based on X-FAB's portfolio of modular, highly specialized proprietary process technologies and IP. The trend to further capture and evaluate measured values in the real world generates growing need for specialty foundry services.

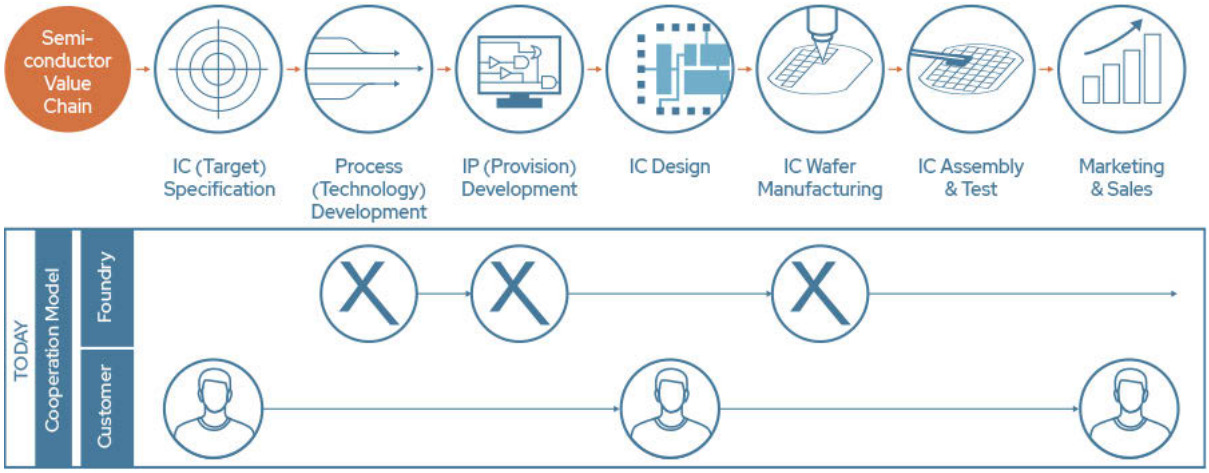


Fig. 4.1: Value chains for foundries, fabless companies, and IDMs

The X-FAB Group has an established track record with over 25 years of experience providing proprietary manufacturing processes and advanced design and engineering support offerings. Excellent service, reliability, and first-class technical support: that's what X-FAB stands for.

Manufacturing excellence

X-FAB manufactures analog/mixed-signal ICs utilizing proprietary process technologies.

A modular approach allows customers to choose from a wide range of enhanced options across many semiconductor technologies, designs and processes, **including complementary metal-oxide semiconductor (CMOS), silicon on insulator (SOI), silicon carbide (SiC),** and **micro-electro-mechanical systems (MEMS)**. Customers can draw on a variety of features in order to develop ICs specifically tailored to their end-use requirements and to optimize product performance, product size, power consumption, and other parameters. Currently the foundry offers process technologies with feature sizes of 1.0µm, 0.8µm, and 0.6µm on 150 mm wafers and 0.6µm, 350nm, 250nm, 180nm, and 130nm on 200 mm wafers.

The X-FAB Group operates six wafer manufacturing sites in Germany, France, Malaysia, and the United States, with aggregate production capacity of approximately 100,000 200 mm equivalent wafer starts per month (WSPM).

CMOS and SOI: X-FAB's open-platform technologies

The vast majority of X-FAB's technologies are based on CMOS, with SOI being a specialty variant offering a so-called SOI layer for better technical performance within certain electrical parameters. These processes are available for all customers and include performance-optimized primitive analog devices such as low noise transistors, high voltage transistors (up to 700-volt breakdown voltage), or integrated sensor elements such as optical sensor diodes.

X-FAB's DNA: Analog/mixed-signal ICs

X-FAB produces microchips and other semiconductor devices. These microchips and devices prepare real-world signals from the analog world (sensory data such as sound, light, pressure, motion, temperature, etc.) for subsequent digital processing or converting digital values into analog signals. Mixed-signal circuits (also referred to as "analog/mixed-signal ICs") embed both digital and analog circuitry onto a single IC. With more and more electronic devices interfacing with the "real world" (such as through the Internet of Things, IoT), the demand for such devices is growing continually, making mixed-signal semiconductor ICs an increasingly important part of the market for electronic equipment.

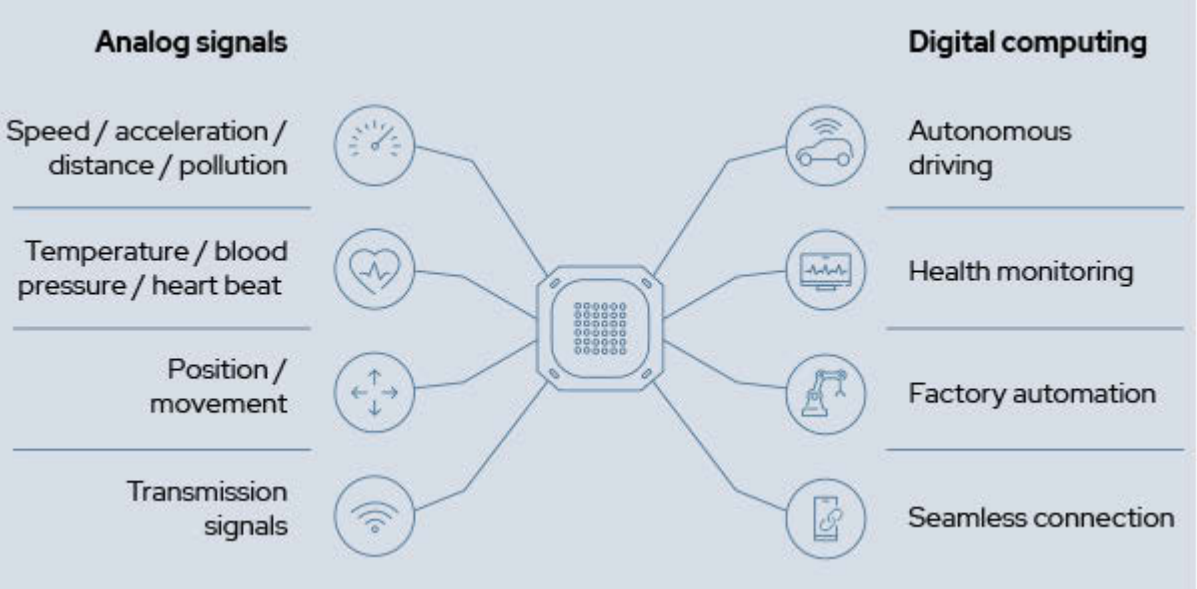


Fig. 4.2: X-FAB connects the real world with the digital world by enabling smart applications

The number of analog (including analog/mixed-signal) semiconductors produced annually has grown from approximately 77 billion units in 2008 (McClean Report 2011, Figure 5.1) to approximately 286.7 billion units in 2022, according to the 2022 McClean Report (Figure 17). This increase is expected to continue for the next five years driven by sensors and actuators (CAGR of 12.3%), optoelectronics (CAGR of 9.2%), and analog ICs (CAGR of 7.4%), with all of these categories growing stronger than the overall market with a CAGR of 7.1% (2022 McClean Report, Figure 11).

Even though those open-platform technologies typically address multiple applications and sometimes more than one market, most of them are qualified for automotive use and support high temperatures up to 175°C. In 2021, revenues based on X-FAB's CMOS technologies amounted to USD 558.5 million.

The Group owns all its technologies and the corresponding IP. The extensive IP offering comes with the option of customizing certain IP blocks, which means that customers can combine X-FAB IP with their own IP for optimized functionality. To enable fast and easy design of new products, X-FAB also provides process design kits (PDKs), libraries with digital and analog circuit elements, and complex IP blocks such as embedded flash memories, related software, and consultancy services.

X-FAB's technology portfolio (see Figure 4.3) spans geometries from 130nm to 1.0µm. The mature technologies down to the 180nm node provide very rich feature sets and thus enable a wide range of applications. X-FAB's approach to extending this portfolio is driven by customer demand to enable further applications, so the feature set for the 130nm node will be extended successively and new process nodes will be added eventually. To mention a few examples: the current 180nm SOI technology is able to operate voltages up to 200 volts, which is crucial for medical ultrasound equipment. Integrated optical sensors enable light curtain safety devices for automated factories. Embedded flash memories, which are qualified for automotive applications and support high temperatures, are suited for controller ICs placed in a car close to the engine.

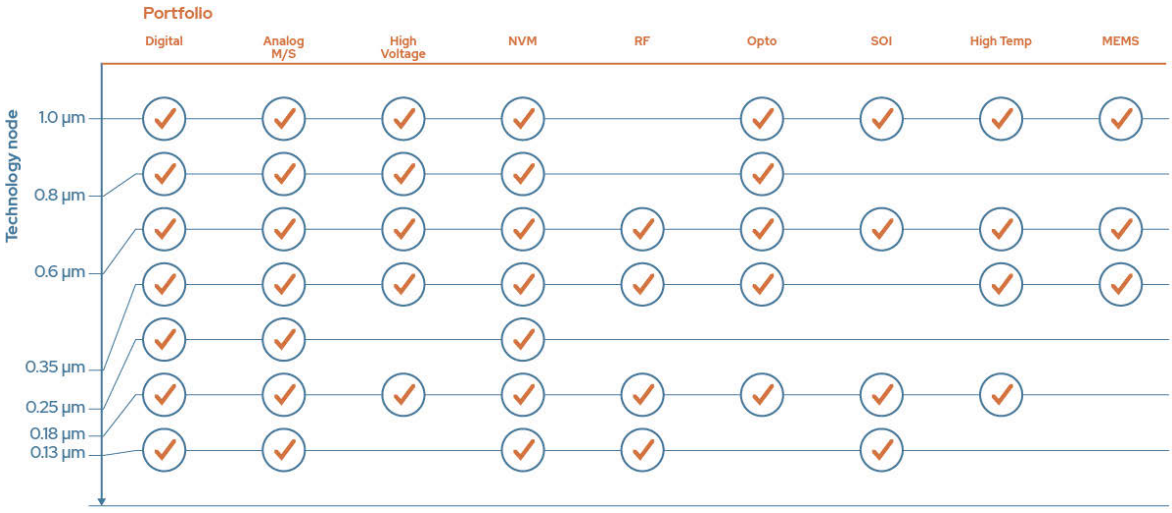


Fig. 4.3: X-FAB open platform process portfolio and features

The benefits of X-FAB's technologies

As already mentioned, X-FAB's 180nm SOI technology is capable of operating at high voltages. Through special structures on the chip, the so-called deep trench isolation (DTI) allows driver circuits operating at 200 volts to be placed alongside sensitive amplifiers processing low voltages of 2 mV. To prevent interference and crosstalk, DTI can also be placed between separate low-voltage circuits.

X-FAB supports the automotive quality standard AEC-Q100 grade 0, allowing the development of ICs that can be used at temperatures of up to 150°C. Such high temperatures can occur close to the combustion engine in hybrid electric vehicles, in battery management systems of electric vehicles, or close to the brakes of trucks.

By the subsequent integration of noble metal electrodes onto CMOS wafers, X-FAB creates interface structures for biological material. These electrodes allow the chips to measure physiological parameters of a biological sample without influencing the sample itself. At the same time, corrosion or deterioration of the chip through interaction with the sample is prevented. Noble metal electrodes make CMOS chips biocompatible. Silicon carbide (SiC) as the crystalline compound of silicon and carbon has advantages over elemental silicon when used in power technologies. Due to their special material properties, components manufactured in SiC offer higher efficiency in power conversion, fewer losses, and high temperature operation. These advantages result in more energy-efficient systems with reduced size, weight, and cost. In the case of energy supply, this means that more energy reaches the customer and, in the case of electric cars, a greater driving range.

2021 R&D highlights include:

- enhancement of the process dedicated to optical sensing with different options for photodiodes for light, with wavelengths ranging from ultraviolet (UV) to near-infrared (NIR), supporting applications such as proximity sensing, spectral analysis, and optical distance measurement;
- creating Europe's largest capacity foundry service for integrated photonics circuits by collaborating with Swiss-based Ligentec;
- entering into collaboration with the Leibniz Institute for High Performance Microelectronics in Germany to progress the development of advanced SiGe BiCMOS technologies for optoelectronics and 5G wireless communication systems;
- continued enhancement of process technologies, design libraries, and design IP, including the release of embedded Flash fully compliant with stringent AEC100-grade 0 automotive specification and a circuit design reference kit with the world's leading EDA vendors;
- increased sales and marketing activities in China, resulting in strong adoption of X-FAB's RF technologies; and
- 35 new patent applications and 29 patents were granted in 2021 contributing to an overall patent portfolio of more than 420 patents and patent applications.

MEMS: Interface to the physical world

MEMS, or micro-electro-mechanical systems, build the interface between mechanical properties and electronics. Complex processes are used to produce structures or components in silicon that convert mechanical variables, such as pressure or acceleration, into electrical signals. MEMS devices can be found in products or modules such as airbags or inkjet printer heads. The development of MEMS products differs from the development of integrated circuits in that usually the manufacturing process has to be adapted to the specification of the final product. This leads to higher development costs and longer development times, but also offers the opportunity to launch products with strong unique selling propositions that cannot be easily copied.

MEMS product manufacturing also requires the use of materials that are not used in integrated circuit manufacturing or are even undesirable because they would contaminate manufacturing lines. These are the reasons why manufacturers either focus exclusively on MEMS product manufacturing or, like X-FAB, run separate facilities for the manufacturing of CMOS and MEMS wafers.

X-FAB decided to using these existing capabilities to expand MEMS to include medical and biological phenomena. This expansion, along with X-FAB's willingness to respond to customer needs and take on additional manufacturing steps in the supply chain, is the cornerstone of a very successful MEMS business.

X-FAB's MEMS business, which recorded revenues of USD 65.5 million in 2021, is built on three pillars:

- sensors and actuators;
- silicon-based microfluidics; and
- 3D/heterogeneous integration.

Sensors and actuators have been the traditional application types of MEMS, and X-FAB builds on its established processes to further develop business in this field. X-FAB offers next generation sensor technologies for relative and absolute pressure sensors for all kinds of media, including corrosive and high-temperature environments. X-FAB further provides a proprietary open platform technology (XMB10) for inertial sensing covering both accelerometers and gyroscopes in the X, Y, and Z axes. By making it available through EUROPRACTICE, the European initiative for low-entry design and fabrication of electronic circuits, this technology is gaining traction. Gas and flow sensors are based on X-FAB's well-established noble-metal processes, resulting in very small sensor devices, while temperature sensors apply the thermopile principle, requiring a well-controlled etching process. This more established part of X-FAB's MEMS business is characterized by continuous improvement, both technologically and operationally.

At the same time, X-FAB invests in disruptive technologies. Jointly with a lead customer, X-FAB developed an integrated thermopile solution for contactless temperature measurement, providing size reduction for smaller form factors and at the same time providing medical grade accuracy. The first product based on this technology won the 2019 Best of Sensors Awards and generated significant turnover in the first year of production. Another area for investment is the concept to process the piezoelectric material aluminum nitride for applications such as precision dosing of minute amounts of liquids.

In the long term, the latter technology could also be used for silicon-based microfluidics, already a designated focus area for X-FAB. For microfluidic devices that are built on integrated circuits, X-FAB provides an offer to augment its 350nm and 180nm CMOS processes with dedicated materials or structures. This offer includes the fabrication of inert electrodes for contact of the chip with a biological substance, polyamide layers to form channels, cavities to hold the samples, and glass lids to seal the microfluidic structures.

The combination of robust analog/mixed-signal CMOS technologies with the opportunities offered by postprocessing dedicated to medical applications is attracting great attention in the marketplace. X-FAB's customer base ranges from established companies expanding into new application areas to start-up companies with innovative approaches to leverage the integration of integrated circuits and microfluidic structures on one lab-on-a-chip device. The platform approach that X-FAB is taking enables it to offer a wide range of applications, leading to an extremely dynamic business development and revenue growth. X-FAB will further invest in development and facilities that will enable it to offer complete solutions to its medical customers.

Further capabilities of X-FAB's MEMS business unit include 3D integration and wafer level packaging. Through-silicon vias (TSVs) are one of the key technologies for 3D stacking of integrated circuits. X-FAB enables this product-specific processing step for its foundry customers and successfully operated multiple prototyping runs on selected devices. For the assembly of microcomponents on top of other chips or substrates, the technology of micro-transfer-printing is in development. Further ways to integrate heterogeneous electronic component concepts for system in package (SiP) are in concept phase. The first customer products utilizing one of the aforementioned technologies are expected in the middle of 2022.

In line with customer demand, all activities described above are aimed at expanding X-FAB's value creation along the supply chain. The close cooperation with X-FAB's customers and their strong commitment, which is reflected by the high prototyping revenue of the business unit MEMS, lead us to expect a successful future for these activities.

Silicon carbide: High power for a high-growth market

At the point X-FAB entered the SiC business it was the first pure-play foundry for wide bandgap material and is to date the leading foundry supplier for SiC technologies. Following the positive trend in 2020, X-FAB's SiC business recorded a tremendous revenue growth of 61% in 2021.

SiC is a semiconductor substrate that, thanks to its material properties, supports the global trend to reduce greenhouse gas emissions. In the transition to CO_2 emissions-free mobility and transport, devices manufactured in SiC address two of the main challenges: driving range and charging time. By using SiC for components in the power train of electric vehicles, the driving range achievable with one battery charge can be increased by approximately 10%. Similarly, used in charging infrastructure, SiC enables high-power, high-speed DC charging, allowing electric vehicles to travel further and faster.

SiC is an already established material for components in the energy sector. An increasing number of suppliers are moving towards greener and more sustainable energy technologies. At the same time the demand for electricity is growing dramatically, creating an ever-growing market for these components. SiC transistors are a core component in systems for power generation from renewable sources such as photovoltaic or wind energy. SiC also enables huge energy savings in power supplies for data centers, computers, chargers for mobile phones, and devices for the Internet of Things.

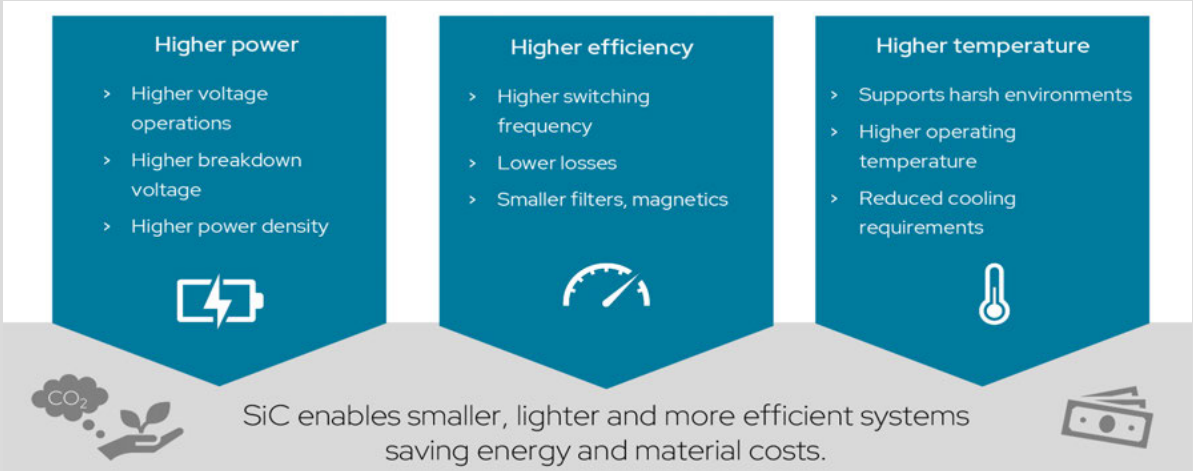
The majority of devices manufactured in silicon carbide are offered by integrated device manufacturers (IDM) designing, manufacturing, and selling semiconductor components under their own brand. X-FAB decided to offer silicon carbide processing capabilities to a variety of customers, strictly following its business model as a specialty pure-play foundry. Customers are enabled by X-FAB to develop solutions based on their own specifications to differentiate and compete in the market.

X-FAB's success as the number 1 foundry for SiC is built on four pillars:

- secure supply chain;
- leading technology offer;
- economy of scale; and
- trusted partnership.

The benefits of silicon carbide as semiconductor material

Silicon carbide enables smaller, lighter, and more efficient systems, saving energy and material costs and paving the road to a more sustainable future.



SiC is a wide bandgap material. Wide bandgap materials, such as silicon carbide, can withstand up to ten times higher voltages than silicon and can therefore operate higher power. It can operate in harsh conditions and at higher temperatures thanks to its wide bandgap voltage and three times higher thermal conductivity compared to silicon.

This means that the components in a system can be packed more densely, resulting in smaller package sizes. Another benefit is the reduction of system costs by reducing the number or size of components, such as magnetic or cooling elements for a given power level. SiC enables energy conversion systems with exceptionally high power densities. These systems achieve high efficiencies that have not previously been reached at high frequencies.

Customers can rely on the supply chain X-FAB has established for its entire foundry business over nearly 30 years. The access to leading technology in services, equipment, and processes enables them to create outstanding device performance. The existing foundry infrastructure ensures ramping to production volumes individually suited to any respective customer and product need. Finally, through its business model, X-FAB will never compete with its customers by selling components or modules under its own brand. This trusted partnership is a cornerstone of X-FAB's success as pure-play foundry.

Since the launch of its foundry offer for silicon carbide, X-FAB has achieved a number of successes. For the broad technology platform that was established in recent years, X-FAB provides standard process blocks supporting customers in the development of diodes and transistor products. A state-of-the-art tool set is available for all relevant process steps, enhanced with next-generation processing capabilities. This has enabled the thinning of wafers or metal layers, improving the solderability of the final product. X-FAB has established collaborations with design houses that can support customers during product design and has built an extensive processing knowledge base that will support each customer with their individual process.

X-FAB has established long-term partnerships with its customers and is supporting more customers than ever. The majority of the non-IDM suppliers of SiC devices are choosing X-FAB as their manufacturing site. Also, smaller IDMs leverage the additional capacity offered by X-FAB for their products.

The SiC processes are complementing X-FAB's offer for power electronics in the automotive and industrial markets. A growing number of customers using X-FAB's SiC technology, strong growth in prototyping revenue, and increasing production volumes from a variety of customers supports the promising outlook for this part of X-FAB's business.

SiC revenues for the full year came in at USD 33.8 million, a 61% growth compared to the previous year, as more customers started volume production. Five new customers were gained in 2021. With the strong pull from the market, X-FAB is adding more SiC-related equipment, extending its SiC capacity and capabilities further.

Customer orientation: Long-standing relationships and strong product customization

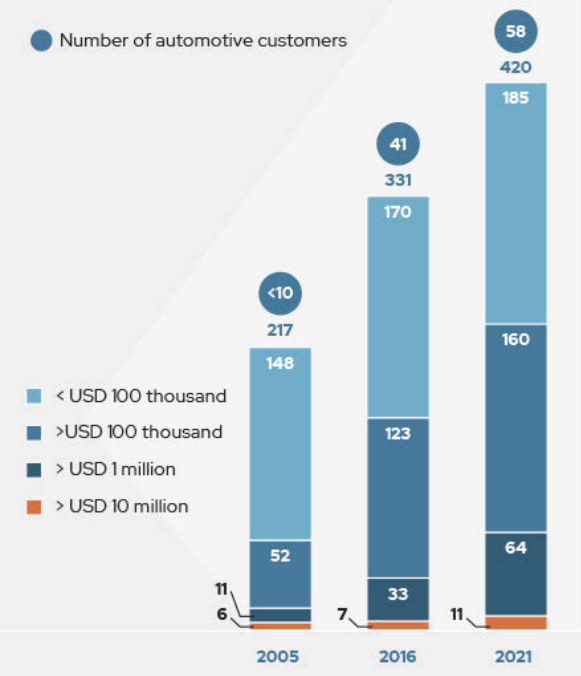


Fig. 4.4: X-FAB's customer count by annual revenue. X-FAB has grown to a diverse base of 420 customers worldwide

The majority of X-FAB's customers are fabless semiconductor companies (often also called fabless houses): companies that have no own manufacturing and process technology expertise but rely on foundries for those services and related expertise. A smaller portion of X-FAB's customer base are either original equipment manufacturers (OEMs) or integrated device manufacturers (IDMs).

X-FAB has a diverse **base of 420 customers** worldwide and continually wins new customers in its core markets (see Figure 4.4).

Due to the high degree of product customization usually required by customers, a specialty foundry is less vulnerable to extreme price and demand volatility experienced by many competitors in the broader foundry market. At the same time, it tends to serve many more customers at any given point in time, including start-ups, often helping them to realize highly innovative product concepts with prototyping or very small early-volume production. X-FAB's focus on highly customized analog/mixed-signal ICs results in smaller production volumes per each product and requires more engineering input per unit creating a high value-add for the customer.

The long-term availability of these high-quality products is essential for X-FAB's customers, since X-FAB is the sole source for more than 90% of the products it manufactures. This is an important aspect contributing to **long-lasting customer loyalty**. Most of the customer products are designed using X-FAB proprietary process technologies and design IP, and it would require significant effort by the customer to move products to other foundries.

By providing a wide range of design-related product and support services as part of its comprehensive offering, including engineering, technical, and design support, X-FAB typically has strong, long-lasting relationships with its customers. Through special offers, like post-processing of CMOS ICs and sensors, X-FAB accomplishes significant manufacturing steps, creating valuable benefits for its customers.

Fig. 4.5: Illustrative lifecycle for automotive: Analog/mixed-signal products are much more specialized for their applications and are used for many years

Those long-standing customer relationships are crucial because a large portion of the products manufactured by X-FAB have long product lifecycles of ten or more years. For example, X-FAB's first medical MEMS product, a sensor used to monitor blood pressure, has been in production for more than 20 years.

Best-in-class support: X-FAB's close relationships with customers

X-FAB aims to differentiate its business through unique technologies combined with excellent technical support. A strong asset of X-FAB is its close collaboration with customers in every phase of an IC product lifetime. From a request for a quotation and the selection of the best suited process technology to the start of volume production, X-FAB has dedicated teams to assist its customers with technical, commercial, and logistical support and consultation.

Fig. 4.6: Assignment of X-FAB teams to every phase of an IC product lifetime

X-FAB's strategic markets

X-FAB serves the markets for **automotive, industrial, and medical (AIM)** applications and supplies successfully into the market for **consumer, communications, and computer (CCC)** products. The AIM market segments all share the same requirements for quality and reliability and feature similar long product lifetimes. Consequently, X-FAB places strategic focus on AIM while selling into CCC when product requirements demand technologies that are within X-FAB's portfolio.

As an example, X-FAB's RF technology based on RF SOI has been designed into both handsets and infrastructure for 4G and 5G networks as well as Wi-Fi connectivity. X-FAB's current technology offering and technologies in development will support the adaption of the fifth generation of cellular mobile communications (5G) requirements to manage today's and tomorrow's data volumes.

After the global Covid-19-driven recession in 2020 the demand for semiconductors recovered rapidly in 2021.

The strong growth in demand was caused by several factors from a rising number of automotive ICs per new car, to increasing sales of devices for the Internet of Things and a broader proliferation of medical electronics. Given the industry wide trend, X-FAB's automotive business grew by 41%. While a similar surge was reported for the industrial semiconductor market, X-FAB's industrial business was fueled by a high demand for SiC applications, recording a revenue increase of 50% compared to 2020. At the same time, revenues achieved with medical semiconductors grew strongly by 43% and are expected to continue to grow above average.

Fig. 4.7: Tomorrow's data volumes are going to grow at an exponential rate

X-FAB enables innovative solutions to address global challenges such as:

- global warming;
- the replacement of fossil energy by sustainable energy; and
- the cost of healthcare and an aging population.

X-FAB is confident of success due to its:

- close collaboration with market leaders in various segments;
- ongoing investment in new technologies;
- wide portfolio of technologies and capabilities; and
- strong pipeline of projects in prototyping stage.

Automotive electronics – We think automotive

Product reliability and established trust in suppliers are two key prerequisites for successfully serving the automotive industry. ICs produced at X-FAB can be found everywhere in a car: in the interior as well as under the hood. Functions directly accessible to the driver such as control of the interior lighting, hands-free phone kits, and parking assistance, as well as battery management, tire pressure monitoring, and anti-lock braking systems, are all exploiting X-FAB technologies. The ever-increasing demand for electronic content in all vehicles will lead to future growth for X-FAB.

The **electrification of cars** requires intelligent solutions for battery management and charging. Transistors manufactured at X-FAB's SiC foundry enable systems with higher energy efficiency, thus increasing the reach of one battery charge. X-FAB's high-voltage and high-temperature process can cope with the challenging environmental conditions of under-the-hood applications.

Safety in traffic will be improved by sophisticated techniques of collision prevention, distance control, lane change assistance, and blind spot detection, ultimately paving the way for **autonomous driving**. The increasing relevance of environmental protection is leading to innovations to improve fuel efficiency and reduce pollution. **Connected cars** will be enabled by the advent of 5G cellular mobile networks.

X-FAB actively supports its lead customers in driving automotive innovation in electronics. Among the described growth areas, the electrification of vehicles might be the biggest technology shift the automotive industry has ever seen. By 2040 electric vehicles will represent about 70% of global light duty vehicle sales, according to Bloomberg. As cars become more and more sophisticated X-FAB will be right there to develop the technologies to make it happen.
For electric vehicles, the biggest challenge is battery life, which is synonymous with driving range. X-FAB already provides advanced technologies to address this challenge, such as its high-voltage and SiC offerings.

Fig. 4.8: Main areas of automotive applications

Industrial electronics – We empower the future

The market for application-specific analog ICs for industrial applications is a **highly fragmented market** spanning applications from avionics to factory automation. About 60% of X-FAB's current customers in production address the industrial market and rely on X-FAB's ability to provide volume production over a 10 to 15-year period. Four global megatrends are driving the next industrial revolution and will change our way of producing, consuming, and living: **Industry 4.0** with an end-to-end connected value chain; **factory automation** including industrial IoT, robots, machine-to-machine communication; **smart cities**, enabling central building management and improving urban lives through interaction and management of connected services; and, finally, **sustainable energy** through exploiting renewable sources of energy and improving power management.

X-FAB is positioned to play a major role in addressing those megatrends based on its commitment to industrial markets and customers. The Group's competitive advantages rely on **four pillars**:

- Easy to work with. Collaboration with X-FAB is made easy for industrial customers as X-FAB can efficiently handle small to medium volumes often required for industrial applications.
- Design support. X-FAB provides comprehensive design support and high-quality IP to achieve first-time-right design. For industrial customers that want to outsource their IC design efforts, X-FAB maintains a global partner network of service providers for design, test, assembly, and supply chain management.
- X-FAB's quality systems. X-FAB's automotive technologies fit well with most industrial applications, which often also operate in harsh environments.
- X-FAB is a reliable foundry partner. X-FAB is a trusted supplier and has built long relationships with its industrial customers.

Fig. 4.9: Main areas of industrial applications

Medical electronics – We save lives

The chips X-FAB manufactures for medical applications are used in **equipment** or **devices** where people, doctors, and patients depend on reliable, accurate, and error-free operation or data. X-FAB delivers chips for **personal medical devices** from cardiac pacemakers and spinal cord stimulators to traditional and implanted hearing aids. X-FAB's specialized technologies can be found in **equipment for medical imaging technologies** such as ultrasound and X-ray sensors.

A trend for the next few years is the **evolution of consumer wearables** with the aim of medical precision, offering the user actionable insights into her or his physical conditions.

Fig. 4.10: Main areas of medical applications

Implantable devices are very important for patients with chronic diseases, and research in this area will continue to provide new therapies, for example for rheumatism, strokes, or obesity. Portable devices will move medical imaging from hospitals and medical practices to patients' homes for point-of-care testing. Further trends in ultrasonic imaging are wireless probe heads and 3D imaging.

With the rapid decline in the costs of DNA sequencing since the availability of next-generation sequencing technology in 2007, new uses have been introduced for health care, industry, and research. There are not only companies that offer genetic testing as a service, DNA sequencing is also being used for the analysis of pathogens helping to contain epidemics as well as the examination of food to identify contamination or allergens. The availability of affordable genetic information is pushing the development of personalized medicine, with great benefits for patients and huge potential for cost-saving in the health care sector as a result of more effective therapies. Lab-on-a-chip or microfluidics are devices to handle minute quantities of liquids or biomaterial, usually on a chip or in a small cavity. That is where X-FAB's capability to **combine CMOS and MEMS** is a key benefit. Manufacturing steps, for which customers initially had to engage with several suppliers, are now provided by X-FAB exclusively.
According to market research, the lab-on-a-chip market is expected to grow at a CAGR of up to 14% over the next five years.

Consumer, communications, and computer – We connect people

X-FAB entered the mobile communications market with a clear vision: connecting mobile devices with the real world. With this vision in mind, X-FAB became a leading foundry provider for discrete and integrated mobile sensor solutions. X-FAB's processes enable communication and consumer applications that make our lives smarter, greener, and safer.

Specialized technologies enable optical sensors, camera autofocus, haptic drivers, touchscreen controllers, and gesture recognition solutions to create intuitive user interfaces that guarantee a great mobile experience. X-FAB's RF SOI technology enables high-performance 5G and WLAN RF front-end modules by meeting stringent requirements for both mobile phones and infrastructures. The transformation from a smartphone-based wireless world to an IoT world, where an enormous number of devices are connected, creates further growth opportunities for X-FAB. Smart home use applications such as lighting or air climate control and home automation for the elderly and disabled are made possible thanks to X-FAB's RF technologies. Devices for augmented reality (AR) and virtual reality (VR) require a multitude of sensors, analog/mixed-signal chips, and wireless connectivity. Applications based on RFID or low-power RF standards can benefit from the lower power consumption of X-FAB's RF SOI technologies compared to solutions manufactured based on a bulk CMOS process.

X-FAB's high-voltage CMOS and SOI technologies enable enhanced power management solutions to improve the energy efficiency of consumer devices, communication infrastructure, and computers. Examples where chips manufactured by X-FAB help to reduce power consumption, optimize battery lifetime, and prolong device usage are AC/DC chargers, 5G base station switches, or battery management ICs for power tools applications.

Connecting the two worlds of microelectronics and microfluidics

Biological and pharmaceutical research is making significant progress by leveraging from advances in silicon technology. Lab-on-a-chip devices created by integrating microfluidic structures onto silicon chips are essential parts of many cartridges in today's lab equipment. CMOS chips that are capped with glass or have antibodies applied to their surface are used to directly analyze biological samples. The miniaturization significantly reduces the size of the probe to just a few microliters while at the same time shortening the duration of the test. As a result, smaller and lighter devices can be developed to analyze samples on site, for example at the patient's home. The Covid-19 pandemic drastically showed the need for fast and cost-effective testing. DNA sequencing is required to investigate the virus and identify mutations. The detection of pathogens in a blood sample or the investigation of individual cells to monitor their reaction to pharmaceuticals are other uses of this technology.

CUSTOMER ORIENTATION

We put our external and internal customers at the center of what we do by providing excellent service.

5. X-FAB CONSOLIDATED FINANCIAL STATEMENTS

5.1 Summary of important developments

Revenue and results
The Group's total sales revenue in 2021 amounted to USD 657,751 thousand (2020: USD 477,586 thousand), an increase of 38% compared to the previous year. The Group recorded a net profit in 2021 of USD 83,640 thousand compared to a net profit of USD 13,530 thousand in the previous year.

The net profit in the previous year included a non-recurring gain of USD 33,551 thousand which was included in finance income. That gain resulted from the derecognition of a liability for redeemable preference shares in X-FAB Sarawak, a Group subsidiary, which is described in detail in notes 6.11 and 7.10 to the consolidated financial statements.

The Group has received government support under short-term working and other government support schemes introduced in various countries to alleviate the economic effects of the Covid-19 pandemic in both the current and previous financial year. These included an amount of USD 6,563 thousand recognized as a deduction from cost of sales representing a loan forgiven under the "Paycheck Protection Program" which had been granted and subsequently forgiven under the US federal government's Coronavirus Aid, Relief, and Economic Security Act to secure payroll and utility payments during the pandemic. Further details are provided in notes 6.2 and 7.10. Other amounts of government support received to alleviate the effects of the pandemic did not have a significant effect on the results of the Group as a whole. These subsidies are designed to partially offset ongoing operating costs and are recognized as a deduction from cost of sales, research and development expenses, and general and administration expenses corresponding to the nature of the costs they are designed to offset, and have been recognized in the same periods as the costs that they offset provided that it is reasonably assured that the Group has been, and will continue to be, in compliance with the terms and conditions to obtain and retain those subsidies. The ongoing commitments under the terms of those subsidies are not significant to the Group's operations.

There have been no significant effects on the Group's balance sheet as a result of the Covid-19 pandemic.There has been no significant effect on the carrying value or fair values of financial instruments arising from the Covid-19 pandemic.

Cost of sales
Cost of sales includes material expenses such as raw materials, the costs of maintaining fixed assets, depreciation, staff costs, and costs incurred for external production-related services. In 2021, cost of sales increased by USD 73,921 thousand, representing an increase of 17% compared to the previous year which was due to higher sales in 2021, offset by the Group's cost-saving initiatives with a variety of cost reduction measures primarily aimed at reducing staff, travel, electricity, and raw material costs as well as the loan forgiveness described above.

Research and development expenses
Research and development expenses amounted to USD 34,308 thousand in 2021, representing 5% of revenue (2020: 6%). Compared to the previous year the research and development expenses increased by 28%. The Group's research and development activities focus on development of new fabrication processes, optimization of existing processes using the Group's key process technologies, and development of new integrated circuit features in order to meet customers' analog/mixed-signal needs.

General, administrative, and selling expenses
General, administrative, and selling expenses increased by 8% in 2021.

Financial result
The net financial result decreased by USD 36,498 thousand from net income of USD 32,172 thousand in 2020 to a net expense of USD 4,326 thousand in 2021. This decrease is primarily attributable to the fact that finance income in 2020 included the non-recurring gain of USD 33,551 thousand described above and to changes in the amounts of currency exchange gains and losses.

5.2 Statement of the Board of Directors

The Board of Directors certifies, on behalf and for the account of the Company, that, to their knowledge,

- the consolidated financial statements, which have been prepared in accordance with IFRS as adopted by the EU, give a true and fair view of the assets, liabilities, financial position, and profit or loss of the Company and the entities included in the consolidation as a whole; and

- the annual report provides a fair view of the development and results of the Company and the companies included in the consolidation, as well as a description of the main risks and uncertainties that they are exposed to.

5.3 Statutory auditor's report to the general meeting of X-Fab Silicon Foundries SE on the consolidated financial statements as of and for the year ended December 31, 2021

In the context of the statutory audit of the consolidated financial statements of X-Fab Silicon Foundries SE ("the Company") and its subsidiaries (jointly "the Group"), we provide you with our statutory auditor's report. This includes our report on the consolidated financial statements for the year ended December 31, 2021, as well as other legal and regulatory requirements. Our report is one and indivisible.

We were appointed as statutory auditor by the general meeting of April 30, 2020, in accordance with the proposal of the board of directors issued on the recommendation of the audit committee. Our mandate will expire on the date of the general meeting deliberating on the annual accounts for the year ending December 31, 2022. We have performed the statutory audit of the consolidated financial statements of the Group for 14 consecutive financial years.

Report on the consolidated financial statements

Unqualified opinion
We have audited the consolidated financial statements of the Group as of and for the year ended December 31, 2021, prepared in accordance with International Financial Reporting Standards as adopted by the European Union, and with the legal and regulatory requirements applicable in Belgium. These consolidated financial statements comprise the consolidated statement of financial position as at December 31, 2021, the consolidated statements of profit or loss and other comprehensive income, changes in equity and cash flows for the year then ended and notes, comprising a summary of significant accounting policies and other explanatory information. The total of the consolidated statement of financial position amounts to USD 986.931 thousand and the consolidated statement of profit or loss and other comprehensive income shows a profit for the year of USD 83.640 thousand.

In our opinion, the consolidated financial statements give a true and fair view of the Group's equity and financial position as at December 31, 2021 and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union, and with the legal and regulatory requirements applicable in Belgium.

Basis for our unqualified opinion
We conducted our audit in accordance with International Standards on Auditing ("ISAs") as adopted in Belgium. In addition, we have applied the ISAs as issued by the IAASB and applicable for the current accounting year while these have not been adopted in Belgium yet. Our responsibilities under those standards are further described in the "Statutory auditors' responsibility for the audit of the consolidated financial statements" section of our report. We have complied with the ethical requirements that are relevant to our audit of the consolidated financial statements in Belgium, including the independence requirements.

We have obtained from the board of directors and the Company's officials the explanations and information necessary for performing our audit.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matter
Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Valuation of deferred tax assets
We refer to note 4.19 of the consolidated financial statements for the accounting policies relating to deferred taxes and to note 6.13 for the disclosures relating to deferred taxes as at December 31, 2021.

Description
The X-Fab Group, which is subject to various tax jurisdictions and resulting obligations, has a significant amount of unused tax losses carried forward (USD 215,9 million) and deductible temporary differences (USD 280,6 million) and has recognized deferred tax assets of USD 45,6 million as at December 31, 2021.

Deferred tax assets are recognized only to the extent that it is probable that sufficient future taxable profits will be generated, against which the unused tax losses carried forward and deductible temporary differences can be utilized. Significant judgement is required to assess the amount of probable future taxable profits that support the recognition of deferred tax assets.

Our audit procedures
In collaboration with our own tax specialists, we have assessed the Group's ability to utilize the deferred tax assets. Our procedures included amongst others:

- Obtaining the forecasted taxable income in the various tax jurisdictions and reconciling these to the latest budget and forecasts approved by the board of directors;

- Assessing the consistency and reliability of the Group's approach to budgeting by comparing historical budgets to actual results;
- Challenging management's key assumptions used in its budget and forecasts, such as projected growth rates, by comparing them with our own expectations derived from our knowledge of the industry and our knowledge gained during our audit;
- Recalculating independently the deferred tax assets which comprise a combination of temporary differences between tax and accounting values as well as available tax losses;
- Assessing whether deferred tax assets had been appropriately recognized in the consolidated financial statements as at December 31, 2021 based on the extent to which they can be recovered by future taxable profits; and
- Assessing the adequacy of the relevant disclosures.

Board of directors' responsibilities for the preparation of the consolidated financial statements
The board of directors is responsible for the preparation of these consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the European Union, and with the legal and regulatory requirements applicable in Belgium, and for such internal control as the board of directors determines, is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the board of directors is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the board of directors either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Statutory auditor's responsibilities for the audit of the consolidated financial statements
Our objectives are to obtain reasonable assurance as to whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of the users taken on the basis of these consolidated financial statements.

When performing our audit we comply with the legal, regulatory and professional requirements applicable to audits of the consolidated financial statements in Belgium. The scope of the statutory audit of the consolidated financial statements does not extend to providing assurance on the future viability of the Group nor on the efficiency or effectivity of how the board of directors has conducted or will conduct the business of the Group. Our responsibilities regarding the going concern basis of accounting applied by the board of directors are described below.

As part of an audit in accordance with ISAs, we exercise professional judgement and maintain professional skepticism throughout the audit. We also perform the following procedures:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- Obtain an understanding of internal controls relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control;
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the board of directors;
- Conclude on the appropriateness of the board of directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern;
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation;

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the audit committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the audit committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

For the matters communicated with the audit committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Other legal and regulatory requirements

Responsibilities of the Board of Directors
The board of directors is responsible for the preparation and the content of the board of directors' annual report on the consolidated financial statements.

Statutory auditor's responsibilities
In the context of our engagement and in accordance with the Belgian standard which is complementary to the International Standards on Auditing as applicable in Belgium, our responsibility is to verify, in all material respects, the board of directors' annual report on the consolidated financial statements and to report on these matters.

Aspects concerning the board of directors' annual report on the consolidated financial statements
Based on specific work performed on the board of directors' annual report on the consolidated financial statements, we are of the opinion that this report is consistent with the consolidated financial statements for the same period and has been prepared in accordance with article 3:32 of the Companies' and Associations' Code.

In the context of our audit of the consolidated financial statements, we are also responsible for considering, in particular based on the knowledge gained throughout the audit, whether the board of directors' annual report on the consolidated financial statements contains material misstatements, that is information incorrectly stated or misleading. In the context of the procedures carried out, we did not identify any material misstatements that we have to report to you.

The non-financial information required by article 3:32 §2 of the Companies' and Associations' Code has been included in the board of directors' annual report on the consolidated financial statements. The Company has prepared this non-financial information based on the Global Reporting Initiative ("GRI") Standards. In accordance with art 3:80 §1, 1st paragraph, 5° of the Companies' and Associations' Code, we do not comment on whether this non-financial information has been prepared in accordance with the mentioned GRI Standards.

Information about the independence
- Our audit firm and our network have not performed any engagement which is incompatible with the statutory audit of the consolidated accounts and our audit firm remained independent of the Group during the term of our mandate.

- The fees for the additional engagements which are compatible with the statutory audit referred to in article 3:65 of the Companies' and Associations' Code were correctly stated and disclosed in the notes to the consolidated financial statements.

European Single Electronic Format (ESEF)

In accordance with the draft standard on the audit of compliance of the Financial Statements with the European Single Electronic Format (hereafter "ESEF"), we have audited as well whether the ESEF-format is in accordance with the regulatory technical standards as laid down in the EU Delegated Regulation nr. 2019/815 of 17 December 2018 (hereafter "Delegated Regulation").

The board of directors is responsible for the preparation, in accordance with the ESEF requirements, of the consolidated financial statements in the form of an electronic file in ESEF format (hereafter "digital consolidated financial statements") included in the annual financial report.

It is our responsibility to obtain sufficient and appropriate information to conclude whether the format and the tagging of the digital consolidated financial statements comply, in all material respects, with the ESEF requirements under the Delegated Regulation.

In our opinion, based on our work performed, the format of and the tagging of information in the English version of the digital consolidated financial statements as per December 31, 2021, included in the annual financial report of X-Fab Silicon Foundries SE, are, in all material respects, prepared in compliance with the ESEF requirements under the Delegated Regulation.

Other aspect

- This report is consistent with our additional report to the audit committee on the basis of Article 11 of Regulation (EU) No 537/2014.

Hasselt, March 24, 2022

KPMG Bedrijfsrevisoren - Réviseurs d'Entreprises
Statutory Auditor represented by

Jos Briers

Bedrijfsrevisor / Réviseur d'Entreprises

5.4 Consolidated financial statements

Consolidated statement of profit or loss and other comprehensive income

For the year ended December 31

in thousands of U.S. dollars	Note	2021	2020
Revenue	6.1/12	657,751	477,586
Cost of sales	6.2/6.6/12	(507,773)	(433,852)
Gross profit		**149,978**	**43,734**
Research and development expenses	6.3/6.6/12	(34,308)	(26,812)
Selling expenses	6.4/6.6/12	(8,017)	(8,005)
General and administrative expenses	6.5/6.6	(32,771)	(29,610)
Rental income and expenses from investment properties	6.7/6.8/12	1,898	1,691
Impairment loss on trade receivables	7.4	(299)	(998)
Other income and other expenses	6.9/6.10/12	711	5,383
Operating profit/(loss)		**77,192**	**(14,617)**
Finance income	6.11/12	16,115	54,187
Finance costs	6.12/12	(20,441)	(22,015)
Net finance income/(costs)		**(4,326)**	**32,172**
Profit/(loss) before tax		**72,866**	**17,555**
Income tax	6.13	10,774	(4,025)
Profit/(loss) for the period		**83,640**	**13,530**
Attributable to:			
Equity holders of the Company		83,607	13,552
Non-controlling interest	7.9	33	(22)

Consolidated statement of profit and loss and other comprehensive income (continued)

For the year ended December 31

in thousands of U.S. dollars	Note	2021	2020
Profit/(loss) for the period		**83,640**	**13,530**
Other comprehensive income			
Items that will not be reclassified to profit or loss			
Remeasurement of defined benefit obligation (asset)	7.10	842	(319)
Items that are or may be transferred to profit or loss as follows:			
Foreign currency translation differences for foreign operations		188	(302)
Other comprehensive income/(loss) for the period, net of income tax		**1,030**	**(621)**
Total comprehensive income for the period		**84,670**	**12,909**
Total comprehensive income attributable to:			
Owners of the Company		84,637	12,931
Non-controlling interest	7.9	33	(22)
Total comprehensive income for the period		**84,670**	**12,909**
Weighted average number of shares outstanding, basic and diluted	6.14	130,631,921	130,631,921
Earnings per share			
Basic and diluted (in U.S. dollars)	6.14	0.64	0.10

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated statement of financial position

in thousands of U.S. dollars	Note	December 31, 2021	December 31, 2020
ASSETS			
Non-current assets			
Property, plant, and equipment	7.1	340,670	336,848
Investment properties	7.1	8,310	8,556
Intangible assets	7.2	4,034	4,726
Other assets	7.5	28	68
Deferred tax assets	6.13	45,645	30,392
Total non-current assets		**398,687**	**380,590**
Current assets			
Inventories	7.3	181,014	153,711
Trade and other receivables	7.4/12	73,689	54,576
Income tax receivables	6.13	745	1,077
Other assets	7.5	42,609	36,977
Cash and cash equivalents	7.6	290,187	205,867
Total current assets		**588,244**	**452,208**
Total assets		**986,931**	**832,798**
EQUITY AND LIABILITIES			
Equity			
Share capital	7.7	432,745	432,745
Share premium	7.7	348,709	348,709
Retained earnings	7.7	(36,154)	(120,603)
Cumulative translation adjustment	7.7	(559)	(747)
Treasury shares	7.7	(770)	(770)
Total equity attributable to equity holders of the Company		**743,971**	**659,334**
Non-controlling interests	7.9	365	344
Total equity		**744,336**	**659,678**
Non-current liabilities			
Loans and borrowings	7.10	39,916	44,413
Other liabilities and provisions	7.11	5,686	4,371
Total non-current liabilities		**45,602**	**48,784**
Current liabilities			
Trade payables	7.12/12	41,364	27,882
Loans and borrowings	7.10	87,114	31,796
Income tax payable	6.13	3,184	2,270
Provisions	7.13	4,445	9,604
Other liabilities	7.12	60,886	52,784
Total current liabilities		**196,993**	**124,336**
Total equity and liabilities		**986,931**	**832,798**

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated statement of changes in Group equity

in thousands of U.S. dollars	Note	Shares issued and fully paid	Share capital	Share premium
At December 31, 2019		**130,781,669**	**432,745**	**348,709**
Profit/(loss) for the period				
Remeasurement of defined benefit plans				
Currency translation effect, net of tax				
Total comprehensive income		**–**	**–**	**–**
Transactions with owners of the Company				
Distribution to non-controlling interests (GVG)	7.9			
Total transactions with owners of the Company		**–**	**–**	**–**
At December 31, 2020		**130,781,669**	**432,745**	**348,709**
Profit/(loss) for the period				
Remeasurement of defined benefit plans				
Currency translation effect				
Total comprehensive income		**–**	**–**	**–**
Transactions with owners of the Company				
Distribution to non-controlling interests (GVG)	7.9			
Total transactions with owners of the Company		**–**	**–**	**–**
At December 31, 2021		**130,781,669**	**432,745**	**348,709**

Retained earnings	Cumulative translation adjustment	Treasury shares	Total attributable to owners of the Company	Non-controlling interests	Total equity
(133,836)	**(445)**	**(770)**	**646,403**	**377**	**646,780**
13,552			13,552	(22)	13,530
(319)			(319)		(319)
	(302)		(302)	–	(302)
13,233	**(302)**	**–**	**12,931**	**(22)**	**12,909**
				(12)	(12)
–	**–**	**–**	**–**	**(12)**	**(12)**
(120,603)	**(747)**	**(770)**	**659,334**	**343**	**659,678**
83,607			83,607	33	83,640
842			842		842
	188		188	–	188
84,449	**188**	**–**	**84,637**	**33**	**84,670**
				(11)	(11)
–	**–**	**–**	**–**	**(11)**	**(11)**
(36,154)	**(559)**	**(770)**	**743,971**	**365**	**744,336**

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated statement of cash flows
For the year ended December 31

in thousands of U.S. dollars	Note	2021	2020
Cash flow from operating activities:			
Profit for the period	7.1	83,640	13,530
Income tax	7.1	(10,774)	4,025
Income before taxes	7.2	72,866	17,555
Reconciliation of net income to cash flow arising from operating activities:		**70,319**	**34,405**
Depreciation and amortization, before effect of grants and	6.6/7.1/7.2	76,093	75,067
Amortization of investment grants and subsidies	6.60	(3,530)	(3,453)
Interest income and expenses (net)	6.11/6.12	(176)	379
Loss/(gain) on the sale of plant, property and equipment (net)	6.9/6.10/ 7.1/7.2	(275)	(3,253)
Loss/(gain) on the change in fair value of financial assets (net) and derivatives	6.11/10	–	(420)
Other non-cash transactions (net)	8	(1,793)	(33,915)
Changes in working capital		**(31,573)**	**23,031**
Decrease/(increase) of trade and other receivables	7.4	(9,769)	362
Decrease/(increase) of other assets	7.5	(4,034)	25,510
Decrease/(increase) of inventories	7.3	(27,302)	936
(Decrease)/increase of trade payables	7.12/8	5,146	(10,970)
(Decrease)/increase of other liabilities and provisions	7.11/7.12/7.13	4,386	7,193
Income taxes (paid)/received		(2,101)	(645)
Net cash from operating activities		**109,511**	**74,346**
Cash flow from investing activities:			
Payments for property, plant, equipment, and intangible assets	7.1/7.2	(66,972)	(38,450)
Payments for investments in investment properties	7.1	–	(9)
Proceeds from sale of investments	10	–	1,156
Payments for loan investments to related parties	12	(827)	(211)
Proceeds from loan investments related parties	12	211	193
Proceeds from the sale of property, plant, and equipment	7.1	669	3,528
Interest received	6.11/6.12	1,769	1,864
Net cash used in investing activities		**(65,150)**	**(31,929)**
Proceeds from loans and borrowings	7.10	82,585	17,208
Repayment of loans and borrowings	7.10	(28,218)	(26,950)
Receipts from sale and leaseback arrangements	7.10/8	–	–
Payment of lease liabilities	7.10	(5,094)	(5,331)
Receipt of government grants and subsidies		535	696
Interest paid	6.10/6.11	(1,569)	(2,244)
Dividends to non-controlling interests	7.90	(12)	(12)
Net cash from/used in financing activities		**48,227**	**(16,633)**
Effects of changes in foreign currency exchange rates on cash		**(8,269)**	**6,872**
Net increase/(decrease) of cash and cash equivalents		**92,589**	**25,784**
Cash and cash equivalents at the beginning of the period		**205,867**	**173,211**
Cash and cash equivalents at the end of the period		**290,187**	**205,867**

The accompanying notes are an integral part of these consolidated financial statements.

Notes to the consolidated financial statements

1 Basic information and description of the X-FAB Silicon Foundries SE Group's business

X-FAB Silicon Foundries SE (hereafter referred to as "X-FAB SE," "the Company," or "the parent company" and, together with its subsidiaries, as "X-FAB SE Group" or "the Group") is a European limited company (Societas Europaea/SE) registered under the number BE0882.390.885 in Hasselt, Belgium. The parent company's registered address is Transportstraat 1, 3980 Tessenderlo, Belgium.

The Group has no associates, joint ventures, joint operations, or investments in unconsolidated structured entities (entities designed so that voting or similar rights are not the dominant factor in deciding which party controls the entity).

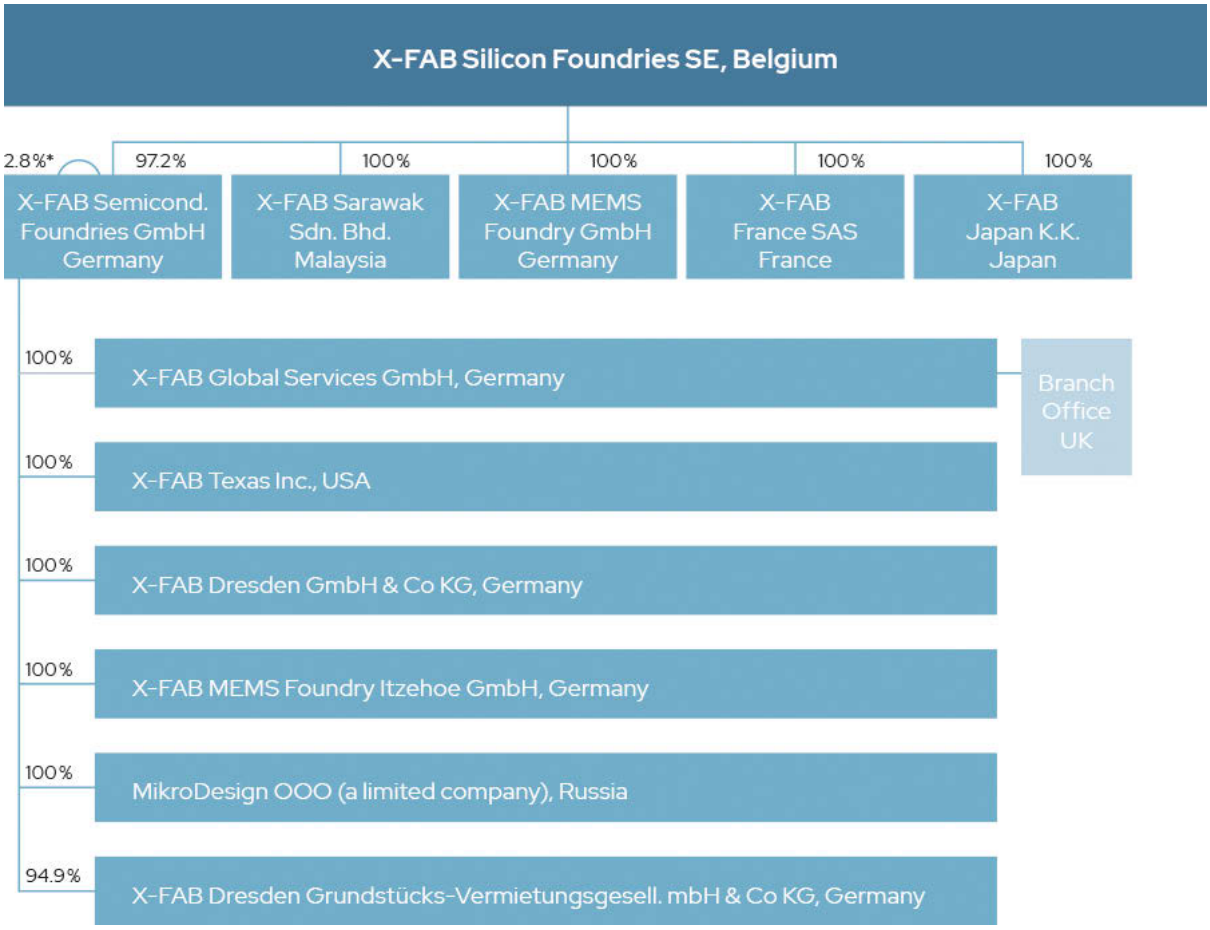
The X-FAB SE Group is one of the world's leading pure-play foundry providers specializing in analog/mixed-signal technologies.

Analog/mixed-signal products are circuits capable of processing digital as well as analog signals. As a pure-play foundry, the Group develops its own technologies, offering its customers a comprehensive range of product development (design support) and production services. The X-FAB SE Group manufactures integrated circuits to customers' designs, supplying these in the form of silicon wafers. For this purpose, X-FAB SE offers special technology modules, cell libraries, and design kits, which allow the Group's customers to develop specific circuits with broad function spectrums and to accelerate their development processes.

X-FAB SE Group's customers include companies that concentrate on the development of integrated circuits (ICs) and leave their manufacture to others (fabless companies). The Group's customers are primarily in the communication, automotive, consumer, and industrial product sectors, and are located in Europe, the United States, and Asia.

2 Group structure

The X-FAB SE Group structure as of December 31, 2021 is illustrated below.



** Treasury shares of X-FAB GmbH*
X-FAB Dresden GmbH & Co. KG refers to X-FAB Dresden GmbH & Co. KG and X-FAB Dresden Verwaltungs-GmbH

The Group's primary operations are held by X-FAB Semiconductor Foundries GmbH (X-FAB GmbH), X-FAB Dresden GmbH & Co. KG (X-FAB Dresden), X-FAB Texas Inc., Lubbock, Texas (X-FAB Texas), X-FAB Sarawak Sdn. Bhd. (X-FAB Sarawak), and X-FAB France SAS (X-FAB France), each of which operate wafer factories at their respective locations. X-FAB MEMS Foundry Itzehoe GmbH (MFI) and X-FAB MEMS Foundry GmbH (XMF) offer process technologies for the fabrication of micromechanical sensors for the detection of pressure, acceleration, rotation, and IR-radiation including integrated solutions that combine MEMS and CMOS. The remaining entities provide research and development, marketing and sales, and administration services to other Group entities or serve administrative purposes.

3 Basis of preparation

3.1 Statement of compliance

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as endorsed by the European Union. All IFRS and IAS standards and associated interpretations were adopted to the extent that they had been endorsed by the European Union by the date of issue of these financial statements.

The consolidated financial statements of X-FAB SE Group for the year ended December 31, 2021, were authorized for issue in accordance with a resolution of the directors on March 24, 2022.

3.2 Basis of measurement

The consolidated financial statements have been prepared on a historical cost basis, except for derivative financial assets and liabilities and certain non-derivative financial investments which are measured at fair value. The net defined benefit liability is measured at the present value of the defined obligation less the fair value of plan assets.

3.3 Functional and presentation currency

The consolidated financial statements are presented in U.S. dollars (USD), which is the functional and presentation currency of the parent company and the Group's primary operating companies. Amounts are rounded to the nearest thousand except when otherwise indicated. Rounding differences may occur.

3.4 Use of judgments, assumptions, and estimation uncertainties

In preparing these consolidated financial statements management has made judgments, assumptions, and estimates that affect the application of the Group's accounting policies and the reported amounts of assets, liabilities, income, and expenses. Actual amounts may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Judgments

Determination of functional currency

The functional currency of the holding company and most of its subsidiaries has been assessed as the USD due to the fact that the currency that mainly influences sales prices for goods and services is the USD. Only two subsidiaries have different functional currencies (the euro and the Russian ruble). These subsidiaries are not significant to the Group's consolidated financial statements.

With respect to the holding company the assessment is based on the fact that the holding acts as an investment holding entity (in operational subsidiaries with USD as their functional currency) and its sole activity consists of the re-allocation of Group costs which are incurred and subsequently recharged in USD. Hence the USD is deemed the most appropriate functional currency of the holding for the preparation of the consolidated financial statements.

Revenue recognition (note 4.3)

Judgment was applied in determining whether revenue from the sale of process control wafers should be recognized over time or at a point in time. Based on management's assessment of its contracts with customers, the Group has determined that only a limited number of contracts provide for an enforceable right to payment for performance completed in the case that a customer would cancel a contract for reasons other than any failure to perform as promised. As a result, the potential recognition of contracts over time has been considered to be not material.

Recognition of right-of-use assets and lease liabilities (notes 4.17 and 11)

The Group recognizes right-of-use assets and lease liabilities for certain assets held under leasing arrangements. Some of the Group's lease contracts include renewal or termination options. In order to determine the lease term for these contracts the Group took into account all relevant facts and circumstances in order to assess whether it is reasonably certain that these options will be exercised. This assessment has an impact on the term of the lease, which has a significant effect on the amount of the lease liabilities and the measurement of the right-of-use asset recognized. Should the Group make changes to its assessment of whether the renewal or termination options will be exercised, it may be necessary to increase or decrease the right-of-use assets and lease liabilities recognized.

Assumptions and estimation uncertainties

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment in the next financial year is included in the following notes:

Recognition of deferred tax assets (note 6.13)

Deferred tax assets are recorded where it is considered probable that tax savings will be made in future periods from the use of losses carried forward

and from the reversal of taxable timing differences arising on the difference between the accounting and tax values of the Group's assets. Taxable profits and the reversal of timing differences in the next financial year may differ from the amounts assumed, and assumptions made in the next financial year about future taxable profits and reversals of subsequent years may change. Such changes could result in a material adjustment.

Measurement of expected credit losses (ECLs) on trade receivables (note 7.4)
Allowances are made to reflect estimates of the amount of ECLs on any receivables. The actual amount of credit losses for receivables in the year ending December 31, 2022, may differ from the amounts recorded as impairments in the year ended December 31, 2021, which may result in a material adjustment.

Measurement of fair values
A number of the Group's accounting policies and disclosures require the measurement of fair values, both for financial and non-financial assets and liabilities.

If third-party information is used to measure fair values, the evidence obtained from third parties is assessed to support the conclusion that such valuations meet the requirements of IFRS 13, including the level in the fair value hierarchy in which such valuations should be classified.

When measuring the fair value of an asset or a liability, the Group uses market observable data as far as possible.

Fair values are classified into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

Level 1: quoted (unadjusted) prices in active markets for identical assets or liabilities.

Level 2: other techniques for which all inputs that have a significant effect on the recorded fair value are observable, either directly or indirectly.

Level 3: techniques that use inputs which have a significant effect on the recorded fair value that are not based on observable market data.

If the inputs used to measure the fair value of an asset or a liability might be categorized in different levels of the fair value hierarchy, then the fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement.

The Group measures transfers between levels of the fair value hierarchy at the end of the reporting period during which the change has occurred.

Further information about the assumptions made in measuring fair values is included in the following notes:

- 7.1 Property, plant, equipment, and investment properties
- 7.4 Trade and other receivables
- 7.6 Cash and cash equivalents
- 7.10 Current and non-current loans and borrowings
- 10 Financial instruments – fair values and risk management

4 Summary of accounting policies

4.1 Basis of consolidation
Entities included in the consolidation
The consolidated financial statements include the financial statements of the parent company and its subsidiaries, which are entities directly or indirectly controlled by the parent company. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Control is generally obtained by ownership of a majority of shares.

The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases.

The financial statements of the subsidiaries are prepared for the same reporting year as the parent company, using consistent accounting policies.

All intra-group balances, transactions, income, and expenses, as well as profits and losses resulting from intra-group transactions, are fully eliminated in these consolidated financial statements.

Non-controlling interests
Non-controlling interests represent the portion of profit or loss, component of other comprehensive income and net assets of a subsidiary attributable to equity interests that are not owned, directly or indirectly, by the parent company. Non-controlling interests' share of income and share of equity are presented separately in the income statement and within equity in the consolidated statement of financial position respectively, separately from parent shareholder's equity.

Non-controlling interests are measured at the date of acquisition at their proportionate share of the acquired company's identifiable net assets.

4.2 Foreign currency translation
Transactions in foreign currencies are initially recorded at the functional currency rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency rate of exchange ruling at the statement of financial position date. All differences are taken to profit or loss. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate as at the dates of the initial transactions. If the functional currency of a consolidated entity differs from the Group's presentation currency, assets and liabilities of that entity are translated into the presentation currency at the closing rate at the statement of financial position date, whereas equity is translated using the historic rates, and the income statement is translated at the average rate of the reporting period. All resulting differences are recognized in the cumulative translation adjustment in equity.

4.3 Revenue from contracts with customers
Sales revenue is measured based on the consideration specified in a contract with a customer. Sales revenues are recognized net of discounts, customer bonuses, and rebates granted.

There is no significant uncertainty concerning the nature, amount, or timing of the revenue or the cash flows of the revenues reported. The Group recognizes revenue when it transfers control over a good or service to a customer.

Sale of process control wafers (PCM wafers)
PCM wafers are goods that are generally customer specific, i.e. when manufacturing goods for a customer, X-FAB is creating an asset for the customer that has no alternative use to X-FAB. However, for the majority of contracts with its most important customers, X-FAB has determined that it does not have an enforceable right to obtain payment for work completed should a customer cancel an incomplete contract for reasons other than any failure by X-FAB to perform as promised. Accordingly, revenue from the sale of process control wafers (PCM wafers) is recognized when shipment has been made. At this date, control over the goods has passed to the customer. Invoices for the sale are generated at that point in time. Invoices are usually payable within 30 days. No discounts of the invoiced amounts are offered to customers in exchange for prompt payment of invoices. Sales prices with customers do not include a significant financing component.

Sales of non-recurring engineering (NRE) services and technology services
When providing non-recurring engineering (NRE) services and technology services X-FAB creates an asset for a customer that has no alternative use to X-FAB as the prototype wafers created are generally customer specific. Invoices are issued according to contractual terms – based on milestones – and are usually payable within 30 days. X-FAB has an enforceable right to payment for the performance of work completed up to the agreed milestones. Revenue is therefore recognized over time, and X-FAB applies a practical expedient for the measurement of progress. Invoicing based on milestones is a reasonable approximation of the progress made to completing the performance obligation. No discounts of the invoiced amounts are offered to customers in exchange for prompt payment of invoices. Sales prices with customers do not include a significant financing component.

Rental and other income
Revenue in respect of rental and other income is recognized over time when the relevant service is provided (see 4.6 below).

Warranty obligations
The Group typically provides warranties for defects that existed at the time of sale, as required by the terms and conditions of sale. These are assurance-type warranties which are accounted for as warranty provisions based on past experience. No service-type warranties are sold either separately or bundled together with the sale of the Group's products.

Contract costs and contract fulfillment costs
Costs of obtaining contracts requiring capitalization have been incurred by the Group; however, the deferral of such costs is not material for the purposes of these consolidated financial statements.

No costs of fulfilling contracts requiring capitalization have been incurred which are not recorded as assets in accordance with IAS 2 Inventories, IAS 16 Property, Plant and Equipment, or IAS 38 Intangible Assets.

4.4 Research and development expenses
Research and development expenses comprise staff expenses, depreciation, and other directly attributable expenses and are allocated process based, i.e. relate to research and development activities that are not related to the improvement of the existing production technologies. Costs incurred in connection with improving existing production technologies used in operational production lines are allocated to cost of sales.

Research and development costs are expensed as incurred. X-FAB SE Group considers that development work performed does not qualify for capitalization because the amount of future benefits to be derived from use of work performed is characterized by a high level of uncertainty until the projects are completed.

Government grants are awarded to the Group for its research and development activities in the form of cash tax payments or tax credits. IAS 20 Government Grants is applied to all grants, including the research and development grants received by X-FAB France, which are paid out using the French corporation tax system. The grants are recognized as income and as a non-current or current asset, as appropriate, when there is reasonable assurance that the entity will comply with the relevant conditions set out in the

terms of the grant arrangement and that the grant will be received. These income-related grants are recognized in profit or loss on a systematic basis as the entity recognizes as expenses the costs that the grants are intended to compensate.

4.5 Finance income and finance costs
Interest income or expense is recognized using the effective interest method. Dividend income is recognized in profit or loss on the date on which the Group's right to receive payment is established.

4.6 Rental income from investment properties
Rental income from operating leases on investment property is accounted for on a straight-line basis over the lease term. Lease incentives granted are recognized as an integral part of the total rental income and recognized over the term of the lease.

4.7 Employee benefits
Employee benefits consist of short-term employee benefits, payments into defined contribution pension schemes and a long-service retirement lump-sum payment scheme at the Group's subsidiary X-FAB France. The Group has no share-based payment arrangements.

Short-term employee benefits are expensed as the related service is provided. A liability is recognized for the amount expected to be paid if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

Obligations for contributions to defined contribution plans are expensed as the related service is provided. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available.

The Group's net obligation in respect of the long-service retirement lump-sum payment scheme is calculated by estimating the amount of future benefit that employees have earned in the current and prior periods, discounting that amount, and deducting the fair value of any plan assets. The calculation of the obligation is performed annually by an independent third-party expert actuary using the projected unit credit method. When the calculation results in a potential asset for the Group, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. To calculate the present value of economic benefits, consideration is given to any applicable minimum funding requirements. Remeasurements of the net defined benefit liability, which comprise actuarial gains and losses, the return on plan assets (excluding interest), and the effect of the asset ceiling (if any, excluding interest), are recognized immediately in other comprehensive income. The Group determines the net interest expense (income) on the net defined benefit liability (asset) for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the then-net defined benefit liability (asset), taking into account any changes in the net defined benefit liability (asset) during the period as a result of contributions and benefit payments. Net interest expense and other expenses related to defined benefit plans are recognized in profit or loss. When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognized immediately in profit or loss. The Group recognizes gains and losses on the settlement of a defined benefit plan when the settlement occurs.

Termination benefits are recorded as an expense at the earlier of when the Group can no longer withdraw the offer of those benefits and when the Group recognizes costs of a restructuring. The benefits are discounted if it is not expected that they will be settled wholly within 12 months of the reporting date.

4.8 Property, plant, equipment, and investment properties
Property, plant, and equipment are measured at purchase cost less accumulated depreciation and accumulated impairment losses. Purchase cost includes expenditure that is directly attributable to the acquisition of the asset. These accounting policies have also been applied to investment properties under the cost model in accordance with IAS 40.

Depreciation is provided using the straight-line method for property, plant, factory, and office equipment and for investment properties. Depreciation is calculated to write off the cost of items of property, plant, and equipment less their estimated residual values using the straight-line method over their estimated useful lives. If significant parts of an item of property, plant, and equipment have different useful lives, then they are accounted for as separate items (major components) of property, plant, and equipment.

The following useful lives are used as a basis for calculating depreciation:

- Buildings, including investment properties over 40–50 years
- Factory and office equipment straight-line over 3–10 years

Borrowing costs were not capitalized because no assets qualifying for the capitalization of borrowing costs were constructed or acquired in the period. Costs incurred which extend the useful life of assets, or which increase performance or capacity of assets, are capitalized where appropriate. Maintenance and repair costs are expensed as incurred.

Assets are recorded as disposals when they are sold or scrapped. The resulting gain or loss is recorded in income within "other income" or "other expenses" as appropriate.

4.9 Intangible assets
Purchased intangible assets are capitalized at purchase cost, including, where applicable, own work capitalized in preparing the intangible assets for use, and depreciated on a straight-line basis over their expected useful lives. The useful life applied is five years.

Internally generated intangible assets were not capitalized because the criteria for capitalization were not met (see note 4.4).

The Group has no intangible assets with indefinite useful lives.

4.10 Impairment
The carrying amounts of the Group's non- financial assets other than inventories and deferred tax assets (for which separate reviews are performed) are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists then the asset's recoverable amount is estimated.

The recoverable amount of an asset or cash-generating unit is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the "cash-generating unit").

An impairment loss is recognized if the carrying amount of an asset or its cash-generating unit exceeds its estimated recoverable amount. Impairment losses are recognized in profit or loss. Impairment losses recognized in respect of cash-generating units are allocated first to reduce the carrying amount of any goodwill allocated to the units and then to reduce the carrying amounts of the other assets in the unit (group of units) on a pro rata basis.

An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

4.11 Financial instruments
Recognition and initial measurement
Trade receivables are initially recognized when they are originated, i.e. when or as the goods and services are provided and the revenue for those goods and services is recognized. Regular way purchases and sales of financial assets were accounted for at the settlement date. All other financial assets and financial liabilities are initially recognized when the Group becomes a party to the contractual provisions of the financial instrument. The Group's trade receivables do not include a significant financing component and the amounts recognized for trade receivables are initially recognized at the transaction price. All other financial assets and financial liabilities are initially recognized at fair value plus, for items not recognized at fair value through profit or loss (FVTPL), transaction costs that are directly attributable to its acquisition or issue.

Classification and subsequent measurement
On initial recognition, a financial asset is classified as measured at amortized cost; FVOCI – debt investment; FVOCI – equity investment; or FVTPL.

(a) Financial assets at amortized cost
A financial asset is classified as measured at amortized cost if it meets both of the following conditions and is not designated as at FVTPL:
- it is held within a business model whose objective is to hold assets to collect contractual cash flows; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

(b) Debt investments at fair value through other comprehensive income (FVOCI)
A debt investment is classified as measured at fair value through other comprehensive income if it meets both of the following conditions and is not designated as at FVTPL:
- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

(c) Equity investments at fair value through other comprehensive income (FVOCI)
An equity investment is classified as measured at fair value through other comprehensive income if it is not held for trading and the Group irrevocably elects to present subsequent changes in the investment's fair value in OCI. This election is made on an investment-by-investment basis.

(d) Financial assets at fair value through profit or loss (FVTPL)
All financial assets not classified as measured at amortized cost or FVOCI as described above are measured at FVTPL. This includes all derivative financial assets, equity investments held for trading, and equity instruments not held for trading, but for which the Group did not elect to present fair value changes in other comprehensive income.

On initial recognition, the Group may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortized cost or at FVOCI as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise. No such designations have been made by the Group.

Financial assets – business model assessment

The Group makes an assessment of the objective of the business model in which a financial asset is held at a portfolio level because this best reflects the way the business is managed and information is provided to management. The information considered includes:

- the stated policies and objectives for the portfolio and the operation of those policies in practice. These include whether management's strategy focuses on earning contractual interest income, maintaining a particular interest rate profile, matching the duration of the financial assets to the duration of any related liabilities or expected cash outflows, or realizing cash flows through the sale of the assets;
- how the performance of the portfolio is evaluated and reported to the Group's management;
- the risks that affect the performance of the business model (and the financial assets held within that business model) and how those risks are managed;
- how managers of the business are compensated – e.g. whether compensation is based on the fair value of the assets managed or the contractual cash flows collected; and
- the frequency, volume, and timing of sales of financial assets in prior periods, the reasons for such sales, and the expectations about future sales activity.

Transfers of financial assets to third parties in transactions that do not qualify for derecognition are not considered sales for this purpose, consistent with the Group's continuing recognition of the assets.

Financial assets that are held for trading or are managed and whose performance is evaluated on a fair value basis are measured at FVTPL.

Financial assets – Assessment of whether contractual cash flows are solely payments of principal and interest

For the purposes of this assessment, "principal" is defined as the fair value of the financial asset on initial recognition. "Interest" is defined as consideration for the time value of money and for the credit risk associated with the principal amount outstanding during a particular period of time and for other basic lending risks and costs (e.g. liquidity risk and administrative costs), as well as a profit margin. In assessing whether the contractual cash flows are solely payments of principal and interest, the Group considers the contractual terms of the instrument. This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition. In making this assessment, the Group considers:

- contingent events that would change the amount or timing of cash flows;
- terms that may adjust the contractual coupon rate, including variable-rate features;
- prepayment and extension features; and
- terms that limit the Group's claim to cash flows from specified assets (e.g. non-recourse features).

A prepayment feature is consistent with the solely payments of principal and interest criterion if the prepayment amount substantially represents unpaid amounts of principal and interest on the principal amount outstanding, which may include reasonable additional compensation for early termination of the contract. Additionally, for a financial asset acquired at a discount or premium to its contractual par value, a feature that permits or requires prepayment at an amount that substantially represents the contractual par amount plus accrued (but unpaid) contractual interest (which may also include reasonable additional compensation for early termination) is treated as consistent with this criterion if the fair value of the prepayment feature is insignificant at initial recognition.

Financial assets – Subsequent measurement and gains and losses

Financial assets at FVTPL

These assets are subsequently measured at fair value. Net gains and losses, including any interest or dividend income, are recognized in profit or loss. The Group does not apply hedge accounting and accordingly does not apply alternative allowed accounting treatment permitted for derivatives designated as hedging instruments.

Financial assets at amortized cost

These assets are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, foreign exchange gains and losses, and impairment are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.

Debt investments at FVOCI

These assets are subsequently measured at fair value. Interest income calculated using the effective interest method, foreign exchange gains and losses, and impairment are recognized in profit or loss. Other net gains and losses are recognized in OCI. On derecognition, gains and losses accumulated in OCI are reclassified to profit or loss.

Equity investments at FVOCI

These assets are subsequently measured at fair value. Dividends are recognized as income in profit or loss unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses are recognized in OCI and are never reclassified to profit or loss.

Financial liabilities

Financial liabilities are classified as measured at amortized cost or FVTPL. A financial liability is classified as at FVTPL if it is classified as held for

trading, it is a derivative, or it is designated as such on initial recognition, whereby no liabilities as at FVTPL have been made by the Group. Financial liabilities at FVTPL are measured at fair value, and net gains and losses, including any interest expense, are recognized in profit or loss. Other financial liabilities are subsequently measured at amortized cost using the effective interest method. Interest expense and foreign exchange gains and losses are recognized in profit or loss. Any gain or loss on derecognition is also recognized in profit or loss.

Derecognition

Financial assets

The Group derecognizes a financial asset when the contractual rights to the cash flows from the financial asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which the Group neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

The Group enters into transactions whereby it transfers assets recognized in its statement of financial position, but retains either all or substantially all of the risks and rewards of the transferred assets. In these cases, the transferred assets are not derecognized.

Financial liabilities

The Group derecognizes a financial liability when its contractual obligations are discharged or canceled, or expire. The Group also derecognizes a financial liability when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognized at fair value.

On derecognition of a financial liability, the difference between the carrying amount extinguished and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

Offsetting

No financial assets or liabilities are presented on a net basis in these consolidated financial statements.

Impairment

The Group recognizes loss allowances for the expected credit losses (ECLs) that it expects to incur over the lifetime of financial assets which it measures at amortized cost.

Loss allowances for trade receivables are always measured at an amount equal to lifetime ECLs. When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECLs, the Group considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Group's historical experience and informed credit assessment and including forward-looking information.

The maximum period considered when estimating ECLs is the maximum contractual period over which the Group is exposed to credit risk.

Measurement of ECLs for non-credit-impaired receivables is assessed collectively based on a probability-weighted estimate of credit losses dependent on the number of days the balances are overdue. Expected credit losses are measured based on past experience of the recovery of similar portfolios of receivables as the Group considers this to be a reasonable approximation of the present value of the shortfalls that can be expected in future. ECLs are discounted at the effective interest rate of the financial asset if the discounting effect is determined to be material. Based on the contractual agreements, receivables are in default when the balances are unpaid by the due date. Dunning collection procedures commence when a receivable is five days overdue. Receivables are classified as credit impaired from the date on which the receivable is 90 days overdue, despite dunning procedures having being performed, or from the date any other specific indications are received that a significant deterioration in credit has occurred. Credit-impaired receivables are assessed on a case-by-case basis and assessments of collectability are based on the information available concerning the outstanding balance, including discussions with the customer, assessments of the reliability of the information provided, available counterclaims or security, an understanding of the economic climate in which the customer operates, and experience with that customer, as well as experience of similar collection procedures.

The relevant amounts are written off when the Group considers that there is no realistic prospect of recovery of the receivable and when no further enforcement activity is taken. When a customer is in liquidation the outstanding amounts are listed and monitored in an ongoing liquidation register until the liquidation process is complete.

No loss allowances are made for cash and cash equivalents as it has been determined that, because of the good standing of the Group's banking partners, the credit risk at the reporting date is so low that the ECLs are insignificant both at the date of their initial recognition and since initial recognition.

Fair values of cash and cash equivalents and current receivables and liabilities

The fair values of cash and cash equivalents, current receivables, and current liabilities approximate their book values due to their short-term nature.

4.12 Derivative financial instruments

The Group holds derivative financial instruments to hedge certain foreign currency and interest risk exposures. Embedded derivatives are separated from the host contract and accounted for separately if the

host contract is not a financial asset and certain criteria are met. Derivative financial instruments are not designated as hedging instruments for hedge accounting purposes and are accordingly classified as fair value through profit or loss.

Gains and losses from changes in the fair values of the derivative financial instruments are reported in the income statement within finance income and finance expenses. The fair values of the derivative financial instruments are presented in the statement of financial position as other current assets and/or other current liabilities, as appropriate, unless their maturity exceeds 12 months in which case they will be presented as non-current.

4.13 Inventories
Inventories of raw materials, consumables, and supplies are measured at the lower of cost and net realizable value. The cost of inventories comprises all costs of purchase, cost of conversion, and other costs incurred in bringing the inventories to their present location and condition, determined by using the weighted average acquisition cost method. Allowances are recognized if the carrying amount exceeds the expected sales price less the estimated cost to complete the inventories and the cost of marketing, sales, and distribution activities. Allowances are made in full for inventories with no realizable value.

4.14 Cash and cash equivalents
Cash and cash equivalents represent cash in hand, checks, and available balances on bank current accounts with an original maturity of four weeks or less. The use of cash and cash equivalents reported are in general not subject to restrictions with the exception of term deposits reported as cash in note 7.6.

4.15 Equity
Share capital
The nominal paid-in contribution amount on each share is recorded in share capital.

Share premium
Incremental costs directly attributable to the issue of share capital are recognized as a deduction from the share premium account, less any related tax effects.

Treasury shares
The Group reports treasury shares as deductions from the Group equity at the cost of purchase.

Equity instruments and financial liabilities
Equity instruments and financial liabilities (including share capital, redeemable preference shares, and other loans and borrowings) are classified according to the substance of the contractual arrangements entered into. An equity instrument is any contract that evidences a residual interest in the assets of the Group after deducting all of its liabilities. Dividends and distributions relating to equity instruments are debited directly to reserves. Equity instruments issued are recorded at the proceeds received, net of direct issue costs. A financial liability exists where there is a contractual obligation to deliver cash or another financial asset to another entity, or to exchange financial assets or financial liabilities under potentially unfavorable conditions. In addition, contracts that result in the entity delivering a variable number of its own equity instruments are financial liabilities. Shares containing such obligations are classified as financial liabilities. Finance costs and gains or losses relating to financial liabilities are included in the income statement. The carrying amount of the liability is increased by the finance cost and reduced by payments made in respect of that liability.

4.16 Provisions
Provisions are recognized when present obligations (legal or constructive) exist which result from past events and which are expected to result in an outflow of resources of which the timing or amount is uncertain. The provisions are measured at the discounted amount of the expected future cash flows arising under the respective obligation at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognized as finance cost. Where the Group expects some or all of a provision to be reimbursed, for example under an insurance contract, the reimbursement is recognized as a separate asset but only when the reimbursement is virtually certain. The expense relating to any provision is presented in profit or loss. If the effect of the time value of money is material, provisions are discounted using a pre-tax rate that reflects current market assessments of the time value of money and of the risk specific to the liability.

A provision for restructuring is recognized when the Group has approved a detailed and formal restructuring plan, and the restructuring either has commenced or has been announced publicly. A provision for onerous contracts is recognized for each specific contract in which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received under the contract.

4.17 Leases
The Group assesses whether a contract is, or contains, a lease arrangement. A contract is, or contains, a lease if a contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration.

The Group as lessee
The assets held under the Group's leasing arrangements are primarily commercial properties, production equipment, and infrastructure equipment.

The Group recognizes right-of-use assets and lease liabilities for most assets, i.e. these are presented on-balance sheet. However, it has elected to not to recognize right-of-use assets and lease liabilities for leases of low-value assets. The Group recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term. The Group has not applied a simplification election

available under IFRS 16 not to separate non-lease components of a lease. At inception or on reassessment of a contract that contains a lease component the Group allocates the consideration in the contract to each lease and non-lease component of the respective contract on the basis of their relative stand-alone prices.

The Group presents right-of-use assets within "property, plant, and equipment" in the statement of financial position, on the same line as it presents underlying assets of the same nature that are owned by the Group. The Group does not hold any properties under leases which are classified as investment properties.

The Group presents lease liabilities within "loans and borrowings", classified between current and non-current liabilities as appropriate.

The Group recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Group by the end of the lease term or the cost of the right-of-use asset reflects that the Group will exercise a purchase option. In that case the right-of-use asset will be depreciated over the useful life of the underlying asset, which is determined on the same basis as those of property and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate. Generally, the Group uses an estimate of its incremental borrowing rate as the discount rate.

The Group determines its incremental borrowing rate by obtaining interest rates from various external financing sources and makes certain adjustments to reflect the terms of the lease and type of the asset leased.

Lease payments included in the measurement of the lease liability comprise the following:

- fixed payments, including in-substance fixed payments;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable under a residual value guarantee; and
- the exercise price under a purchase option that the Group is reasonably certain to exercise, lease payments in an optional renewal period if the Group is reasonably certain to exercise an extension option, and penalties for early termination of a lease unless the Group is reasonably certain not to terminate early.

Some of the Group's lease contracts include renewal or termination options. In order to determine the lease term for these contracts the Group takes into account all relevant facts and circumstances in order to assess whether it is reasonably certain that these options will be exercised. This assessment has an impact on the term of the lease, which has a significant effect on the amount of the lease liabilities and the measurement of the right-of-use asset recognized.

Generally, the Group uses an estimate of its incremental borrowing rate as the discount rate. The lease liability is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Group's estimate of the amount expected to be payable under a residual value guarantee, if the Group changes its assessment of whether it will exercise a purchase, extension or termination option, or if there is a revised in-substance fixed lease payment. When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

Short-term leases and leases of low-value assets
The Group has elected not to recognize right of-use assets and lease liabilities for leases of low-value assets and short-term leases, including IT equipment. The Group recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

Sale and leaseback transactions
When the Group undertakes a sale and leaseback transaction with a buyer-lessor, it determines whether the transfer qualifies as a sale. This determination is based on the requirements for satisfying a performance obligation in IFRS 15 Revenue from Contracts with Customers. If the transfer qualifies as a sale and the transaction is on market terms the Group splits the previous carrying amount of the underlying asset into (a) a right-of-use asset arising from the leaseback and (b) the rights in the underlying asset retained by the buyer-lessor at the end of the leaseback. The Group recognizes a portion of the total gain or loss on the sale. The amount recognized is calculated by splitting the total gain or loss into (a)

an unrecognized amount relating to the rights retained by the seller-lessee and (b) an amount recognized amount relating to the buyer-lessor's rights in the underlying asset at the end of the leaseback. The leaseback itself is then accounted for under the lessee accounting model. Adjustments are required if consideration for the sale is not at fair value and/or payments for the lease are not at market rates. These adjustments result in recognition of a prepayment to reflect below-market terms and/or additional financing provided by the buyer-lessor to the seller-lessee to reflect above-market terms.

The Group as lessor
The Group is lessor at several locations where it leases commercial property which is owned by the Group but not used for its own commercial business purposes. The Group has classified these leases as operating leases, because they do not transfer substantially all of the risks and rewards incidental to the ownership of the assets.

At inception or on modification of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease component on the basis of their relative stand-alone prices.

When the Group acts as a lessor, it examines each lease at lease inception to determine whether is a finance lease or an operating lease. This consists of making an overall assessment of whether the lease transfers substantially all of the risks and rewards incidental to ownership of the underlying asset. If this is the case, then the lease is a finance lease; if not, then it is an operating lease. As part of this assessment, the Group considers certain indicators such as whether the lease is for the major part of the economic life of the asset.

When the Group is an intermediate lessor, it accounts for its interests in the head lease and the sublease separately. It assesses the lease classification of a sublease with reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset. If a head lease is a short-term lease to which the Group applies the exemption described above, then it classifies the sub-lease as an operating lease. If an arrangement contains lease and non-lease components, then the Group applies IFRS 15 to allocate the consideration in the contract.

All leases entered into by the Group as lessor to date have been classified as operating leases and relate to investment properties rented to third parties. The Group recognizes lease payments received under operating leases as income on a straight-line basis over the lease term as part of "Income from investment property rentals."

4.18 Subsidies
The Group receives government assistance in the form of government investment grants and investment subsidies which are dependent on the acquisition of certain assets qualifying under the respective grant awards. Grants and subsidies related to assets are recognized when there is reasonable assurance that the entity will comply with the relevant conditions of the grant, and that grant will be received. They are recognized in profit or loss on a systematic basis as the entity recognizes as expenses the costs that the grants are intended to compensate. The investment grants and subsidies received reduce the purchase cost for the relevant subsidized assets recorded under property, plant, and equipment.

The receipt of government assistance is governed by terms set out in law and by specific terms and conditions attached to the applicable grants and subsidies.

4.19 Income taxes
The income tax charge includes current and deferred taxation. Deferred income taxes reflect the tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes and the deferred benefits expected from unused tax losses, unused tax credits, and other credits carried forward, whereby amounts are only recognized when their realization is considered by management to probable. Deferred tax assets and liabilities are measured using the tax rates expected to apply to taxable income in the years in which these temporary differences are expected to be recovered or settled, based on tax rates enacted or substantially enacted at the statement of financial position date.

The measurement of deferred tax liabilities and deferred tax assets reflects the tax consequences that would follow from the manner in which the enterprise expects, at the statement of financial position date, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets are not discounted and are classified as non-current assets in the statement of financial position. Current and deferred tax assets and liabilities are offset only if certain criteria are met. Such criteria mean the entity has a legally enforceable right to set off the recognized amounts and it intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. Deferred tax assets are recognized when it is probable that sufficient taxable profits will be available against which the deferred tax assets can be utilized.

At each statement of financial position date, the Group reassesses unrecognized deferred tax assets and the carrying amount of deferred tax assets. The Group recognizes a previously unrecognized deferred tax asset to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered. The probability of recognition is based on the expected tax profits included in the Group's current business planning. The Group conversely reduces the carrying amount of a deferred tax asset to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of

part or that entire deferred tax asset to be utilized. A deferred tax liability is recognized for all taxable temporary differences, unless the deferred tax liability arises from the initial recognition of goodwill or the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss.

4.20 Changes to accounting policies

New accounting pronouncements

The following amendments to standards, which are effective for annual periods beginning on or before January 1, 2021, have been applied by the Group for the first time in preparing these consolidated financial statements.

Standard/interpretation	Effective date
Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 Interest Rate Benchmark Reform – Phase 2	January 1, 2021
Amendments to IFRS 16 Leases: Covid-19-Related Rent Concessions beyond June 30, 2021	April 1, 2021

None of the above amendments to standards or new and amended interpretations had a significant effect on the consolidated financial statements of the X-FAB Group.

New standards, amendments to standards, and interpretations effective for annual periods beginning after January 1, 2021

A number of new standards and amendments to standards and interpretations are not yet effective for the year ended December 31, 2021, and have not been applied in preparing these consolidated financial statements. These amendments are not expected to have a material impact on the Group's consolidated financial statements.

Amendments to IAS 1 Presentation of Financial Statements: Classification of Liabilities as Current or Non-current

Amendments to IAS 1 Presentation of Financial Statements: Classification of Liabilities as Current or Non-current, issued on January 23, 2020, clarify a criterion in IAS 1 for classifying a liability as non-current: the requirement for an entity to have the right to defer settlement of the liability for at least 12 months after the reporting period.

The amendments:

- specify that an entity's right to defer settlement must exist at the end of the reporting period;
- clarify that classification is unaffected by management's intentions or expectations about whether the entity will exercise its right to defer settlement;
- clarify how lending conditions affect classification; and
- clarify requirements for classifying liabilities an entity will or may settle by issuing its own equity instruments.

On July 15, 2020, the IASB issued Classification of Liabilities as Current or Non-current — Deferral of Effective Date (Amendment to IAS 1) deferring the effective date of the January 2020 amendments to IAS 1 by one year to annual reporting periods beginning on or after January 1, 2023, with early application permitted. The amendments have not yet been endorsed by the EU.

The IASB has published a new exposure draft on the topic on November 19, 2021.

Amendments to IFRS 3 Business Combinations

Amendments to IFRS 3 Business Combinations; IAS 16 Property, Plant and Equipment; IAS 37 Provisions, Contingent Liabilities and Contingent Assets; as well as Annual improvements, issued on May 14, 2020, include several narrow-scope amendments which are changes that clarify the wording or correct minor consequences, oversights or conflicts between requirements in the standards:

- Amendments to IFRS 3 Business Combinations update a reference in IFRS 3 to the Conceptual Framework for Financial Reporting without changing the accounting requirements for business combinations.
- Amendments to IAS 16 Property, Plant and Equipment prohibit a company from deducting from the cost of property, plant, and equipment amounts received from selling items produced while the company is preparing the asset for its intended use. Instead, a company will recognize such sales proceeds and related cost in profit or loss. The amendments also clarify that testing whether an item of PPE is functioning properly means assessing its technical and physical performance rather than assessing its financial performance.
- Amendments to IAS 37 Provisions, Contingent Liabilities and Contingent Assets specify which costs a company includes when assessing whether a contract will be loss-making. The amendments clarify that the "costs of fulfilling a contract" comprise both the incremental costs and an allocation of other direct costs.
- Annual Improvements to IFRS Standards 2018–2020 make minor amendments to IFRS 1 First-time Adoption of International Financial Reporting Standards, IFRS 9 Financial Instruments, IAS 41 Agriculture, and the illustrative examples accompanying IFRS 16 Leases.

The amendments are effective for annual periods beginning on or after January 1, 2022. These amendments have been endorsed by the EU.

Amendments to IAS 1 Presentation of Financial Statements and IFRS Practice Statement 2: Disclosure of Accounting Policies

Amendments to IAS 1 Presentation of Financial Statements and IFRS Practice Statement 2: Disclosure of Accounting Policies, issued on February 12, 2021, include narrow-scope amendments to improve accounting policy disclosures so that they provide more useful information to investors and other primary users of the financial statements. The amendments to IAS 1 require companies to disclose their *material* accounting policy information rather than their *significant* accounting policies. The amendments to IFRS Practice Statement 2 provide guidance on how to apply the concept of materiality to accounting policy disclosures.

The amendments are effective for annual periods beginning on or after January 1, 2023, with early application permitted. These amendments have not yet been endorsed by the EU.

Amendments to IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors: Definition of Accounting Estimate

Amendments to IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors: Definition of Accounting Estimates, issued on February 12, 2021, clarify how companies should distinguish changes in accounting policies from changes in accounting estimates. The distinction is important because changes in accounting estimates are applied prospectively only to future transactions and other future events, but changes in accounting policies are generally also applied retrospectively to past transactions and other past events.

The amendments are effective for annual periods beginning on or after January 1, 2023, with early application permitted. These amendments have not yet been endorsed by the EU.

Amendments to IAS 12 Income Taxes: Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction

Amendments to IAS 12 Income Taxes: Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction, issued on May 6, 2021, clarifies how companies should account for deferred tax on transactions such as leases and decommissioning obligations. IAS 12 Income Taxes specifies how a company accounts for income tax, including deferred tax, which represents tax payable or recoverable in the future. In specified circumstances, companies are exempt from recognizing deferred tax when they recognize assets or liabilities for the first time. Previously, there had been some uncertainty about whether the exemption applied to transactions such as leases and decommissioning obligations – transactions for which companies recognize both an asset and a liability. The amendments clarify that the exemption does not apply and that companies are required to recognize deferred tax on such transactions. The aim of the amendments is to reduce diversity in the reporting of deferred tax on leases and decommissioning obligations.

The amendments are effective for annual periods beginning on or after January 1, 2023, with early application permitted. These amendments have not yet been endorsed by the EU.

5 Business combinations

There have been no business combinations in the years ended December 31, 2021, or December 31, 2020, involving the Group.

6 Notes to the consolidated statement of profit or loss

6.1 Revenue

Revenue, which wholly and exclusively represents revenue from contracts with customers, comprises the following (refer to note 9 for revenue by geographic concentration):

in thousands of U.S. dollars	2021	2020
Gross revenue PCM wafer	572,986	415,160
Gross revenue NRE and technology services	89,290	67,967
Other revenue	19	16
Discounts and warranty credits	(4,544)	(5,557)
Total	**657,751**	**477,586**

Revenues from production increased by 38%, driven by a consistently strong demand across all end markets, while revenue from from prototyping increased by 31%.

No revenue is recognized in the current year from performance obligations satisfied in prior years (e.g. changes in transaction price).

6.2 Cost of sales

The cost of sales comprises the following:

in thousands of U.S. dollars	2021	2020
Employee-related expenses	(181,086)	(164,075)
Cost of materials	(156,937)	(108,451)
Costs of fixed assets	(77,783)	(61,123)
Depreciation and amortization	(66,194)	(65,103)
Facility costs	(60,332)	(56,929)
External services	(7,736)	(3,793)
Changes in inventories	22,303	8,614
Grants	20,240	12,352
Other	(248)	4,656
Total	**(507,773)**	**(433,852)**

While revenues increased by 38%, the increase in cost of sales was lower at 17% in 2021 due to the Group's

cost-saving initiatives with a variety of cost reduction measures primarily aimed at reducing staff, travel, electricity and raw material costs and due to the recognition of USD 6,563 thousand of Coronavirus-related debt forgiven (see below).

The cost-saving program, initiated in 2019 in response to the automotive crisis, was continued and intensified after the Covid-19 pandemic set in, yielding significant savings throughout the year and laying the foundation for greater profitability with continued growth going forward.

Grants which are presented as an offset against cost of sales include capital and income related grants which in 2021 additionally included a one-off amount of USD 6,563 thousand received in 2020 under the "Paycheck Protection Program" which had been granted and subsequently forgiven under the US federal government's Coronavirus Aid, Relief, and Economic Security Act to secure payroll and utility payments during the pandemic. Further details are provided in note 7.10.

6.3 Research and development expenses

Research and development expenses comprise the following:

in thousands of U.S. dollars	2021	2020
Employee-related expenses	(25,245)	(23,103)
Cost of materials	(10,279)	(9,728)
Costs of fixed assets	(3,693)	(3,738)
Depreciation and	(1,371)	(1,413)
Facility costs	(949)	(895)
External services	(799)	(462)
Grants	10,681	13,432
Other	(2,655)	(905)
Total	**(34,308)**	**(26,812)**

Research and development expenses increased consistently with the increased sales volume in 2021. It is X-FAB's policy to maintain a consistent rate of research and development expenses in relation to revenue.

6.4 Selling expenses

The selling expenses comprise the following:

in thousands of U.S. dollars	2021	2020
Employee-related expenses	(7,046)	(6,594)
Advertising costs and costs	(844)	(1,096)
External services	(154)	(364)
Facility costs	(147)	(126)
Depreciation and	(102)	(102)
Costs of fixed assets	(79)	(27)
Other	355	304
Total	**(8,017)**	**(8,005)**

6.5 General and administrative expenses

The general and administrative expenses comprise the following:

in thousands of U.S. dollars	2021	2020
Employee-related expenses	(21,206)	(20,483)
External services	(3,864)	(4,225)
Depreciation and	(3,273)	(3,420)
Costs of fixed assets	(3,232)	(2,063)
Insurance, dues, and fees	(1,522)	(1,550)
Facility costs	(1,128)	(1,064)
Grants	635	2,313
Other	819	882
Total	**(32,771)**	**(29,610)**

Grants received in 2020 primarily related to employment grants received by X-FAB France.

6.6 Expenses by nature

In the income statement, expenditures are classified by function. Expenses include depreciation charges allocated to the following items:

in thousands of U.S. dollars	2021	2020
Included in cost of sales	(65,232)	(64,442)
Included in research and development expenses	(1,196)	(1,201)
Included in selling expenses	(102)	(102)
Included in general and administrative expenses	(1,625)	(1,586)
Included in expenses related to investment properties and other expenses	(1,623)	(1,598)
Total	**(69,778)**	**(68,929)**

Expenses include charges for amortization of intangible assets allocated to the following items:

in thousands of U.S. dollars	2021	2020
Included in cost of sales	(962)	(661)
Included in research and development expenses	(175)	(212)
Included in general and administrative expenses	(1,648)	(1,817)
Total	**(2,785)**	**(2,690)**

Employee-related expenses allocated according to function in the income statement consist of the following:

in thousands of U.S. dollars	2021	2020
Wages and salaries	(184,334)	(167,907)
Social security costs	(35,580)	(33,173)
Contributions to defined contribution plans	(10,077)	(9,696)
Other employee-related costs	(4,592)	(3,535)
Total	**(234,583)**	**(214,311)**

The increase in staff costs compared to the previous year is primarily due to the general increase in business activity.

Defined contribution plans primarily consist of contributions made under statutory schemes by employers to state-based defined contribution plans.

6.7 Rental income from investment properties
Rental income from investment properties comprises the following:

in thousands of U.S. dollars	2021	2020
Income from technical services provided	7,075	6,280
Income from investment property rentals	6,876	6,543
Total	**13,951**	**12,823**

Property rentals and technical services for tenants represent activities outside the X-FAB SE Group's core activities. Technical services mainly comprise the supply of power, water, cooling water, ultra-pure water, bulk gases, or compressed dry air.

6.8 Rental expenses related to investment properties
Expenses related to investment properties comprise the following:

in thousands of U.S. dollars	2021	2020
Expenses for technical services provided	(8,956)	(7,745)
Expenses for connection with investment property	(3,097)	(3,388)
Total	**(12,053)**	**(11,133)**

Expenses in connection with investment properties mainly relate to depreciation and building maintenance.

6.9 Other income
Other income comprises the following:

in thousands of U.S. dollars	2021	2020
Income from recharges	2,817	3,789
Income from other admin services/cost sharing	693	366
Gains on disposals of property, plant, and equipment	600	3,507
Income from sales of materials	199	1,512
Other	607	506
Total	**4,916**	**9,680**

The income from recharges primarily results from charges for software maintenance costs to Melexis, a related party, included in the disclosures presented in note 12.

Gains on disposal of property, plant, and equipment in 2020 primarily related to sales of technical machinery and equipment previously used by X-FAB France for technologies in operation in its predecessor business prior to it being acquired by the X-FAB Group.

6.10 Other expenses
Other expenses comprise the following:

in thousands of U.S. dollars	2021	2020
Expenses from recharges	(2,817)	(3,789)
Losses on disposal of property, plant, and equipment	(325)	(254)
Other	(1,113)	(254)
Total	**(4,255)**	**(4,297)**

The expenses from recharges primarily relates to costs in connection with recharges for software maintenance provided to related parties. Refer to note 12.

6.11 Finance income

Finance income comprises the following:

in thousands of U.S. dollars	2021	2020
Interest on financial assets measured at amortized cost:		
Interest on cash and cash equivalents	1,767	1,864
Change in fair value of financial assets and liabilities at fair value through profit or loss:		
Gains on other financial assets classified as held for trading	–	420
Other:		
Income from exchange rate differences	14,347	18,351
Gain on derecognition of financial liability	–	33,551
Total	**16,114**	**54,186**

The gain on derecognition of a financial liability in 2020 amounting to USD 33,551 thousand was the result of the extinguishment of redeemable preference shares (RPS) previously held in X-FAB Sarawak by Sarawak Technology Holdings Sdn. Bhd. (STH), a Malaysian government agency.

Prior to derecognition, the financial liability represented the discounted value of the total amount payable in 2030, discounted on initial recognition. The extinguishment of the financial liability came into effect following an agreement entered into on October 1, 2020 between X-FAB Sarawak and STH. Under this agreement, X-FAB Sarawak was released from all future dividend and redemption payment obligations for the redeemable preference shares and the RPS held by STH were canceled for the benefit of X-FAB Sarawak. In consideration for the extinguishment STH was released from the obligation to disburse the balance of an incentive grant previously payable to X-FAB Sarawak in annual installments for 2020 and thereafter amounting to a total of USD 38,400,000 under the terms of the Agreement for Research and Development (R&D) Incentive Grant dated December 30, 2013 (Grant Agreement). The Grant Agreement was also terminated under this arrangement.

The decrease in income from exchange rate differences is primarily due to the lower level of currency exchange rate gains on cash balances denominated in Malaysian ringgit and euros.

6.12 Finance costs

Finance costs comprise the following:

in thousands of U.S. dollars	2021	2020
Interest on financial liabilities measured at amortized cost:		
Loans and borrowings	(1,592)	(3,991)
Other:		
Expenses from exchange rate differences	(18,850)	(18,024)
Total	**(20,442)**	**(22,015)**

Interest expenses in 2020 also included interest expenses incurred on the RPS prior to its derecognition in 2020 consisting of USD 996 thousand for the unwinding of the discounted RPS liability and an expense of USD 750 thousand for the 2% cumulative preference dividend payable to STH as holder of the RPS, neither of which resulted in cash outflows in 2020.

Exchange rate expenses contain the translation effects of euro-denominated loans and of euro-denominated cash.

6.13 Income tax

Income taxes comprise German corporation and trade taxes (plus solidarity surcharge), Belgian corporation tax, French tax, and Malaysian tax on interest received. United States federal income taxes have not been incurred during the reporting period as no taxable income was generated in that country or sufficient tax losses were available to offset taxable income.

Income taxes in the years 2021 and 2020 comprised the following:

in thousands of U.S. dollars	2021	2020
Current taxes:		
Actual income tax charge for the period	(2,060)	(554)
Adjustment of prior years' tax charges	(2,420)	59
	(4,480)	**(495)**
Deferred taxes	15,253	(3,530)
Total	**10,773**	**(4,025)**

The Belgian applicable tax rate applicable for the Group's result was 25.00% in 2021 and 2020 . The deferred tax assets and liabilities of the foreign subsidiaries are valued based on local tax rates. The Group's various German operations incur federal income taxes and local trade taxes which result in overall applicable tax rates of between 31.58% and 32.28.%. The federal income tax rate applicable to the Group's earnings in the United States is 21.00%, the tax rate applicable on earnings in Malaysia amounts to

24.00%, and the tax rate applicable to X-FAB France is 26.50% (2020: 28.00%).

The reconciliation of the theoretical tax charge based on the IFRS net income before tax is as follows for the years 2021 and 2020:

in thousands of U.S.	2021	2020
Result before taxes	**72,866**	**17,555**
Theoretical tax at combined applicable Belgian tax rate (25.00% in 2021 and 2020)	(18,217)	(4,389)
Recognition of previously unrecognized deferred tax on timing differences and tax losses	42,395	9,691
Current year losses for which no deferred tax asset is recognized	(12,457)	(24,559)
Adjustment of prior period tax liabilities recorded in the current period	(2,420)	(280)
Effect of tax-free income	1,580	11,524
Currency effects	(892)	1,039
Effect of permanent differences	(89)	–
Effect of non-deductible expenditures	(147)	(123)
Effect of changes in applicable tax rates enacted during the year	–	–
Effect of different tax rates applying to foreign	600	3,043
Differences which are only valid for special taxes	420	29
Income/(expense) for income taxes recognized in the consolidated statement of profit or loss	**10,773**	**(4,025)**

Previously unrecognized deferred tax on timing differences and tax losses results in deferred tax income as the Group recognizes deferred tax on timing differences and tax losses which are expected to be realized in the near future. As described below, the amount recognized in the statement of financial position is based on the Group's current business planning. The amount reported primarily consists of deferred tax assets of USD 39,209 thousand recognized in the Group's Malaysian subsidiary at December 31, 2021 (December 31, 2020: USD 30,618 thousand). The income statement includes recognition of previously unrecognized deferred tax on timing differences and tax losses carried forward of USD 42,395 thousand (previous year: USD 9,691 thousand) based on the carrying value at the reporting date, less the amount recognized in the previous year, after the amount recognized in the previous year had been reduced by the assets utilized in the current year.

Current year losses for which no deferred tax asset is recognized primarily arose in current and previous year at the Group's subsidiary in France.

Effects from tax-free income primarily relate to various tax exempted items of X-FAB Sarawak, for example interest income, exchange rate gains, gains from fixed asset sales, and the gain on the derecognition of the liability described in note 7.10.

Currency effects mainly relate to the effect of changes in exchange rates on tax carrying amounts denominated in euros in 2021 and 2020.

The deferred tax assets and liabilities arise from temporary differences and unused tax losses as follows:

in thousands of U.S. dollars	2021	2020
Deferred tax assets – unrecognized amounts		
On unused tax losses	215,947	221,875
On temporary differences		
Property, plant, and equipment/capital	278,996	321,282
Other temporary differences	1,613	5,504
Total unrecognized deferred tax assets	**496,556**	**548,661**
Deferred tax assets – recognized amounts		
On unused tax losses	18,833	12,380
On temporary differences		
Property, plant, and equipment/capital	31,341	26,144
Other temporary differences	(4,529)	(8,131)
Total recognized deferred tax assets	**45,645**	**30,393**

X-FAB SE Group recognizes deferred tax assets resulting from temporary differences and from unused tax losses which exceed the deferred tax liabilities only to the extent that, on the basis of the Group's business planning, the realization of these assets is assessed as probable. This assessment involves a review by management of profits and losses expected in the business plan and limiting recognition of the future tax benefits to take account of potential variances against the business plan. Accordingly, recognized and unrecognized deferred tax assets are subject to estimation uncertainty and there is a significant risk that the carrying amounts will require adjustment in subsequent periods. The estimates are, in particular, subject to the estimation uncertainties inherent in business planning which affect the likely utilization of unused tax losses and subject to potential changes in exchange rates which affect the size of timing differences.

Unrecognized temporary differences on property, plant, and equipment and other timing differences which can be used to offset future taxable income mainly relate to the Group's Malaysian subsidiary.

More specifically for the assessment of future available taxable profit a risk-adjusted profits approach was applied to the forecasts included in the Group's business planning. This method was applied to reflect the risk that actual taxable profits will fall short of the expectations. The Board has determined that adjusting the expected future taxable profits for this component by using a risk factor is appropriate considering the inherent risk in the semiconductor market and the specific exchange rate volatility risks which affect the assessment. In addition, the Board has determined that taxable income as from 2025 does not meet the "probable" threshold as required under IFRS standards and is not taken into account for the determination of the amount of deferred tax assets to be recognized.

In particular, tax legislation in the jurisdictions in which the Group operates provides for the full or partial cancellation of unused tax losses on the occurrence of significant changes in the direct or indirect equity ownership of the taxable entity. Accordingly, there is a risk that recognized and unrecognized deferred tax assets may not be realized should such transactions occur in the future.

X-FAB SE and its subsidiaries have unused corporation tax losses as follows:

in thousands of U.S. dollars	2021	2020
Belgian tax loss carry forward	–	213
German corporation tax loss carry forward	172,876	192,546
German trade tax loss carry forward	203,005	214,567
US federal tax loss carry forward	144,416	141,382
US state tax loss carry	14,825	11,791
Malaysian tax loss carry forward	361,114	373,350
French tax loss carry forward	219,559	199,847

The Group's French and German tax losses can be carried forward indefinitely, whereby in France and Germany there are restrictions on the amounts that can be utilized in any specific year. US federal tax losses for years prior to 2018 expire, if unused, after a period of 20 years, with the Group's first tax losses expiring in 2020. US federal tax losses of USD 3,591 thousand expired in 2021 (2020: USD 0 thousand). The Group estimates that further US federal tax losses of USD 29,855 thousand will expire in the year 2022 unless utilized. Unabsorbed Malaysian business losses expire after a period of seven years. The unused tax losses changed as a result of tax losses in the year, tax losses offset in the year, and, in addition, changes in currency exchange rates. Insignificant changes resulted from changes in estimates between the dates of preparation of the previous year's consolidated financial statements and the finalization of the tax returns and tax assessments of individual entities.

Significant deferred tax balances arise in respect of tax losses carried forward and on timing differences on property, plant, and equipment. A summary of the movements is presented in the table below. Deferred tax balances on other balance sheet positions are presented on a combined basis for this purpose.

in thousands of U.S. dollars	Tax losses carried forward	Property, plant, and equipment	Other temporary	Total
Balance at January 1, 2020	**15,324**	**26,978**	**(8,380)**	**33,922**
Recognized in profit and loss	(2,944)	(834)	249	(3,529)
Recognized in other comprehensive income	–	–	–	–
Balance at December 31, 2020	**12,380**	**26,144**	**(8,131)**	**30,393**
Set off of tax	–	803	(803)	–
Net balance at December 31, 2020	**12,380**	**26,947**	**(8,934)**	**30,393**
Balance at January 1, 2021	**12,380**	**26,144**	**(8,131)**	**30,393**
Recognized in profit and loss	6,453	5,197	3,602	15,252
Recognized in other comprehensive income	–	–	–	–
Balance at December 31, 2021	**18,833**	**31,341**	**(4,529)**	**45,645**
Set off of tax	–	3,794	(3,794)	–
Net balance at December 31, 2021	**18,833**	**35,135**	**(8,323)**	**45,645**

Changes in recognized deferred tax assets resulted in a deferred tax income of USD 15,252 thousand (2020: expense of USD 3,529 thousand). The increase in previously unrecognized deferred tax assets on property, plant, and equipment and other timing differences recognized in 2021 compared to 2020 is due to a higher level of taxable income from achieved and projected operating results at the Group's subsidiaries against which timing differences can be offset.

6.14 Earnings per share

The earnings per share is calculated by dividing the profit for the period attributable to the ordinary shareholders (as reported in the statement of profit or loss and other comprehensive income) by the weighted average number of shares in issue during the period.

The weighted average number of ordinary shares is identical to the number of ordinary shares in issue during the years ended December 31, 2021 and December 31, 2020.

No instruments with a potential diluting effect on shareholders' equity have been in issue during the years ended December 31, 2021 and December 31, 2020. Accordingly, there is no potential dilution of the profit attributable to equity shareholders and no difference between basic and diluted earnings per share.

7 Notes to the statement of financial position

7.1 Property, plant, equipment, and investment properties

in thousands of U.S. dollars	Land	Buildings	Technical machinery and	Factory and office equipment	Assets under construction	Total
Net book value January 1, 2021	**14,139**	**40,554**	**232,686**	**4,855**	**44,614**	**336,848**
Accumulated historical cost	**14,291**	**110,466**	**1,068,016**	**28,009**	**44,614**	**1,265,396**
Additions	1	80	11,850	1,490	60,322	73,743
Disposals	–	(5)	(12,106)	(322)	–	(12,433)
Reclassifications	–	732	28,098	2,220	(31,436)	(386)
Effect of changes in exchange rates	–	–	–	11	–	11
Accumulated historical cost	**14,292**	**111,273**	**1,095,858**	**31,408**	**73,500**	**1,326,331**
Accumulated depreciation January 1, 2021	**(152)**	**(69,912)**	**(835,330)**	**(23,154)**	**–**	**(928,548)**
Additions	(30)	(3,523)	(62,853)	(2,740)	–	(69,146)
Disposals	–	5	11,726	308	–	12,039
Effect of changes in exchange rates	–	–	–	(6)	–	(6)
Accumulated depreciation December 31, 2021	**(182)**	**(73,430)**	**(886,457)**	**(25,592)**	**–**	**(985,661)**
Net book value December 31, 2021	**14,110**	**37,843**	**209,401**	**5,816**	**73,500**	**340,670**
Net book value January 1, 2020	**14,165**	**41,200**	**267,874**	**5,661**	**39,855**	**368,755**
Accumulated historical cost	**14,287**	**107,587**	**1,049,067**	**26,648**	**40,545**	**1,238,134**
Additions	–	86	8,380	1,289	27,182	36,937
Disposals	–	–	(8,209)	(346)	(874)	(9,429)
Reclassifications	4	2,793	18,778	624	(22,239)	(40)
Effect of changes in exchange rates	–	–	–	(206)	–	(206)
Accumulated historical cost	**14,291**	**110,466**	**1,068,016**	**28,009**	**44,614**	**1,265,396**
Accumulated depreciation January 1, 2020	**(122)**	**(66,387)**	**(781,193)**	**(20,987)**	**(690)**	**(869,379)**
Additions	(30)	(3,525)	(62,175)	(2,611)	–	(68,341)
Disposals	–	–	8,038	334	690	9,062
Effect of changes in exchange rates	–	–	–	110	–	110
Accumulated depreciation December 31, 2020	**(152)**	**(69,912)**	**(835,330)**	**(23,154)**	**–**	**(928,548)**
Net book value December 31, 2020	**14,139**	**40,554**	**232,686**	**4,855**	**44,614**	**336,848**

Property, plant, and equipment
Additions in technical machinery and equipment and additions in assets under construction mainly refer to capital investments in technical machinery in, X-FAB France (USD 35 million), X-FAB Sarawak (USD 21 million), X-FAB Texas (USD 6 million), X-FAB Erfurt (USD 5 million), X-FAB Dresden (USD 3 million) , X-FAB MEMS Foundry Itzehoe (USD 2 million), and X-FAB MEMS Foundry (USD 1 million). Assets under construction primarily include investments in technical machinery. Additions in property, plant, and equipment resulted in cash payments in 2021 of USD 66,972 thousand (2020: USD 38,450 thousand). Refer to the statement of cash flows.

The Group received investment grants related to the acquisition of qualifying assets totaling USD 535 thousand (2020: USD 696 thousand).

No impairment tests were performed in the financial year ended December 31, 2021 as there were no triggering events that would have required impairment tests to be performed.

Accumulated historical costs have been reduced by investment grants received of USD 136,121 thousand (December 31, 2020: USD 134,340 thousand) and accumulated depreciation has been reduced by USD 122,880 thousand (December 31, 2020: USD 119,354 thousand).

At December 31, 2021 property, plant, and equipment with a book value of USD 31 million (December 31, 2020: USD 58 million) had been provided as collateral security to third-party lenders. The carrying values of technical machinery and equipment includes USD 22.0 million (December 31, 2020: USD 25.3 million) which are not owned by the Group but which are held under leasing arrangements as disclosed in note 11.

Investment properties
Investment properties consist of properties let to third parties by X-FAB GmbH, X-FAB Dresden, X-FAB Texas, and X-FAB France. The lease arrangements, the majority of which expire at various dates until 2023, continue after expiry unless canceled by either party within notice periods of between one month and six months.

Investment properties are accounted for at purchase cost less straight-line depreciation. The book and fair values of these properties at the reporting date were as follows:

in thousands of U.S. dollars	2021	2020
Net book value, beginning of period	**8,556**	**9,127**
Additions	–	10
Depreciation	(632)	(581)
Disposals	–	–
Reclassifications	385	–
Net book value, end of	**8,309**	**8,556**
Accumulated cost	33,647	33,262
Accumulated depreciation	(25,339)	(24,707)
Fair value	**26,258**	**24,964**

Properties are reclassified between the land and buildings and investment properties classifications when there is a change in the use of the property (for example, when a property previously used by the Group is let to third parties or the Group uses a property previously let to third parties).

Additions to investment properties represents work capitalized on the Group's existing investment properties.

The fair values of the investment properties relate to properties in Germany (December 31, 2021: USD 9,374 thousand; December 31, 2020: 8,085 thousand), the USA (December 31, 2021: USD 2,039 thousand; December 31, 2020: 2,034 thousand), and France (December 31, 2021: USD 14,845 thousand; December 31, 2020: 14,845 thousand). The fair value measurements of the investment properties have been categorized as a Level 3 fair value based on the inputs to the valuation techniques used.The valuations disclosed of the Group's investment properties are updated annually. In the US and in France the valuations were performed by independent third-party experts with the appropriate professional qualifications and the necessary expertise in the location and category of property. In Germany they are performed by the management of X-FAB SE Group calculated on the basis of discounted future cash flows, and discounting future rents at a rate of 1.5% (December 31, 2020: 1.5%). The valuation model takes into account the rent per square meter, expected rental growth rates, other costs, and the maturity of the contracts.

No impairment charges were recorded against investment properties in 2021 or 2020.

The following table sets out a maturity analysis of lease payments which will be received in respect of investment properties, showing the undiscounted lease payments to be received after the reporting date.

in thousands of U.S. dollars	2021	2020
2021		6,551
2022	5,034	6,213
2023	5,125	1,344
2024	1,063	1,133
2025	1,063	1,133
2026	1,063	
Total	**13,348**	**16,374**

7.2 Intangible assets

The movements on intangible assets were as follows:

in thousands of U.S. dollars	Licenses	Payments on account	Total
Net book value January 1, 2021	**3,585**	**1,141**	**4,726**
Accumulated historical cost January 1, 2021	**69,533**	**1,141**	**70,674**
Additions	768	1,325	2,093
Disposals	(15)	–	(15)
Reclassifications	1,088	(1,088)	–
Accumulated historical cost December 31, 2021	**71,374**	**1,378**	**72,752**
Accumulated amortization January 1, 2021	**(65,948)**	**–**	**(65,948)**
Additions	(2,785)	–	(2,785)
Disposals	15	–	15
Accumulated amortization December 31, 2021	**(68,718)**	**–**	**(68,718)**
Net book value December 31, 2021	**2,656**	**1,378**	**4,034**
Net book value January 1, 2020	**6,035**	**2,328**	**8,363**
Accumulated historical cost January 1, 2020	**69,361**	**2,328**	**71,689**
Additions	832	607	1,439
Disposals	(1,723)	(774)	(2,497)
Reclassifications	1,063	(1,020)	43
Accumulated historical cost December 31, 2020	**69,533**	**1,141**	**70,674**
Accumulated amortization January 1, 2020	**(63,326)**	**–**	**(63,326)**
Additions	(2,690)	–	(2,690)
Disposals	68	–	68
Accumulated amortization December 31, 2020	**(65,948)**	**–**	**(65,948)**
Net book value December 31, 2020	**3,585**	**1,141**	**4,726**

Disposals refer to software licenses from which the Group obtains no further benefit.

Intangible assets in the statement of financial position do not include any capitalized costs of internally generated assets. Payments on account refer to advance and milestone payments made for the acquisition of software licenses and the customization of such software in a project not yet fully completed. Refer to note 4.9.

No impairment against the carrying values of payments on account was recorded in 2021 or 2020.

7.3 Inventories

Inventories comprise the following:

in thousands of U.S. dollars	2021	2020
Materials and supplies	106,020	100,649
Work in progress	78,495	50,209
Finished goods	2,050	9,000
Merchandise	6	6
Write-downs	(5,558)	(6,152)
Total	**181,013**	**153,712**

Changes in work in progress and finished goods totaling USD 22,844 thousand were included in cost of sales in 2021 (2020: USD 9,803 thousand). Write-downs are recorded against inventories and recognized as an expense in cost of sales in the period of USD 541 thousand (2020: USD 1,190 thousand). There have not been any reversals of write-downs. Inventories wholly represent amounts which are expected to be realized within 12 months.

7.4 Trade and other receivables

Trade receivables and other receivables comprise the following:

in thousands of U.S. dollars	2021	2020
Trade accounts receivable	49,500	31,945
Amounts due from related party entities	25,217	24,144
Allowances	(1,028)	(1,513)
Total	**73,689**	**54,576**

The increase in trade receivables in 2021 compared to 2020 corresponds with the change in revenues.

Trade receivables are generally on 30 to 90-day terms and are non-interest bearing. They are classified as financial assets at amortized cost for financial reporting purposes. Under consideration of allowances made, the fair values of trade receivables approximate their carrying amount. The amounts due from related parties are in respect of trade accounts receivable balances.

As at December 31, the aging analysis of trade accounts receivables (third parties, net of allowances) is as follows:

in thousands of U.S.	2021	2020
Neither past due nor	30,305	20,841
Past due 1–30 days	17,004	7,826
Past due 31–60 days	615	1,433
Past due 61–360 days	548	332
Past due > 360 days	–	–
Total	**48,472**	**30,432**

The Group measures the expected credit losses of trade receivables by using an allowance matrix to measure the expected losses on trade receivable balances, including those with related parties. The allowances are based on the number of days each balance is overdue. The assessment of expected losses on trade receivable balances that are not impaired is based on past experience of credit losses, which the Group considers to be a reasonable approximation of the losses that can be expected in future periods since there are no indications that there will be significant changes in the industry going forward. An analysis of receivables by geographic region or by type of customer is not made since X-FAB mainly deals with global customers and hence there is no significant difference in risks between the geographic regions where X-FAB is active or the type of customers served by X-FAB. The amount of trade receivables due from related parties is disclosed separately from trade receivables in the table above and in the related party disclosures in note 12 below.

In addition, X-FAB recorded several additional allowances on individual case-by-case assessments for credit-impaired balances.

A settlement arrangement was entered into in 2021 with a customer, a related party, concerning outstanding receivables in excess of 360 days overdue totaling USD 1,277 thousand. Impairment allowances of USD 848 thousand had been recorded in 2020 against these balances. Under this arrangement, collateral security in the form of certain intellectual property rights was transferred by the customer to the Group as final settlement of the outstanding balances due. The Group valued the collateral security received at USD 484 thousand, and accordingly the outstanding amounts were derecognized and a gain on derecognition of the receivables, net of allowances, of USD 55 thousand was recognized in 2021. The intellectual property rights received have been recognized as intangible assets on initial recognition at their fair value. The fair value of the intellectual property rights received was estimated by management based on the discounted royalties which can be earned on the expected future product sales that will generated using the intellectual property, discounted using a weighted average cost of capital (WACC). The WACC was obtained by reference to a risk-free interest rate and entity-specific risk premiums obtained by reference to external third party reference databases (a level 3 valuation).

The following tables provide information on the exposure to credit risk and the loss allowances made for balances which are not credit impaired as at December 31, 2021 and December 31, 2020:

December 31, 2021			
in thousands of U.S. dollars	**Weighted average loss rate**	**Gross carrying amount**	**Loss allowance**
Neither past due nor impaired	0.08 %	56,462	(45)
Past due 1–30	0.08 %	15,431	(12)
Past due 31–60 days	1.50 %	742	(11)
Past due 61–90 days	3.75 %	343	(13)
More than 90 days past due (less credit impaired)	9.75 %	711	(69)
Total		**73,689**	**(150)**

December 31, 2020			
in thousands of U.S. dollars	**Weighted average loss rate**	**Gross carrying amount**	**Loss allowance**
Neither past due nor impaired	0.08 %	37,847	(30)
Past due 1–30 days	0.08 %	13,150	(11)
Past due 31–60 days	1.50 %	2,460	(37)
Past due 61–90 days	3.75 %	1,052	(39)
More than 90 days past due (less credit impaired)	9.75 %	67	(7)
Total		**54,576**	**(124)**

in thousands of U.S. dollars	2021	2020
Balance at January 1	**(1,513)**	**(1,165)**
Impairment loss recognized	(275)	(890)
Use of allowance	784	568
Reversal of allowance	–	10
Net remeasurement of loss allowance	(24)	(36)
Balance at December 31	**(1,028)**	**(1,513)**

There are no balances which were written off during the period and which continue to be the subject of collection processes.

7.5 Other assets

Other assets comprise the following:

in thousands of U.S. dollars	2021	2020
Other assets	42,609	36,977
Other non-current assets	28	68
Total	**42,637**	**37,045**

Current other assets comprise the following:

in thousands of U.S. dollars	2021	2020
R&D grants receivable	18,596	17,885
Prepaid expenses	18,112	11,431
Receivables from energy surcharges	3,116	4,308
Taxes (other)	1,512	1,216
Deposits	341	1,966
Investment grants and subsidies receivable	480	–
Other	452	171
Total	**42,609**	**36,977**

Research and development grants receivable in 2021 include USD 15,895 thousand research and development tax credits and competitiveness and employment tax credits attributable to X-FAB France (December 31, 2020: USD 14,929 thousand).

Research and development tax credits and competitiveness and employment tax credits attributable to X-FAB France totaling EUR 9,217 thousand (2020: USD 28,727 thousand) were sold without recourse to a bank in 2021. The carrying amounts of the credits sold generated cash inflows of EUR 8,928 thousand (2020: USD 28,119 thousand) net of EUR 233 thousand representing interest expenses and fees (2020: USD 608 thousand). On initial recognition, X-FAB France presents the grant receivables as a reduction of cost of sales and research and development expenses, consistent with the Group's general presentation of subsidized expenses. The sales accelerate the cash inflows from tax credits; in the normal course of events where the credits are not sold they can be offset against income tax payable by X-FAB France or will be paid to X-FAB France at a subsequent date if there is no income tax to be paid. Due to the sale, these repayments will be received by the bank directly. There are no remaining ongoing obligations to be fulfilled by X-Fab France in respect of the tax credits and the credits have been derecognized and the amounts received by the bank have been recognized as cash and cash equivalents.

Prepaid expenses refer to prepayments made for raw materials.

The deposits mainly represent security deposits provided as collateral security and are classified as current assets as they are either in connection with contractual arrangements which may be canceled at short notice or are expected to be released within 12 months on other grounds.

7.6 Cash and cash equivalents

Cash and cash equivalents comprise the following:

in thousands of U.S. dollars	2021	2020
Cash and bank balances	287,907	202,838
Term deposits	2,280	3,029
Total	**290,187**	**205,867**

Term deposits and some cash at bank balances earn interest at floating rates based on daily bank deposit rates. The fair values of cash and short-term deposits are identical to the carrying amounts.

7.7 Equity

Share capital

X-FAB Silicon Foundries SE had 130,781,669 fully paid-in ordinary shares in issue at December 31, 2021, and December 31, 2020. Each share carries one vote at the Company's general meetings. There are no unissued shares authorized for issue.

Share premium
The share premium of X-FAB Silicon Foundries SE represents the excess of paid-in capital for shares at the time of their issue over the fractional value of the shares.

Retained earnings
Retained earnings represent the historical balance of cumulative losses of the Group together with the cumulated balance of the remeasurement of defined benefit plans attributable to owners of the parent. The negative retained earnings primarily result from the Group's acquisition of X-FAB Sarawak Sdn. Bhd. under a "reverse acquisition transaction" in 2006.

Cumulative translation adjustment
The translation reserve comprises all foreign currency differences arising from the translation of the financial statements of foreign operations that have functional currencies other than USD.

Treasury shares
At December 31, 2021 the Group held 149,748 treasury shares of X-FAB Silicon Foundries SE held by its fully owned subsidiary X-FAB GmbH. Based on the purchase price of EUR 11.25 per share, the treasury shares reduced the equity capital of the parent company by USD 770 thousand (December 31, 2020: USD 770 thousand).

Share-based payment arrangements
The Group had no share-based payment arrangements and no share option programs during the years ended December 31, 2021, or December 31, 2020.

Authorization to acquire treasury shares
In accordance with the Belgian Companies and Associations Code, the Articles of Association permit the Company to acquire, on or outside the stock market, its own shares, profit-sharing certificates or associated certificates by resolution approved by the shareholders' meeting by a majority of at least 80% of the votes cast where at least 50% of the share capital and at least 50% of the profit certificates, if any, are present or represented. Prior approval by the shareholders is not required if the Company purchases the shares in order to offer them to the Company's employees.

The shares, profit-sharing certificates, or associated certificates can only be acquired with funds that would otherwise be available for distribution as dividend. The total nominal value or fractional value of the shares, profit-sharing certificates, or associated certificates held by the Company can at no time be more than 20% of the share capital. Voting rights attached to shares held by the Company as treasury shares are suspended.

On March 16, 2017, an extraordinary shareholders' meeting authorized the Board of Directors to purchase up to 20% of the outstanding shares, for a price not lower than 10% below the lowest closing price in the last 30 trading days preceding the transaction and not more than 5% above the highest closing price during the last 30 trading days preceding the transaction. This authorization was valid for five years from March 16, 2017 and expired on March 17, 2022.

The above authorization was also valid if the acquisition was made by one of the subsidiaries directly controlled by the Company, as set out in Article 5 SE Regulation juncto Article 7:221 of the Belgian Companies and Associations Code.

The Board of Directors is authorized to divest all or part of the shares, profit-sharing certificates, or associated certificates at a price it determines, on or outside the stock market or in the framework of its remuneration policy to employees, directors, or consultants of the Company, or to prevent any serious and imminent harm to the Company. This authorization is valid without any restriction in time, except when the divestment is made to prevent serious and imminent harm to the Company, in which case the authorization is only valid for three years as from the date of the publication of the authorization in the Annexes to the Belgian State Gazette (Belgisch Staatsblad/Moniteur belge). The authorization covers the divestment of the shares, profit-sharing certificates, or associated certificates by a direct subsidiary of the Company, as set out in Article 5 SE Regulation juncto Article 7:221 of the Belgian Companies and Associations Code.

7.8 Dividends
No dividends were resolved or paid in the years 2021 or 2020.

Under Belgian company law, the shareholders decide on the distribution of profits at the annual shareholders' meeting, based on the latest audited statutory accounts of the Company. Dividends may be paid either in cash or in kind. However, shareholders may not declare a dividend if the Company has not first reserved at least 5% of its profits for the financial year until such reserve has reached an amount equal to 10% of its share capital (the "Legal Reserve") or if, following any such dividend, the level of the net assets adjusted for the unamortized balance of the incorporation costs and capitalized research and development costs of the Company falls below the amount of the Company's paid-in-capital and of its non-distributable reserves. The Board of Directors may pay an interim dividend, provided certain conditions set forth in Belgian company law are met.

7.9 Non-controlling interests

The non-controlling interests for the period and the accumulated non-controlling interests represent the 5.1% (December 31, 2020: 5.1%) non-controlling shareholders' interests in the subsidiary GVG. GVG is a property management company responsible for the administration of certain of the Group's properties in Dresden, Germany. GVG's net profit for the financial year 2021 amounted to USD 807 thousand (2020 net loss: USD 274 thousand). GVG had total assets amounting to USD 9,084 thousand at December 31, 2021 (December 31, 2020: USD 9,602 thousand), liabilities of USD 4,887 thousand (December 31, 2020: USD 6,200 thousand), and equity of USD 4,197 thousand (December 31, 2020: USD 3,402 thousand). The currency translation effect of the retranslation of non-controlling interests in GVG is not material to the movements on other comprehensive income or the statement of changes in equity.

7.10 Loans and borrowings

The Group has unused credit lines available under bank loan facilities as follows:

in thousands of U.S. dollars	2021	2020
Unused credit lines		
Unused part of multicurrency revolving credit facility denominated in EUR or in USD – variable rates	152,494	–
Interest rate USD: SOFR + 1.25%		
Interest rate EUR: EURIBOR +1.0%		
Unused credit lines denominated in EUR - fixed rates	4,520	1,440
Interest rate: 2.1%		
Other unused credit lines denominated in EUR – variable rates	5,651	1,153
Interest rates: EURIBOR +1.957%/ EURIBOR +2.63%		

The carrying amounts of the Group's loans and borrowings at December 31 are shown in the following table:

in thousands of U.S. dollars	2021	2020
Bank loans and overdrafts		
Fixed interest bank loans denominated in USD	–	6,563
Maturity: 2021		
Interest rates: 1.0%		
Repayments in monthly installments		
Fixed interest bank loans denominated in EUR	23,247	33,006
Maturity: 2020–2026		
Interest rates: 0.85–2.3%		
Repayments in monthly or quarterly installments		
Variable interest bank loans denominated in EUR	–	3,779
Maturity: 2020–2021		
Interest rate: EURIBOR + 1.58% – EURIBOR + 1.69%		
Repayments in quarterly installments		
Variable interest bank overdrafts in EUR	–	8,225
Maturity: 2021		
Interest rates: EURIBOR + 3.0%		
Variable interest revolving credit facility denominated in USD	30,582	–
Maturity: 2022		
Interest rates: SOFR + 1.25%		
Repayment on maturity		
Variable interest revolving credit facility denominated in EUR	42,944	–
Maturity: 2022		
Interest rates: EURIBOR + 1.0%		
Repayment on maturity		
Leasing arrangements		
Leasing liabilities denominated in EUR	9,209	1,934
Maturity: 2020–2028		
Interest rates: 0.6–1.91%		
Repayment in monthly installments		
Liabilities for leases recognized on application of IFRS 16	21,048	22,702
denominated in USD, EUR and MYR		
Maturity: 2020–2034		
Interest rates: 0.02–4.82%		
Repayment in monthly installments		
Total	**127,030**	**76,209**
Current loans and borrowings	**87,114**	**31,796**
Non-current loans and borrowings	**39,916**	**44,413**

Variable interest bank loans include loans amounting to USD 31,000 thousand and EUR 38,000 thousand under the EUR 200,000,000 multicurrency revolving facility agreement ("the facility") entered into between the parent company and its principal subsidiaries and a syndicate of eight international banks on December 1, 2021. The credit facility is for a five-year period until December 2026, with an option for X-FAB to request an extension of the facility's maturity date until December 2027. The option is exercisable not earlier than 90 days prior to and not 45 days later than prior to the initial termination date of November 30, 2026.

The movements on loans and borrowing include exchange rate gains of USD 2,627 thousand resulting from the translation of euro-denominated loans and borrowings (2020: exchange rate losses of USD 4,042 thousand).

The fair value of the Group's loans and borrowings are presented in note 10.

Approximately 42% of the Group's borrowings are at a fixed rate of interest (December 31, 2020: 84%). Refer to note 10.

Bank loans and overdrafts of USD 20,281 thousand (2020: USD 36,785 thousand) are secured by charges on plant and machinery and land (see note 7.1).

A bank loan with a carrying value of USD 6,563 thousand at December 31, 2020 has been derecognized and reported in the financial year 2021 as a deduction from cost of sales. The loan, obtained and paid to X-FAB Texas in 2020, was issued under the "Paycheck Protection Program" established by the US federal government's Coronavirus Aid, Relief, and Economic Security Act to secure payroll and utility payments. Under the terms of the program, the borrower was entitled to apply for forgiveness of the loan by December 31, 2020, provided certain conditions regarding retention and rehiring of employees had been met and provided the government still had sufficient budget available to forgive those loans. An application for forgiveness of the bank loan was made in the financial year 2020 and was approved on June 10, 2021. Accordingly the balance on the loan was released to income and was offset against cost of sales matching the classification of the costs – direct production-related costs – which were financed under the program.

As described in note 6.11, a liability for the X-FAB Sarawak redeemable preference shares representing a discounted carrying amount of a USD 50,000 thousand debt investment held by Sarawak Technologies Holding Sdn. Bhd. due for repayment in 2030 was derecognized in 2020 as a result of an agreement between X-FAB Sarawak and Sarawak Technology Holdings Sdn. Bhd. entered into on October 1, 2020. The redeemable preference shares required X-FAB Sarawak to make payments of a cumulative preference dividend of 2% to the holder to the extent that X-FAB Sarawak had sufficient net profits after taxation available for distribution for the relevant financial year including retained profits and distributable reserves brought forward.

Prior to derecognition, the USD 50,000 thousand due for repayment in 2030 was carried at USD 33,551 thousand, a discounted value, discounted at an interest rate of 4.12%. The discount rate was calculated at the date of the initial recognition of the liability, taking into account a weighted average risk-free rate of United States treasury bills with a corresponding maturity and an additional spread to reflect the risk premium that market participants would require based on an average credit spread for BBB-rated debt instruments with a corresponding maturity.

Contractual maturities

The contractual maturities of the Group's non-derivative financial liabilities (including lease liabilities) at December 31, 2021 and 2020 are shown in the table below. The amounts presented in the table are undiscounted and do not include interest as most of the liabilities are linked to credit facilities for which interest can fluctuate over time depending on the level of the used part of these facilities:

in thousands of U.S. dollars	2021	2020
2021		31,796
2022	87,880	18,340
2023	13,687	10,841
2024	8,733	5,197
2025–2034	16,730	10,035
Total	**127,030**	**76,209**

The Group is exposed to a liquidity risk in that the maturity of bank loan agreements, which are presented based on the contractual payment obligations, could be brought forward should the Group fail to comply with its contractual obligations under the bank loan agreements.

The following table provides a reconciliation of the movements in liabilities to the cash flows arising from financing activities for the year 2021:

in thousands of U.S. dollars	Liabilities		Other	Equity				
	Loans and borrowings	Lease liability		Share capital	Share premium	Retained earnings	NCI	Total
Balance at December 31, 2020	**51,573**	**24,636**	**11,037**	**432,745**	**348,709**	**(120,604)**	**344**	**748,440**
Changes from financing cash flows								
Proceeds from loans and borrowings	82,585	–	–	–	–	–	–	82,585
Repayment of loans and borrowings	(28,218)	–	–	–	–	–	–	(28,218)
Repayment of loans and borrowings from related parties	–	–	–	–	–	–	–	–
Payments of lease liabilities	–	(5,094)	–	–	–	–	–	(5,094)
Interest paid	(1,569)		–	–	–	–	–	(1,569)
Payment of preference dividend	–	–	–	–	–	–	–	–
Distribution to non-controlling interests	–	–	–	–	–	–	(12)	(12)
Receipt of investment government grants and subsidies	–	–	535	–	–	–	–	535
Total changes from financing cash flows	**52,798**	**(5,094)**	**535**	**–**	**–**	**–**	**(12)**	**48,227**
Other changes								
Effect of changes in foreign exchange rates	**(2,627)**	**(86)**	**–**	**–**	**–**	**–**	**–**	**(2,713)**
Changes in fair value	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Liability related								
New leases	–	8,488	–	–	–	–	–	**8,488**
Prolongation of existing lease contracts	–	2,313	–	–	–	–		**2,313**
Interest expenses	1,592		–	–	–	–	–	1,592
Gain on derecognition of financial liability	(6,563)	–	–	–	–	–	–	(6,563)
Equity related	**–**	**–**	**–**	**–**	**–**	**84,449**	**33**	**84,482**
Total liability-related other changes	**(4,971)**	**10,801**	**–**	**–**	**–**	**–**	**–**	**5,830**
Total equity-related other changes	**–**	**–**	**–**	**–**	**–**	**84,449**	**33**	**84,482**
Balance at December 31, 2021	**96,773**	**30,257**	**11,572**	**432,745**	**348,709**	**(36,155)**	**365**	**884,266**

The following table provides a reconciliation of the movements in liabilities to the cash flows arising from financing activities for year 2020:

in thousands of U.S. dollars	Liabilities		Other	Equity				
	Loans and borrowings	Lease liability		Share capital	Share premium	Retained earnings	NCI	Total
Balance at December 31, 2019	**89,204**	**29,843**	**10,341**	**432,745**	**348,709**	**(133,837)**	**378**	**777,383**
Changes from financing cash flows								
Proceeds from loans and borrowings	17,208	–	–	–	–	–	–	17,208
Repayment of loans and borrowings	(26,950)	–	–	–	–	–	–	(26,950)
Repayment of loans and borrowings from related parties	–	–	–	–	–	–	–	–
Payments of lease liabilities	–	(5,331)	–	–	–	–	–	(5,331)
Interest paid	(2,184)	(60)	–	–	–	–	–	(2,244)
Payment of preference dividend	–	–	–	–	–	–	–	–
Distribution to non-controlling interests	–	–	–	–	–	–	–	(12)
Receipt of investment government grants and subsidies	–	–	696	–	–	–	–	696
Total changes from financing cash flows	**(11,926)**	**(5,391)**	**696**	**–**	**–**	**–**	**(12)**	**(16,633)**
Other changes								
Effect of changes in foreign exchange rates	**3,915**	**124**	**–**	**–**	**–**	**–**	**–**	**4,039**
Changes in fair value	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Liability related								
Interest expenses	3,931	60	–	–	–	–	–	3,991
Gain on derecognition of financial liability	(33,551)							(33,551)
Equity related	**–**	**–**	**–**	**–**	**–**	**13,233**	**(22)**	**13,211**
Total liability-related other changes	**(29,620)**	**60**	**–**	**–**	**–**	**–**	**–**	**(29,560)**
Total equity-related other changes	**–**	**–**	**–**	**–**	**–**	**13,233**	**(22)**	**13,211**
Balance at December 31, 2020	**51,573**	**24,636**	**11,037**	**432,745**	**348,709**	**(120,604)**	**344**	**748,440**

7.11 Other non-current liabilities

Other non-current liabilities primarily comprise defined benefit pension obligations and deferred rental income.

Other non-current liabilities include an amount of USD 5,620 thousand at December 31, 2021 (December 31, 2020: USD 4,008 thousand), representing the net defined benefit obligations under a long-service retirement lump-sum payment scheme at the Group's subsidiary X-FAB France. An additional USD 0 thousand (December 31, 2020: USD 291 thousand) of defined benefit obligations relating to this plan are recorded as other current liabilities. The net defined benefit obligation consists of defined benefit obligations under the scheme of USD 9,974 thousand (December 31, 2020: USD 8,571 thousand) less plan assets recorded at their fair values of USD 4,354 thousand (December 31, 2020: USD 4,272 thousand). Under this scheme, X-FAB France awards its employees a lump-sum payment on reaching retirement age of 65 (for management employees) and 62 (for other employees). The payment is dependent on the final salary of the employee and the length of time the employee has been employed by X-FAB France. Employees are not required to contribute to the plan. The liability recognized for the future defined benefit obligation under this scheme is presented net of the funding plan assets which are "ring fenced" to meet obligations under the scheme. The plan assets at December 31, 2021 consist of investments in a fund that is managed by a financial institution of which the underlying assets relate to long-term bonds with capital guarantees of USD 1,918 thousand at December 31, 2021 (December 31, 2020: USD 2,043 thousand) and equity savings plans with a value of USD 2,436 thousand at December 31, 2021 (December 31, 2020: USD 2,229 thousand). Accordingly, there are risks typical of such defined benefit obligations, i.e. actuarial risks associated with the uncertainties of the estimated obligations under the scheme and with the anticipated performance of the investment assets held to offset the obligations under the scheme.

in thousands of U.S. dollars	DBO	Fair value of plan assets	Net defined benefit liability
January 1, 2021	**8,571**	**(4,272)**	**4,299**
Included in profit or loss:			
Current service cost	382		382
Past service cost/curtailment	2,323		2,323
Currency effects from conversion into USD	(777)	347	(430)
Included in OCI:			
Return on plan assets		(429)	(429)
Actuarial losses	(414)		(414)
Other:			
Contributions paid by the employer	–	–	–
Benefits paid	(111)		(111)
December 31, 2021	**9,974**	**(4,354)**	**5,620**
January 1, 2020	**11,409**	**(3,808)**	**7,601**
Included in profit or loss:			
Current service cost	527		527
Past service cost	(3,589)		(3,589)
Currency effects from conversion into USD	825	(374)	451
Included in OCI:			
Return on plan assets		(90)	(90)
Actuarial losses	410		410
Other:			
Contributions paid by the employer	–	–	–
Benefits paid	(1,011)	–	(1,011)
December 31, 2020	**8,571**	**(4,272)**	**4,299**

The primary assumptions made in calculating the defined benefit obligation were as follows:

in thousands of U.S. dollars	2021	2020
Discount rate	0.79%	0.28%
Employee turnover	5.00%	5.00%
Social security costs	47.00%	47.00%

The discount rate used is calculated by reference to marked yields on high quality corporate bonds. Future salary growth is assumed to be 0.5% lower than inflation (December 31, 2020: 0.5% lower). Assumptions regarding future mortality have been based on published statistics and mortality tables.

Past service cost adjustments in 2021 and 2020 relate to a plan curtailment at X-FAB France in 2020. The plan curtailment in 2020 reflected the reduction in expected benefits payable following a restructuring plan initiated by the Group in 2020. The resulting reduction in expense is included in employee-related expenses in general and administration expenses. The past service cost adjustments in 2021 reflect the amendment of the previous years' estimate following implementation of the restructuring plan in 2021.

The Group expects to pay no contributions to the funding plan in 2022.

Reasonably possible changes at the reporting date to one of the actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation changing the discounted amounts of the net liability by the amounts shown below:

in thousands of U.S. dollars	Increase at December 31, 2021	Decrease at December 31, 2021	Increase at December 31, 2020	Decrease at December 31, 2020
Discount rate (+0.25% movement)	–	166	–	197
Future salary growth (+0.25% movement)	167	–	203	–

The defined benefit obligation is not materially sensitive to a reasonable potential change in the assumed mortality rate.

7.12 Trade payables and other current liabilities

Trade payables are non-interest bearing and are normally settled on 60-day terms. Trade payables have been increased from USD 27,882 thousand at December 31, 2020 to USD 41,364 thousand at December 31, 2021. This increase was influenced by the general increase of business and increases in investments in property, plant and equipment.

Other current liabilities comprise the following:

in thousands of U.S. dollars	2021	2020
Accrued liabilities	**17,521**	**21,074**
For invoices not yet	15,850	19,327
Royalties	376	399
Sales commissions	307	297
Staff association costs	602	538
Other	386	513
Advances received	19,193	10,264
Deferred income	293	520
Employee-related	**23,879**	**20,899**
Wages	2,931	1,107
Earned holiday	12,469	8,351
Payroll taxes	3,870	3,452
Social security costs	4,609	7,989
Other	–	28
Total	**60,886**	**52,785**

Liabilities for social security costs at December 31, 2021 and December 31, 2020 include deferred payments of amounts due by X-FAB France in accordance with the terms of a government support scheme to alleviate the economic effects of the Covid-19 pandemic. Advances received relate to prepayments from customers for future wafer sales.

7.13 Provisions

Provisions comprise the following:

in thousands of U.S. dollars	2021	2020
Current provisions	4,445	9,604
Non-current provisions	66	72
Total	**4,511**	**9,676**

Current provisions primarily relate to warranty costs. Provisions in 2020 also included a provision for the costs associated with a restructuring plan which was implemented at the Group's French location in 2021 due to falling demand for certain legacy products which were manufactured at the location prior to its acquisition by X-FAB and the smooth first industrial development ramp up of X-FAB technologies. Following announcement of the plan on December 10, 2020, the Group recognized a provision of USD 5,722 thousand for expected restructuring costs. The expected restructuring costs primarily include employee termination benefits and are based on a detailed plan agreed between management and employees' representatives. The restructuring measures were completed in 2021.

The expense to record the provision for restructuring costs amounting to USD 5,722 thousand was included in general and administration expenses in 2020 and the release of the unused amounts of the provision

amounting to USD 3,312 thousand was offset against general and administration expenses in 2021.

Warranty provisions are estimated based on the Group's experience of past claim rates and knowledge of current claims together with an assessment of rectification costs.

Non-current provisions refer to anniversary bonuses for employees accounted for in accordance with IAS 19, which include estimates of future staff turnover, based on the Group's experience of staff turnover rates in recent years.

The movements on provisions during the year were as follows:

in thousands of U.S. dollars	Warranty provisions	Employee provisions	Restruct-uring cost	Total
January 1, 2021	**2,541**	**1,412**	**5,722**	**9,675**
Provided for	2,176	17	–	2,193
Utilized	(979)	(571)	(2,023)	(3,573)
Released	–	(69)	(3,312)	(3,381)
Effect of changes in exchange rates	(47)	31	(387)	(403)
December 31, 2021	**3,691**	**820**	**–**	**4,511**

in thousands of U.S. dollars	Warranty provisions	Employee provisions	Restruct-uring cost	Total
January 1, 2020	**5,336**	**1,348**	**–**	**6,684**
Provided for	1,519	78	5,722	7,319
Utilized	(2,508)	(26)		(2,534)
Released	(1,865)	–		(1,865)
Effect of changes in exchange rates	59	12		71
December 31, 2020	**2,541**	**1,412**	**5,722**	**9,675**

Employee provisions include a provision for litigation of X-FAB France.

8 Notes to the statement of cash flows

The change in trade payables in working capital excludes changes in the amounts of outstanding liabilities for additions to property, plant, and equipment, as payments for additions to fixed assets are recorded in the statement of cash flows when payment is made.

Non-cash transactions primarily include the effects from exchange rate differences (see note 7.10) and the gain on derecognition of a financial liability amounting to USD 33,550 thousand in 2020 (see note 6.11 and note 7.10).

The difference between the cash outflows for investments and the additions to property, plant, and equipment are primarily due to the level of outstanding invoices for additions recorded at the end of the financial year.

The Group entered into one sale and leaseback transaction for property, plant, and equipment in 2021 (2020: none). The cash inflow from that transaction will be received in 2022 and is accordingly not yet reported in the statement of cash flows.

9 Segment reporting

Operating segment

The Group manages its CMOS and MEMS operations as one single operating segment. Operating decisions are taken on a product and technology level by the President and Chief Executive Officer, who is assisted by the parent company's management team. Accordingly, X-FAB has identified its President and CEO as its chief operating decision maker for the purposes of defining segments in accordance with IFRS 8. No separate operating results for the CMOS and MEMS operations are used by the chief operating decision maker to manage X-FAB's operations, assess performance, or make resource allocation decisions. As a result, X-FAB has determined that its operations constitute one single segment.

Geographic concentrations

The following table shows an analysis of revenue (based on the customer's billing location) and non-current assets by geographic area for the reporting period.

Revenue by geographic area:

in thousands of U.S. dollars	2021	2020
Europe	**403,201**	**287,263**
Belgium	256,258	186,050
Germany	70,245	52,368
United Kingdom	37,028	19,978
Austria	10,837	5,893
Switzerland	7,380	4,191
France	7,240	7,962
Sweden	3,752	2,506
Denmark	2,990	2,473
Other	2,585	2,217
Finland	1,743	1,353
Netherlands	1,689	1,012
Ireland	1,454	1,260
Asia	**149,736**	**103,722**
China	44,916	29,845
Japan	24,815	16,378
Malaysia	17,893	11,866
Singapore	16,743	15,185
Korea	15,302	9,550
Thailand	10,123	9,387
Taiwan	10,067	4,671
Hong Kong	5,667	3,616
New Zealand	3,060	1,820
Other	1,150	1,404
United States of America	**102,189**	**84,682**
Rest of the world	**2,625**	**1,919**
Total	**657,751**	**477,586**

Non-current assets by geographic area:

in thousands of U.S.	2021	2020
Malaysia	156,660	156,075
Germany	133,482	144,956
France	66,491	40,092
United States of America	42,054	39,467
Total	**398,687**	**380,590**

Significant customers

The Group has one (2020: one) customer whose revenues exceeded 10% of the Group's consolidated external revenues. The total revenue from this customer, which is a related party (see note 12), amounted to USD 254,362 thousand in 2021 (2020: USD 186,138).

10 Financial instruments – fair values and risk management

Accounting classifications and fair values
The following tables show the carrying amounts and fair values of financial assets and financial liabilities measured at fair value through profit or loss and measured at amortized cost, respectively, including their levels in the fair value hierarchy.

December 31, 2021					
in thousands of U.S. dollars	Carrying amount	Fair value			
	Total	Level 1	Level 2	Level 3	Total
Financial assets measured at amortized cost					
Trade and other receivables	73,689				
Cash and cash equivalents	290,187				
Financial liabilities measured at amortized					
Trade payables	(41,364)				
Bank loans, overdrafts, and lease liabilities	(127,030)		(127,223)		(127,223)
December 31, 2020					
Financial assets measured at amortized cost					
Trade and other receivables	54,576				
Cash and cash equivalents	205,867				
Financial liabilities measured at amortized cost					
Trade payables	(27,882)				
Bank loans, overdrafts, and lease liabilities	(76,209)	–	(75,911)	–	(75,911)

Financial instruments measured at amortized cost
The carrying amount of cash and cash equivalents, bank overdrafts, trade and other receivables, and trade payables approximates their fair value due to the short-term maturity of these financial instruments.

The fair value of the Group's non-current liabilities is based on their present values calculated by discounting future cash flows at current rates of interest available for debt with the same maturity profile.

The Group's principal financial instruments not carried at fair value are cash and cash equivalents, trade receivables, other current assets, other non-current assets, trade and other payables, bank overdrafts, and long-term borrowings.

There have been no transfers of assets or liabilities between levels of the fair value hierarchy in the current or previous year.

Financial assets and liabilities accounted for at fair value through profit or loss
The Group held no financial instruments measured at fair value in the financial year. In the previous year the Group held an equity investment in a company listed on the NASDAQ stock exchange which was, until its sale in 2020, measured at fair value based on the price quoted for those shares at the respective reporting dates. Changes in the fair value of this investment were recorded in profit or loss, although the investment was not held for trading purposes, as the Group did not opt to present fair value changes in other comprehensive income.

The Group held no forward foreign exchange contracts or interest rate swaps in the reporting period.

Financial assets and liabilities accounted for at fair value through other comprehensive income
The Group held no financial assets and liabilities accounted for at fair value through other comprehensive income in the current or previous financial year.

Management of risks arising from financial instruments
The X-FAB SE Group's principal financial liabilities comprise bank loans and bank overdrafts, and trade payables. The main purpose of these financial liabilities is to finance the Group's operations. The Group has various financial assets, such as trade receivables and cash and short-term deposits, which arise directly from its operations.

Financial assets in the form of free short-term cash available are placed on deposit with banks with a high credit rating.

Deliveries made by the Group are subject to the reservation of proprietary rights until the customer has paid for the goods. Generally, further security is not obtained.

While the Group did not hold any derivative financial instruments in the current or previous year, it does, from time to time, enter into derivative financial instruments to manage the foreign exchange risks and interest rate arising from the Group's sources of finance where the risks of financial loss or the liquidity risk appears excessive. Such transactions are exclusively entered into to reduce the risk of contractually agreed or highly probable transactions. These transactions are classified as FVTPL for accounting purposes because the Group does not formally account for them using hedge accounting techniques.

The primary risks arising from the Group's financial instruments are market risks (interest rate and foreign currency risks), credit risk, and liquidity risk. The Board of Directors reviews and agrees policies for managing each of these risks. The primary objective in managing these risks is to minimize the risk of financial loss and the risk of any interference with the Group's ability to pursue its commercial objectives. The policies followed in respect of each risk are summarized below.

Interest rate risk

The X-FAB SE Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates.

The Group's policy is to manage its interest cost using a mix of fixed and variable rate debts. To manage this, the Group might enter into interest rate swaps, in which the Group agrees to exchange, at specified intervals, the difference between fixed and variable rate interest amounts calculated by reference to an agreed-upon notional principal amount. At December 31, 2021 approximately 42% of the Group's borrowings (excluding financial leases) are at a fixed rate of interest (December 31, 2020: 84%). Accordingly, the Group's exposure to interest rate risk is limited.

Foreign currency risk

The Group's statement of financial position can be affected by changes in the dollar exchange rates, in particular movements against the euro (EUR) and the Malaysian ringgit (MYR). This risk mainly relates to transactions in foreign currency.

The following table provides an analysis of monetary assets and liabilities by currency denomination, expressed in thousands of USD:

Assets and liabilities denominated in EUR:

in thousands of U.S. dollars	2021	2020
Assets		
Trade accounts receivable	25,603	13,778
Other assets	19,145	26,484
Cash	103,702	53,552
Liabilities		
Trade payables	11,411	8,490
Loans and borrowings	75,399	45,011
Other liabilities and provisions	33,521	33,393

Assets and liabilities denominated in MYR:

in thousands of U.S. dollars	2021	2020
Assets		
Trade accounts receivable	49	230
Other assets	5,972	6,181
Cash	70,419	118,787
Liabilities		
Trade payables	330	865
Other liabilities and provisions	7,110	18,943

The Group's policy is to manage selected foreign currency exchange risk by entering into forward rate currency purchase or sale transactions (currency forwards) for specific amounts of foreign currencies in anticipation of transactions which are contractually fixed or highly probable.

The following exchange rates were used in preparing the consolidated financial statements:

	2021	2020
USD/EUR		
Closing rate	0.885	0.815
Average rate	0.845	0.876
USD/MYR		
Closing rate	4.182	4.037
Average rate	4.144	4.202

The Group also has currency exposures arising from sales or purchases made when operating units undertake transactions in currencies other than their functional currencies.

Approximately 37% (2020: 32%) of the Group's sales and 47% (2020: 51%) of the costs are denominated in currencies other than the functional currency of the operating unit making the sales.

The following table demonstrates the sensitivity to changes in fair value of monetary assets and liabilities on the Group's profit before tax to reasonably possible

changes in the USD/EUR and USD/MYR exchange rates, with all other variables held constant and excluding effects of foreign exchange related derivatives held. We have also assessed that the sensitivity to changes in fair value of monetary assets and liabilities to profit before tax is a good approximation of the effect on equity of the Group as the associated tax effect would not be significant.

USD/EUR	Increase/ (decrease) in EUR rate	Effect on profit before tax
2021	5%	1,404
	-5%	(1,404)
2020	5%	346
	-5%	(346)
USD/MYR	**Increase/ (decrease) in MYR rate**	**Effect on profit before tax**
2021	20%	13,800
	-20%	(13,800)
2020	20%	20,542
	-20%	(20,542)

The Group believes that a reasonably possible change of other exchange rates, with all other variables held constant, will not have a significant effect on the Group's profit before tax and on the Group's equity.

The currency risk from translating foreign entities with a functional currency that is different from the presentation currency can be considered to be immaterial as it relates to non-significant entities.

Credit risk
The Group's primary risk credit risk concentrations affecting financial assets are in respect of trade receivables (described in note 7.4), balances with related parties (note 12), and balances and short-term deposits at banks (note 7.6).

The Group only trades with recognized, creditworthy third parties. It is the Group's policy that all customers who wish to trade on credit terms are subject to credit verification procedures. In addition, receivables balances are monitored on an ongoing basis to ensure that the Group is not exposed to significant risk of credit loss. The maximum exposure is represented by the carrying amounts disclosed in notes 7.4 and 7.5. With respect to credit risk arising from financial assets, including cash and cash equivalents, the Group's maximum exposure to credit risk arising from default of the counterparty is equal to their carrying amounts in the statement of financial position.

The Group has not recorded any expected credit losses for cash and cash equivalents as it considers that any measurement of the 12-month expected loss would be an insignificant amount given the good credit rating of the respective banks.

Liquidity risk
The Group monitors its risk of a shortage of funds and of difficulties in meeting obligations associated with financial liabilities. The Group's objective is to maintain a balance between continuity of funding and flexibility through the use of bank loans, bank overdrafts, and other financial instruments. Based on the positive cash flow projections and the excess of current assets over current liabilities there was no significant liquidity risk at December 31, 2021 or December 31, 2020. The expected cash inflows from trade and other receivables maturing within two months total USD 73,689 thousand (December 31, 2020: USD 54,576 thousand). Trade accounts payables are due within the next 12 months. An analysis of the maturity of financial liabilities and available credit lines is presented in note 7.10.

Capital management
The primary objective of the Group's capital management is to ensure that it maintains a strong credit rating and healthy capital ratios in order to support its business and maximize shareholder value. Further, management aims to maintain a stable level of cash balances available for ready use at all times and to at least maintain, or increase, the available cash at the current level and to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings. These goals can be achieved by a combination of cash inflows and the use of new external new financing arrangements. The Group manages its capital structure (consisting of equity and borrowings) and makes adjustments to it in light of changes in economic conditions. To adjust its capital structure, the Group may choose to take measures such as making payments to or adjusting dividend payments made to shareholders, returning capital to shareholders, or raising new capital by issuing new shares or adjusting its borrowing levels. No change was made to the Group's capital management objectives, policies, or processes during the years ended December 31, 2021 and December 31, 2020.

The EUR 200,000,000 multicurrency revolving credit facility is available to the parent company and its primary subsidiaries for use for euro and U.S. dollar capital expenditures, general working capital requirements and general corporate purposes (including acquisitions). The facility contains a covenant stating that the borrower shall ensure that the ratio of total net indebtedness (the sum of all borrowing and guarantee obligations of a financial nature, defined more closely in the facility agreement) cannot exceed 3.5 times its EBITDA, otherwise the loan will be repayable on demand. The Group was in compliance with this covenant at December 31, 2021.

The X-FAB SE Group's other bank loan agreements do not include requirements to comply with externally imposed capital requirements, for example

requirements to meet specific equity and free cash flow ratios.

The EUR 200,000,000 multicurrency revolving credit facility and other bank loan agreements contain certain other covenants typical for such borrowing arrangements which impose a number of requirements on the borrower, including, among other things, early termination and set-off of asset balances against matured obligations balances in case of a material event of default, negative pledge clauses, obligations to provide certain information relating to the financial condition of the borrower, and change of control provisions. Early repayments of amounts borrowed may be demanded or offset against asset balances and renewals or drawdowns of additional tranches under credit arrangements may not be available if there is an event of default or should the Group fail to meet its other obligations under such terms and conditions. Further, the Company has entered into undertakings under the terms of certain credit agreements to maintain its existing equity percentage in the share capital and related percentage of voting rights of its respective subsidiaries.

11 Leases

The Group has various lease arrangements for the use of commercial properties, infrastructure, and technical equipment and machinery. The arrangements run for various periods until 2034 and carry interest rates between 0.02% and 4.46% (December 31, 2020: 0.02% and 4.82%). The contractual arrangements vary from lease to lease. Some of these arrangements include purchase options at a price that is lower than the expected fair value of the assets at the end of the lease period, so that the Group expects that these will be acquired at a later date. Other leases are for a fixed period of time and are renewed unless canceled by either party, or include lease period extension options exercisable by the Group.

In 2021 the Group entered into a sale and leaseback transaction under which machinery was sold at book value and leased back. The contractual arrangements include a purchase option at a price that is lower than the fair value and the lease term is for the major part of the economic life. The Group continues to be able to direct the use of the assets and obtain substantially all of the remaining benefits from their use. Accordingly, the transaction is wholly recognized as a financing arrangement and no sale or gain or loss is recognized on the transaction. The assets were not derecognized. The lease period runs from 2021 until 2028 and carries an interest rate of 1.26%.

The carrying values of right-of-use assets presented as property, plant, and equipment were as follows:

in thousands of U.S. dollars	2021	2020
Net book value January 1	**25,278**	**30,856**
Additions	2,316	240
Depreciation	(4,339)	(5,186)
Disposals	–	–
Reclassifications	1,160	(632)
Net book value December	**24,415**	**25,278**

For lease arrangements which include extension options exercisable by the Group, the Group assesses, at the commencement of the lease, whether it is reasonably certain to exercise the extension options. The Group makes subsequent reassessments of whether it is reasonably certain to exercise such options if there is a significant event or significant changes in circumstances which are within its control. Should the Group exercise the extension options, the future cash outflows under leasing arrangements, the right-of-use assets recognized, and the commitments under the lease liabilities would be increased. The Group does not make estimates of such potential increases as the most significant extension options are at future dates and the amounts and available operational alternatives may change. The overall level of right-of-use assets and leasing obligations are, however, unlikely to change by material amounts.

The future minimum lease payments due in respect of lease liabilities are as follows:

in thousands of U.S. dollars	2021		2020	
	Minimum leasing	Present value	Minimum leasing	Present value
2022	6,015	5,380		
2023–2025	27,062	24,877		
2021			5,694	4,932
2022–2024			22,526	19,704
Total	**33,077**	**30,257**	**28,220**	**24,636**
Interest	(2,821)	(2,821)	(3,584)	(3,584)
Liability	**30,256**	**27,436**	**24,636**	**21,052**

The minimum leasing payments disclosed for the previous year have been amended to include certain amounts previously omitted from future interest charges. The amendments have no effect on the results of operations or on the carrying amounts reported in the statement of financial position.

Expenses relating to short-term leases amounted to USD 616 thousand (2020: USD 604 thousand) and expenses relating to leases of low-value assets (excluding short-term leases of low-value assets) amounted to USD 18 thousand (2020: USD 23 thousand).

12 Transactions with related parties

Transactions with shareholders and their subsidiaries

As part of its normal business activities, X-FAB SE Group undertakes transactions with entities in the XTRION Group, a group of companies controlled by XTRION NV, the ultimate parent company and the largest shareholder of X-FAB SE. These include the purchase of certain work in process and services, as well as the sale of products and provision of services to these companies. XTRION NV is also the parent company of Melexis NV, which develops, designs, and sells integrated circuits to customers such as the automotive industry. The main wafer suppliers for the Melexis Group are X-FAB SE's subsidiaries. The Melexis Group also provides final test services as well as design support to X-FAB SE subsidiaries. Refer also to the corporate governance statement. Conditions of the commercial relations between X-FAB and its related parties are in line with those that have been agreed upon between independent parties in comparable circumstances.

The tables below show the balances with shareholders and their subsidiaries included in the statement of financial position.

in thousands of U.S. dollars	2021	2020
Trade accounts receivable due from Melexis group	22,224	19,109
Trade accounts receivable due from Anvo-Systems	–	1,277
Trade accounts receivable due from M-MOS group	2,961	3,666
Trade accounts receivable due from X-Celeprint	32	92
Total	**25,217**	**24,144**

in thousands of U.S. dollars	2021	2020
Trade accounts payable due to Melexis group companies	178	108
Trade accounts payable due to M-MOS group companies	59	19
Trade accounts payable due to XTRION	21	14
Trade accounts payable due to Sensinnovat	96	188
Other	22	80
Total	**376**	**409**

Receivables from related parties relate to trade receivables, do not carry interest, and are payable on normal credit terms. As described in detail in note 7.4, a settlement arrangement was entered into in 2021 with a related party customer, concerning outstanding receivables in excess of 360 days overdue totaling USD 1,277 thousand. Impairment allowances of USD 848 thousand had been recorded in 2020 against these balances. Under this arrangement the Group received intellectual property, which had been provided by the customer as collateral security, which the Group valued at USD 484 in settlement of the outstanding liability.

Sales made to XTRION group companies primarily include the supply of PCM-tested wafers and NRE on the basis of wafer supply agreements made between the parties.

Other income results from the provision of technical facilities, supplies, utilities, property rentals, and services provided. Services provided include information technology, personnel, and legal support services. For services provided, charges are made in relation to the costs incurred based on an agreed formula which considers the use of facilities, employee time spent, and specific transaction details. Interest income and expenses arose in connection with loan arrangements.

Sales and other income comprise the following:

in thousands of U.S. dollars	2021	2020
Sales to Melexis group companies	254,362	186,138
Sales to M-MOS group companies	16,386	10,907
Sales to Anvo-Systems	50	62
Sales to X-Celeprint	–	187
Sales to X Display Company Technology	297	104
Property rental and other income from Melexis group companies	2,211	3,618
Other income from M-MOS	122	413
Gain on derecognition of liability to Sarawak Technology Holdings Sdn. Bhd	–	33,551
Total	**273,428**	**234,980**

Further information on the gain on derecognition of the financial liability to Sarawak Technology Holdings Sdn. Bhd reported in 2020 is provided in notes 7.10 and 13.1.

Property rental and other income from Melexis group companies includes rentals and charges for technical services included in the amounts described in note 6.7 as well as other items classified in other positions in the consolidated statement of income.

Purchases, expenses, and other transactions recorded with shareholders and their subsidiaries were as follows:

in thousands of U.S. dollars	2021	2020
Services provided by Melexis group companies	533	2,332
Services/purchases provided by M-MOS group companies	400	287
Services provided by X-Celeprint	8	–
Services purchased from Sensinnovat	302	308
Services purchased from	159	183
Warranty cost Melexis group	2,036	968
Interest from loan from Sarawak Technology Holdings Sdn. Bhd.	–	1,746
Total	**3,438**	**5,824**

Services purchased from member companies of the XTRION group primarily included wafer test and final test services. Outstanding balances from sales and purchases of goods and from receiving and rendering of services at the reporting date are unsecured, interest free, and settled in cash. There have been no guarantees provided or received for any related party receivables or payables.

Remuneration of persons with key management positions

in thousands of U.S. dollars	2021	2020
Short-term employee benefits	1,302	1,157
Short-term employee benefits for members of management that are not on the payroll of the Company (CEO and CFO)	655	455
Directors' compensation	205	260
Total	**2,162**	**1,872**

The persons with key management positions as referred above as of December 31, 2021 include the Group's CEO, COO, CTO, CFO, the CEO of X-FAB Dresden, the CEO of X-FAB Sarawak, the CEO of X-FAB Texas, and the CEO of X-FAB France.

The Group has made contributions to defined contribution pension plans for the benefit of persons with key management positions totaling USD 79 thousand (2020: USD 70 thousand). Defined contribution plans primarily comprise statutory contributions to be made by employers to state-based defined contribution plans. In connection with these plans there are no minimum guarantees by the employer. The defined contribution is based on a fixed percentage of the (capped) gross salary determined by state laws.

13 Other disclosures

13.1 Purchase commitments and contingencies

Purchase commitments comprise the following at December 31:

in thousands of U.S.	2021	2020
Purchase commitments		
Property, plant, and equipment	67,621	9,988
Intangible assets	383	459
Material and services	9,512	36,660
Total	**77,516**	**47,107**

Purchase commitments mainly refer to purchase orders placed for investments in technical machinery. In addition to the presented figures above, the Group was committed to invest USD 120 million (EUR 100 million) in property, plant, and equipment at the Corbeil-Essonnes site over a ten-year period from October 1, 2016, the date of its acquisition by the Group. This commitment has now been met in full; the outstanding commitment at December 31, 2020 amounted to USD 10 million.

Commitments concerning investment grants and subsidies received
Various Group entities receive grants and subsidies in connection with the acquisition of certain qualifying assets (asset-related grants and subsidies) and subsidies to offset research and development costs (income-related grants). No material amounts of other government assistance are received.

Specifically, X-FAB GmbH, XMF, and X-FAB Dresden receive grants and subsidies in connection with the acquisition of certain qualifying assets (asset-related grants and subsidies). The grant rules require that the assets on which investment grants have been received are retained for a period of five years (the subsidy rules, which largely apply to the same assets, have a similar three-year retention requirement) and that specified employee levels are maintained at specific locations. If it is not possible to fulfill these conditions, the grants and subsidies may be partially repayable. The total amount of grants and subsidies received in the past (and thus deducted from the carrying amounts of the assets) on property, plant, and equipment amounted to USD 136.1 million (December 31, 2020: USD 134.3 million); the retention requirements have not yet been fulfilled in full for grants and subsidies received totaling USD 13.2 million included in that total.

13.2 Unresolved legal disputes and claims
X-FAB is currently involved in a legal dispute with one of its suppliers. No provision is made for this dispute as no reliable estimate can be made concerning the outcome of the dispute. The Group is not aware of the threat of any other proceedings which could have a significant financial impact on the Group.

13.3 Employees
The average number of employees employed by the Group during the year was as follows:

	2021	2020
Production	3,318	3,276
Research and development	305	321
Sales, marketing, and administration	264	258
Trainees	102	95
Total	**3,989**	**3,950**

The total number of employees employed by the Group at December 31 was as follows:

	2021	2020
Production	3,430	3,213
Research and development	305	313
Sales, marketing, and administration	270	255
Trainees	118	105
Total	**4,123**	**3,886**

Note: Number of employees excludes contract workers (borrowed)

13.4 List of shareholdings

Entity	Place of incorporation	Principal activities	Shareholding in %
X-FAB Silicon Foundries SE	Tessenderlo, Belgium	Holding company	
X-FAB Semiconductor Foundries GmbH	Erfurt, Germany	Wafer manufacturing	100.00 %
X-FAB Dresden GmbH & Co. KG	Dresden, Germany	Wafer manufacturing	100.00 %
X-FAB Dresden Verwaltungs-GmbH	Dresden, Germany	No activity	100.00 %
X-FAB Texas Inc.	Texas, USA	Wafer manufacturing	100.00 %
X-FAB Sarawak Sdn. Bhd.	Kuching, Malaysia	Wafer manufacturing	100.00 %
X-FAB France SAS	Corbeil-Essonnes, France	Wafer manufacturing	100.00 %
X-FAB Japan KK	Yokohama, Japan	Trading company	100.00 %
X-FAB MEMS Foundry GmbH	Erfurt, Germany	Wafer manufacturing	100.00 %
OOO Microdesign	Voronesh, Russia	R&D, design	100.00 %
X-FAB MEMS Foundry Itzehoe GmbH	Itzehoe, Germany	Wafer manufacturing	100.00 %
X-FAB Global Services GmbH	Erfurt, Germany	R&D, administration	100.00 %
X-FAB Dresden Grundstücks-Vermietungs- gesellschaft mbH & Co. KG	Dresden, Germany	Real estate	94.90 %

13.5 Consolidated financial statements of the ultimate parent

The parent of the Company is XTRION NV. Although XTRION NV does not hold a majority of the Company's shares, it is the Company's largest shareholder and has a controlling interest given its dominant shareholding position relative to the size and dispersion of other shareholders.

The financial statements of the companies included in the Group are also included in the consolidated financial statements of XTRION NV. These can be obtained on request from XTRION NV, Transportstraat 1, 3980 Tessenderlo, Belgium.

13.6 Auditor and auditor's remuneration

During the general shareholders' meeting on April 30, 2020, KPMG Bedrijfsrevisoren BV was reappointed as the Company's auditor for the years 2020, 2021, and 2022.

The auditor's remuneration for the period was as follows:

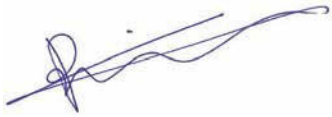
in thousands of U.S. dollars	2021	2020
Audit cost		
KPMG	392	351
Other audit firms	61	115
Other services		
KPMG	36	32
Total	**489**	**498**

14 Events after the reporting period

At this point in time, X-FAB is not significantly impacted by the conflict in Ukraine and the measures taken against Russia as a consequence thereof. X-FAB has only very limited revenues from Russia. So far, X-FAB's subsidiary in Russia has not been impacted and continues to operate its normal activities of providing design services internally. We do, however, closely monitor economic sanctions that are being issued and take appropriate actions to comply. While X-FAB does not source any raw materials from Russia directly, its suppliers may be affected by a crisis-driven shortage of commodities coming from Russia, which may cause disruptions in supply.

Tessenderlo, March 24, 2022

Managing Director, CEO



Sensinnovat BV
Represented by Rudi De Winter
CEO

INTEGRITY & RESPECT

We take ownership, act fairly, ethically and openly and respect those we work with and the contributions they make.

6. CORPORATE SOCIAL RESPONSIBILITY AT X-FAB

6.1 Scope

This chapter documents X-FAB's environmental and social performance during the 2021 financial year. The environmental and social performance figures encompassed in this chapter have been prepared according to the Global Reporting Initiative (GRI) Sustainability Reporting Standards (2016) core option.

During the materiality analysis and the review of the GRI standards, the expectations and requirements of external and internal stakeholders were evaluated. A report is prepared to outline various topics with regards to sustainability, respect for human rights, personal and social matters, environment matters, anti-corruption and bribery, supply chain, and the Covid-19 situation. Additionally, there is information on cyber security at X-FAB and a section on EU taxonomy and the associated reporting requirements.

The report contains the core GRI indices as well as standard disclosures on general characteristics of X-FAB as an organization. Some of these figures can be found in other parts of the annual report. A table identifying the location of key figures and statements can be found on X-FAB's website. Unless otherwise specified, the disclosed information refers to the 2021 financial year. Where applicable, data were collected and/or measured by X-FAB or obtained from external sources, such as utility providers. Data compiled from X-FAB sites were validated using internal procedures. Therefore, the environmental and social information in this report was not externally assured.

This chapter is structured according to the three key areas of environment, social, and governance (ESG) and is based on a broader understanding with respect to external stakeholders.

Environmental

Considers how X-FAB performs as a steward of nature, e.g. energy emissions and waste management

Social

Examines how X-FAB manages its relationships with employees and the community, e.g. health and well-being, working conditions, and social awareness

Governance

Deals with how X-FAB is governed, e.g. governance overview and supply chain management. More information in the Corporate Governance

Fig. 6.1: Environmental, social, and governance (ESG) topics

In general, the provided statements and figures are valid for the entire organization. Site-specific information is indicated where applicable. The report covers all entities of X-FAB Silicon Foundries SE. Its scope and boundary was confirmed by the X-FAB Board.

X-FAB is fully engaged to be the foundry of choice for the analog world by focusing on innovative solutions and on the quality of products as well as services. X-FAB's manufacturing excellence meets customer expectations and enables long-lasting success for all stakeholders.

To exceed the expectations of its customers, X-FAB practices a quality management system certified according to IATF 16949:2016 and ISO 9001:2015.

ISO 9001 and IATF 16949

ISO 9001:2015 specifies the requirements for a quality management system. It helps organizations to ensure they meet the needs of customers and other stakeholders while also respecting statutory and regulatory requirements related to a product or service. IATF 16949:2016 as a new automotive standard for quality management systems is implemented as a supplement to and in conjunction with ISO 9001:2015. It specifies the requirements for establishing, implementing, maintaining, and continually improving a quality management system in the automotive supply chain.

Furthermore, X-FAB assumes responsibility by seeking an appropriate balance of interests between the consequences of required business decisions and its activities on economic, technological, social, and environmental levels. To save natural resources and to support the global reduction of CO_2 emissions, X-FAB operates an environmental, health and safety, and energy management system that is certified according to ISO 14001:2015 and ISO 50001:2018. Additionally, X-FAB is a member of the German Electrical and Electronic Manufacturers association (ZVEI) and has signed the ZVEI Code of Conduct.

ZVEI

The ZVEI ("Zentralverband Elektrotechnik- und Elektronikindustrie e.V.") is the representative of the economic, technological, and environmental interests of the German electrical industry. The ZVEI has drawn up a Code of Conduct of its own, governing corporate social responsibility. The ZVEI Code of Conduct takes internationally established benchmarks as its reference and covers all relevant subjects.

X-FAB, as one of the largest specialty foundry groups, is aware of its social responsibility derived from the Company's global business activities. X-FAB's company culture is based on universal ethical values and principles, especially integrity, honesty, diversity, respect of human dignity, openness, and nondiscrimination comprising religion, ideology, gender, and ethnicity. X-FAB is also committed to promoting those values wherever possible and across all parts of the value chain.

In the year 2021 and to the best of X-FAB's knowledge, there has been no non-compliance of any laws or regulations identified concerning the use and provision of products and services related to environmental laws and regulations. X-FAB fosters partnerships and trustworthy interactions with its supervisory authorities, its supply chain partners, and its customers.

X-FAB also manufactures a large variety of products with sustainable impact on mobility, healthcare, and the energy sector. In particular, in the area of electrification of cars and the usage of renewable energy, the products manufactured at X-FAB play a vital part in reducing CO_2 emissions.

6.1.1 Stakeholder engagement

For several years now, sustainability has been a driving force behind X-FAB's development, not only within the broad range of X-FAB´s products but also with respect to several internal and external activities. X-FAB's mission is to contribute to the social, environmental, and economic development of the countries and regions where it conducts business. X-FAB promotes volunteer activities by its employees. X-FAB thereby contributes to the well-being and long-term development of affected societies, in particular regarding working conditions, social and environmental compatibility, transparency, collaboration, and dialog.

In 2021, X-FAB increased the share of collective bargaining contracts in Europe to 98% by introducing a new collective bargaining agreement at its Dresden site.

In April 2021, employees from X-FAB Texas participated in the National Child Abuse Awareness month by wearing something blue during office hours.

Fig. 6.2: Employees of X-FAB Texas participating in National Child Abuse Awareness month

X-FAB promotes state-of-the-art technologies and their advancement through its involvement in numerous industry associations and other organizations.

Industry associations

X-FAB is a member of or otherwise related to several industry associations as well as scientific, governmental, and standardization organizations, including but not limited to:

A. Industry associations

- AENEAS – Association for European Nanoelectronics Activities
- ACSIEL – Professional French organization for the electronic field
- edaCentrum – Association for Electronic Design Automation, Germany
- ESIA – European Semiconductor Industry Association
- FOA – Fab Owners Alliance
- Forderkreis Mikroelektronik (Society for the Promotion of Microelectronics, Germany)
- GSA – Global Semiconductor Alliance
- IVAM Microtechnology Network, Germany
- Medicen – Medical Competitiveness Cluster, Paris region
- Minalogic – Competitiveness cluster for digital technologies in the Auvergne Rhone Alpes region in France
- SECA – Sarawak Electronics and Supporting Industries Companies Association, Malaysia
- SEMI – global industry association serving the manufacturing supply chain for the micro- and nanoelectronics industries
- SFAM – Semiconductor Fabrication Association of Malaysia
- Silicon Saxony, Germany
- ZVEI – Zentralverband Elektrotechnik- und Elektronikindustrie (Electrical Industry Association, Germany)

B. Scientific organizations

- Curatorship in different Fraunhofer Institutes, Germany
- IMMS Institut fur Mikroelektronik- und Mechatronik-Systeme (IMMS Institute for Microelectronic and Mechatronic Systems, Germany)
- C2N Center for Nanoscience and Nanotechnology at the University Paris-Saclay
- Texas Tech University, Electrical Engineering Industrial Advisory Board, and Dean's Council for the College of Engineering

C. Governmental committees/organizations

- Mikroelektronik Strategiekreis (Microelectronics strategy circle, Germany)
- Silicon Germany

D. Standardization organizations

- DKE – Deutsche Kommission Elektrotechnik Elektronik Informationstechnik in DIN und VDE (German Commission for Electrical Engineering, Electronics, and Information Technology of DIN and VDE)

To achieve X-FAB's mission, good and effective communication with all stakeholders is essential. The following stakeholders were identified: customers, employees, investors, suppliers, and local communities. Particular focus in 2021 was on the external employment market.

X-FAB launched a new employer branding campaign aimed at attracting new talents to support X-FAB's future growth. X-FAB regularly takes into account the feedback from stakeholders to improve its reporting. Figure 6.3 shows the different channels X-FAB is using to communicate about its activities.

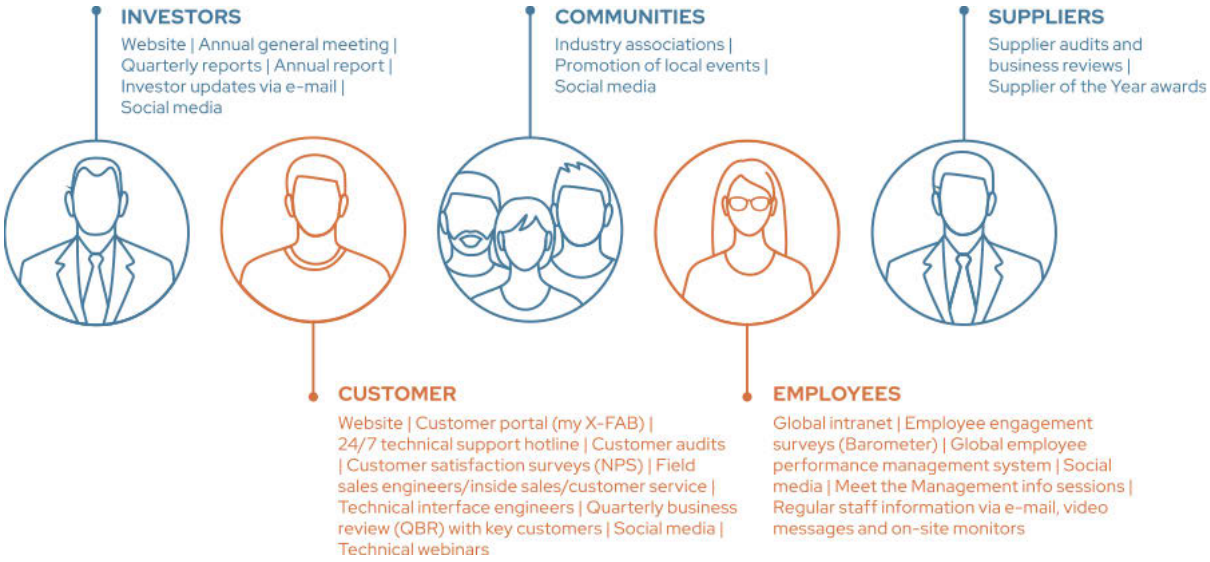


Fig. 6.3: Stakeholder engagement

6.1.2 The Covid-19 pandemic

In 2021, the world was continuously affected by the Covid-19 pandemic. People became accustomed to following rules and regulations established by governmental authorities. At each of its sites, X-FAB offered medical support as well as opportunities for vaccination to its employees. This offer was very well received, especially at our location in Kuching.

Through the implemented measures, X-FAB successfully protected its employees against infections and was able to continually run operations throughout the year. Rigid social distancing and hygiene rules were established, and wearing a face mask at work became mandatory in most of X-FAB`s locations. At the same time, X-FAB closely cooperated with local authorities to ensure compliance with all required procedures and measures to minimize infection transmission.

Fig. 6.4: Photo wall as part of X-FAB Sarawak's vaccination campaign

6.2 Environment

X-FAB's expertise in process technologies is used by its customers to develop green technology for energy solutions contributing to a sustainable future. However, the production of high-quality microchips and microsensors requires a huge amount of materials and energy in general. Thus, X-FAB has a responsibility regarding environmental topics. This is why, in addition to the Company's business, environmental activities are handled with an integrated quality management system with all sites being certified according to the ISO 14001:2015 standard. It is X-FAB's goal to balance current environmental, social, and economic requirements in order to minimize its impact on future generations. One standard and permanent goal is to fulfill all existing compliance obligations.

6.2.1 Environmental awareness and responsibility

In addition to the company values, X-FAB trains its employees on various topics in order to increase individual awareness for the Company's environmental impact as well as sustainability. All sites obey strict environmental local laws. In addition, each site defines specific environmental goals, which are renewed annually and implemented to continuously reduce the Company's impact on the environment.

Various environmental topics have been assigned to dedicated employees within X-FAB to ensure these environmental responsibilities in compliance with the EHS policy following the requirements of ISO 14001:2015 are fully covered. The following functions are defined: waste inspector, energy management inspector, radiation and emission inspector, and safety inspector. Employees taking over any of these roles are trained accordingly.

The production of semiconductors requires the use of large amounts of different materials, among them toxic materials and greenhouse gases. Thus, tracking the material flow and monitoring the material efficiency as well as their use is necessary to reach sustained environmental conservation. All X-FAB sites are located in industrial areas. There are no adjacent nature reserves or similarly classified areas so that the impact on the biodiversity is minimized.

For 2021, the data used for an overview of X-FAB's environmental indicators is consolidated across all sites and normalized to wafer area sold in cm^2 (total of 272.28 million cm^2). X-FAB Itzehoe is not included as it is part of a joint site with only aggregated data available. However, compared to all other sites, the material and energy consumption as well as the corresponding output of waste and gases are not material.

6.2.2 Materials and waste management

The need to use materials that might cause toxic waste in the production of semiconductor products is a special challenge and a key environmental aspect. Therefore, material departments and waste commissioners have been established at each X-FAB site. The following materials are used for production: solvents, photoresists, neutral etchants, acids and bases, metals, gases, and water. Classifications are used and waste is separated by X-FAB to reduce the amount of hazardous or non-recyclable waste. The majority of the waste (hazardous as well as nonhazardous) is sent for recycling in order to recover valuable resources.

There was a slight increase in 2021 total waste generation compared to 2020 due to increased production output. This also led to a higher level of waste recovery of 84.7% compared to 80% in 2020.

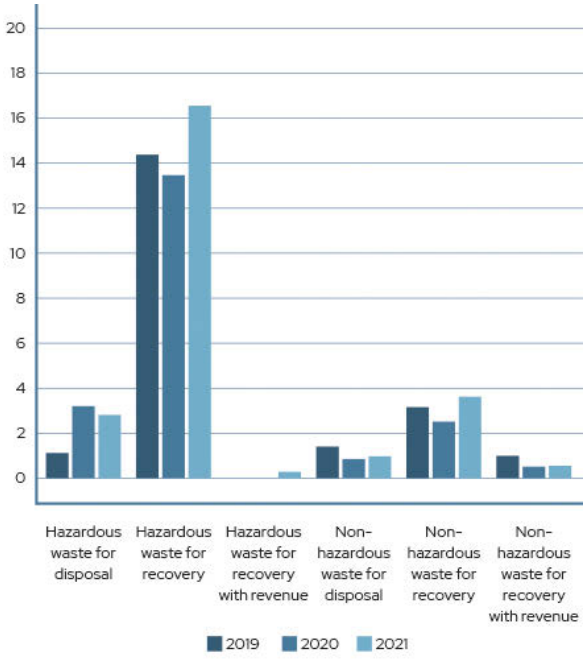


Fig. 6.5: Amount of waste by type and disposal method normalized to the total wafer area sold (tons per million cm^2 wafer produced)

X-FAB pursues permanent environmental objectives to decrease its overall environmental impact. Some of the activities carried out are:

- an annual reduction in the use of the chemical NMP of approximately 800kg in polyimide processing through substitution, as NMP is a critical substance under EU REACH regulations (Erfurt);
- continuation of the biocide savings program launched in 2018 with the installation of a UV reactor in the cooling water system. In 2021, biocide consumption was reduced by 10% (approximately 20kg per year) (Dresden);
- replacement of an ineffective screw compressor in the CDA plant, achieving energy savings of about USD 30,000 per year (Dresden);

- reduction of fluoride sludge waste by 50% from 50 tons/month and reduce cost from USD 41/ton to approximately USD 6/ton for the slurry sludge (Kuching);
- reduction of the amount of hydrochloric acid (HCl) and caustic used by 5% from the previous three years' average of HCl per the amount of industrial waste discharged, providing a cost saving of USD 59,557 (Lubbock); and
- increasing the recycling rate by 3% in 2021 (Lubbock).

6.2.2.1 Energy efficiency

At X-FAB, energy is mainly used in the form of electricity, whereas other sources play only a minor role. The production department has the highest energy consumption based on the advanced cleanroom conditions as well as the production process itself. In 2021, X-FAB's global energy consumption was at about 503 GWh, a slight increase due to the increase in production equipment. The share of low-carbon electricity power sources, such as hydro, nuclear, solar, and wind, was at 74% and the share of high-carbon sources, such as oil, gas, coal, biofuel, etc., was at 26%. The split for X-FAB Sarawak is based on data for 2020, as it is the most recent data available from the local electricity provider.

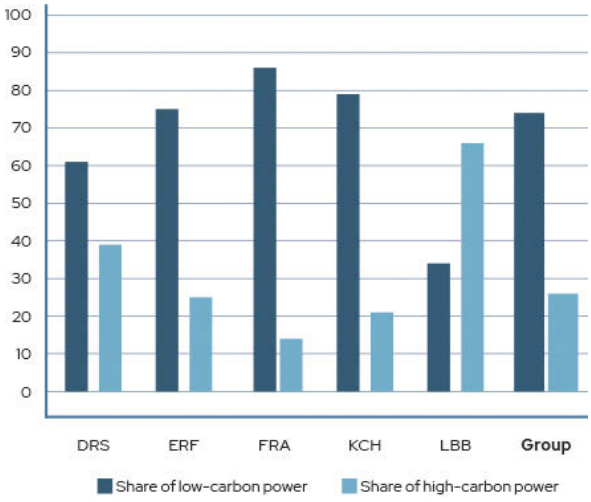


Fig. 6.6: Share of low-carbon and high-carbon electricity power sources (in percent)

At the sites in Erfurt, Dresden, and Corbeil-Essonnes, X-FAB has implemented an energy management system according to the requirements of ISO 50001:2011.

ISO 50001

This international standard specifies requirements for establishing, implementing, maintaining, and improving an energy management system, the purpose of which is to enable an organization to follow a systematic approach in achieving continual improvement of energy performance, including energy efficiency, energy use, and consumption.

This enables the assessment of improvement potentials of the Company's energy efficiency and their implementation in the daily work. Across the Company, different activities and projects exist to reduce energy consumption, which are part of the aforementioned annually renewed environmental goals.

X-FAB's has a permanent ongoing objective to improve its energy efficiency and to reduce energy consumption at all of its locations and a range of activities and projects are being undertaken to achieve this, illustrated by the following examples of projects completed during the 2021 financial year:

- optimization of a hydraulic switch to improve chiller efficiency, which led to annual savings of USD 146,050 and a decrease in energy consumption of 1,000 MWh with a reduction of 300t CO_2 per year. This was achieved by installing additional flow meters at the hydraulic switch as well as frequency converters on all chillers' supply pumps (Erfurt);
- replacement of 30-year old cooling towers resulted in annual savings of USD 30,000, a decrease in energy consumption of 275,000 kWh per year with a reduction of 213t of CO_2 per year (Erfurt); and
- replacement of potentially defective 20kV cables that were damaged from a power blackout incident (Dresden).

Such environmental goals are communicated during X-FAB's annual EHS week taking place at all sites.

Figure 6.7 shows the power consumed at all X-FAB sites over the past four years. Data is not available for France for 2018 and for Itzehoe for the entire period shown.

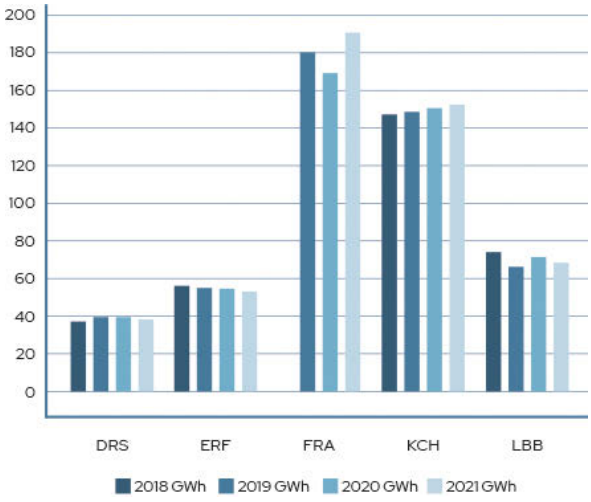


Fig. 6.7: Power consumption of all X-FAB sites from 2018 to 2021 (in GWh)

6.2.2.2 Water

In 2021, X-FAB's production consumed roughly 17 liters of water per each cm^2 wafer area sold. The majority was used for cooling as well as for the supply and cleaning of production tools. Different sources of water supply are used including surface water, municipal water, and ground water. There is a slight increase in consumption due to the higher production rates in 2021.

	Amount in liter/cm^2
From a river	1.65
Ground water	4.95
Local drinking water supplier (city council)	10.53
Total water withdrawal	**17.13**

Fig. 6.8: Total water withdrawal by source

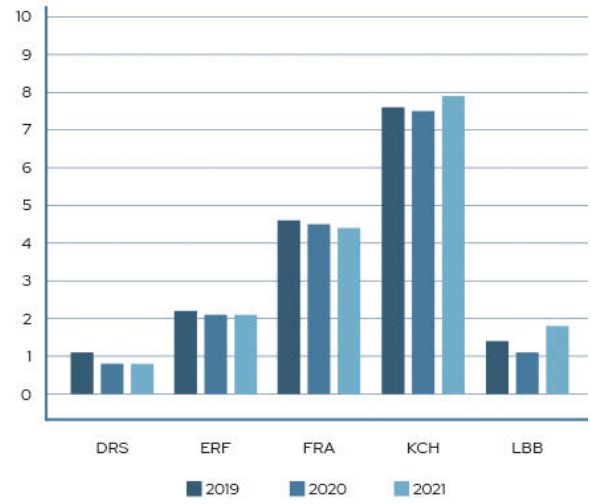


Fig. 6.9: Total water consumption (1,000 m^3 per million cm^2 wafer produced) over a three-year period

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6.2.2.3 Greenhouse gases

Global climate change is an important challenge to all industrial players worldwide. X-FAB understands the climate impact from its operations on society and the global economy. Nevertheless, the use of greenhouse gases is inevitable for the production of microchips and sensors. Figure 6.10 lists the 2021 total consumption of these gases.

Gas	Amount in kg
CHF_3	934
CF_4	3,276
C_4F_8	599
C_3F_8	141
C_2F_6	22,574
SF_6	2,558
NF_3	18,050
N_2O	66,626

Fig. 6.10: Gas emissions by weight

Fig. 6.11: Three-year comparison of PFC gas consumption (kilogram per million cm^2 wafer produced)

It is X-FAB's intention to minimize the output of greenhouse gases. Therefore, each production site is equipped with state-of-the-art cleaning systems. The functionality of these systems is tracked and linked to the production equipment using greenhouse gases. There are additional measures at every site to ensure all regulations are followed. As a result, no significant spills of hazardous substances and greenhouse gases were found in the reporting period. Gas usage is monitored to ensure no wastage is occurring.

There was also a slight increase in PFC gas consumption in the last year due to higher production rates.

Customer goods deliveries are handled by customers directly.

Notable improvements regarding the emission of greenhouse gases in the reporting period were:

- the cancellation of all cross-site workshops continued in 2021 and the resulting general reduction in travel activity resulted in a decrease of greenhouse gas emissions as well as savings in

excess of USD 1.5 million compared to pre-pandemic levels;

- mass concentration of total carbon in the exhaust air was below 50 mg/m^3 (according to the German air pollution control regulation TA Luft) to reduce total carbon emissions in photolithic exhaust air (Erfurt); and
- energy efficiency programs helped to reduce CO_2 emissions; refer to section 6.2.2.1 Energy efficiency.

6.3 Social

6.3.1 Human rights and human resources

X-FAB's company ethics are based on universally held ethical values and principles, including respect of human dignity, openness, and nondiscrimination according to the ZVEI Code of Conduct. Consequently, X-FAB stands up for human rights as stated in the Charter of the United Nations, especially the protection from harassment, the prohibition of child and forced labor, the prohibition of discrimination, fair working standards and compensation, and freedom of thought, expression, association, and assembly, as well as collective bargaining. Based on the principle "freedom of association" 98% of our employees in Europe are organized under the regulation of local and national collective bargaining agreements. These agreements give the highest level of transparency of working conditions to all employees.

All operations are continually monitored and reviewed regarding human rights. All of X-FAB's investments are in compliance with respective local laws. Additionally, a specific policy exists addressing the sourcing of conflict minerals which is further described in section 6.4.2.3 of this report. Respecting human rights is a matter of course for X-FAB, and in all employment contracts. Any kind of child and/or forced labor is prohibited. Health and safety for all employees is guaranteed. The protection from corporal punishment as well as physical, sexual, psychological, or verbal harassment and abuse is ensured.

Internal and external security personnel follow very high standards of human rights practices. During the selection process, they have to undergo special screenings and have to provide special certifications and qualification. They undergo specific training on values, behavior standards, and policies of X-FAB.

X-FAB supports disabled or handicapped persons according to local laws. At X-FAB's workplace more than 100 employees (officially registered with disabilities) are well integrated into the daily work processes and routines. Any form of discrimination is strictly prohibited. All new employees who started in 2021 underwent the mandatory employee orientation of which human rights policies are a crucial focus point. Relevant local laws together with company handbooks are accessible to all employees on X-FAB's intranet as well as in printed form. This is implemented by the Human Resources (HR) department, whose members are regularly trained externally and internally on human rights topics in more detail, such as inclusion, diversity, and anti-discrimination.

Employees are encouraged to report incidents related to human rights to the HR department or, where available, the workers council and the equal opportunities officer. No incidents were reported in 2021.

In the case of reported incidents, corrective actions are initiated in consultation with the HR department and in compliance with local laws. The identity and well-being of employees who report on the violation of any law or regulation of the Company, on any activities that are against the interests of the Company, or on any matter likely to harm any other person will be even better protected with a corresponding global procedure.

Employee statistics

At the end of 2021, X-FAB had around 4,100 employees worldwide at six different manufacturing sites in Europe, Asia, and the US. At all of its sites, X-FAB's recruitment policy is based on the employee's qualifications and the Company's requirements. Consequently, different requirement profiles exist in technology and operations-related positions.

More than half of X-FAB´s staff is located in Europe.

Location	Absolute # of employees	Percentage of male employees [%]	Absolute # of male employees	Absolute # of female employees	Percentage of female employees [%]
North America	442	74.0	327	115	26.0
Europe	2,315	75.1	1,739	576	24.9
Asia	1,319	66.0	871	448	34.0
TOTAL	**4,076**	**72.1**	**2,937**	**1,139**	**27.9**

Fig. 6.12: Number of employees (without trainees) by region and gender at the end of 2021

In line with the strong demand in semiconductors the number of employees increased from 2020 to 2021 by 277. The growth in the number of full-time equivalent employees (FTEs) was mainly driven by the strong focus on employer branding as well as various activities to hire qualified staff.

In particular, X-FAB is aiming at increasing its share of female employees. The share of female employees is constantly increasing in all regions X-FAB is operating in. It increased from 27% in 2020 to 28% in 2021 for the entire Group.

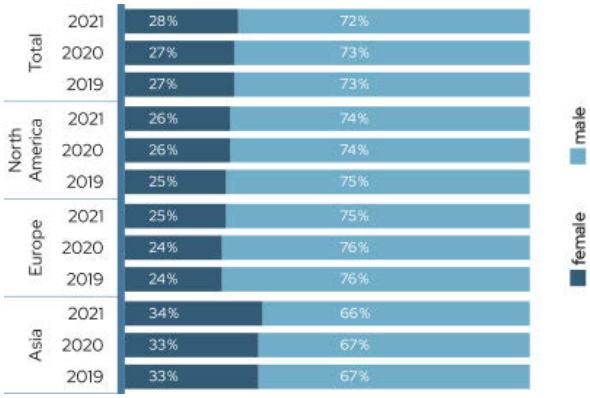

Fig. 6.13: Share of male and female employees by region 2019–2021

Employees' rights and working standards are highly valued at X-FAB. Consequently, all arrangements comply with corresponding national laws and requirements. X-FAB employees with a full-time contract, which applies to 95% of all employees, work between 35 and 40 hours per week. 93% of employees hold a permanent employment contract. Less than 1% of staff are contract workers (borrowed).

The number of part-time contracts stayed the same as in 2020.

The full "Flex@work" policy was deployed at all X-FAB locations, so employees were able to work from home and were provided with the technical requirements for remote work. With this full flexibility X-FAB employees could adapt to the different Covid-19 regulations in the countries X-FAB operates in. This policy will become a global standard for X-FAB employees independently from the pandemic.

Location	Gender	Temporary/ fixed term	Permanent employees	Contract workers	Trainees/ intern ships	Full-time	Part-time
North America	Male	0	296	31	0	325	2
	Female	0	96	19	0	115	0
Europe	Male	163	1,573	2	97	1,655	83
	Female	56	520	1	24	442	135
Asia	Male	32	839	0	0	871	0
	Female	38	410	0	0	448	0
TOTAL	**Male**	**195**	**2,708**	**33**	**97**	**2,851**	**85**
	Female	**94**	**1,026**	**20**	**24**	**1,005**	**135**

Fig. 6.14: Employment contracts by type, region, and gender as at year end 2021

About 98% of all contracts in Europe are collective bargaining contracts. In 2021 the site in Dresden was integrated in the German-wide collective bargaining agreement. This was the final step to align working conditions between the German X-FAB sites. In other regions of the world this concept is not common, and therefore, there are no collective bargaining agreements in place.

In 2021, 628 new employees were hired, 70% of them being male and 30% being female. A large portion relates to graduates having gained several months practical experience at X-FAB Sarawak in the context of a government program. The majority of newly hired employees are younger than 35 years. The turnover rate in 2021 was at 4% up from 3% in the previous year.

Location	Gender	<35 yrs	36–50 yrs	51–60 yrs	> 60 yrs	Total
North America	Male	46	17	7	1	71
	Female	18	14	2	0	34
Europe	Male	204	65	10	1	280
	Female	68	24	9	1	102
Asia	Male	75	11	0	0	86
	Female	52	3	0	0	55
TOTAL	**Male**	**325**	**93**	**17**	**2**	**437**
	Female	**138**	**41**	**11**	**1**	**191**

Fig. 6.15: Newly hired employees (including contract workers and without trainees) by age and gender in 2021

Location	Gender	<35 yrs	36–50 yrs	51–60 yrs	> 60 yrs	Total
North America	Male	7	13	8	0	28
	Female	7	8	1	0	16
Europe	Male	167	47	14	4	232
	Female	53	18	5	1	77
Asia	Male	30	11	4	0	45
	Female	14	1	0	0	15
TOTAL	**Male**	**204**	**71**	**26**	**4**	**305**
	Female	**74**	**27**	**6**	**1**	**108**

Fig. 6.16: Number of employees (excluding trainees and retirements) who have left X-FAB in 2021 by age and gender

X-FAB conducts an employee engagement survey, referred to as Barometer, on a regular basis. In 2021, X-FAB has done a Barometer survey and achieved a response rate of 73%. The results indicated some improvement potentials which are recognized by X-FAB management. Action teams were established on a global as well as on local levels to review and discuss actions and initiatives. This work will continue in 2022.

The average age is different in each location, ranging from an average of 37 years in Asia to an average of 46 years in North America.

Location	Average age of all employees	Average age of male employees	Average age of female
North America	46.0	47.0	43.0
Europe	42.4	42.3	42.3
Asia	36.9	38.1	34.6
TOTAL	**41.8**	**42.4**	**40.0**

Fig. 6.17: Average age by location and gender in 2021

X-FAB is aware of the importance of fair payment. Therefore, all employees receive salaries above the minimum wage according to individual qualification irrespective of gender or age. Based on specific local laws and regulations the relevant employees have the opportunity to inform themselves about the equal pay policy of X-FAB by benchmarking their payment against a relevant group of employees. Of all employees who were on parental leave, nearly 100% returned to X-FAB.

Developing excellence

The success of a company, and thus also X-FAB, depends on whether its employees are able to optimally contribute their individual strengths, which consequently need to be identified and individually developed. The required expertise includes solid knowledge and understanding of X-FAB's internal procedures and production processes as well as job-specific knowledge, all of which are part of the introductory training plan for each new employee.

To strengthen individual development and drive performance improvement, X-FAB introduced a new performance management process (PMP) that is based on constant feedback from supervisor to employee on performance and goal achievement. The newly introduced software, SAP SuccessFactors, helps to track progress on an individual level. This standardized global process allows X-FAB to ensure that every employee is aware of its individual, the site's, the department's and the Company's goals. Several comprehensive trainings were held to raise awareness and to teach all staff how to use the process for feedback and performance improvements.

For a high level of environmental and social awareness, company values, quality awareness and employee rights are highlighted from the beginning of the working relationship at X-FAB.

Enabling employees to be promoted to positions with either higher technical or staff responsibility requires constant development in different areas. To ensure global knowledge transfer and continual development of all employees, internal workshops, training sessions, Lunch & Learn sessions, knowledge networks, and webinars on various technical topics are incorporated

into the daily work of every X-FAB employee. Over the whole year all training was held virtually, which included internal as well as external training. In total, the amount of training hours stayed flat compared to 2020.

Location	Gender	<35 yrs	36–50 yrs	51–60 yrs	> 60 yrs
North America	Male	24	24	24	12
	Female	24	24	12	12
Europe	Male	23	19	15	17
	Female	20	18	12	11
Asia	Male	12	6	6	0
	Female	12	6	6	0

Fig. 6.18: Average training hours per year and employee in 2021

In 2021 X-FAB finished the two-and-a-half-year education program for professionals and talents from all X-FAB sites designed to develop project management and personal skills. This program concentrates on the areas of "personality and leadership," "project management," "quality management," "strategic thinking," and "cultural awareness." Sixteen employees from all X-FAB locations started with the program. Alongside their training they worked on several strategically important projects for the X-FAB Group. In 2021 all training for that program as well as the closing of the program was held virtually. Feedback collected from the participants will be used to improve the program in 2022.

To support the career of X-FAB's technical experts and to acknowledge that technical and management expertise make contributions to the organization that are equally important, X-FAB has established a system of human capital management. An important part of that is X-FAB's Technical Ladder. It enables visionary technical leadership and expertise, and supports recruitment, individual development, and retention of talented people in a competitive employment market, acknowledging the highest levels of technical expertise. In 2021 X-FAB promoted 10 technical experts to a global grade on the Technical Ladder. This not only shows that more and more of the Company's experts work on global projects it also stands for the broad technical knowledge base X-FAB has.

To keep up with the fast development within the high tech area, X-FAB supports innovation – being one of the company values – and participates in publicly funded projects. In those projects, X-FAB enables technical experts to conduct research and to propel state-of-the-art technologies by proving feasibility of new concepts or the industrialization of innovative process technologies. Innovation is appreciated by X-FAB, and technical experts are explicitly invited and encouraged to publish their findings in international journals and to file patents. As at year-end 2021 X-FAB's overall patent portfolio amounts to more than 420 patents and patent applications.

Besides the development of its existing staff, X-FAB is highly interested in offering a wide range of opportunities to potential future employees, for example via apprenticeships, internships, and student training. This comprises commercial and technical careers, dual study programs, and financial support for employees who enhance their skill and knowledge by obtaining relevant qualifications.

X-FAB also offers dual study programs, which combine theoretical sessions and practical work, allowing students to integrate these skills into their future working life from the beginning of their studies. Apprenticeships offered by X-FAB to young talents cover commercial as well as technical careers. In Germany and France more than 100 apprentices are currently undertaking their first, second, or third year of VET (vocational and educational training).

In 2021, X-FAB rebranded its employer brand "We are X-FABulous," showcasing real X-FAB employees and their individual stories. Site-specific advertisement campaigns aimed at raising brand awareness in the public at each location. A specific Instagram account with biweekly updates was launched and each month employee focused stories are posted in the corporate LinkedIn account.

Fig. 6.19: The faces of X-FAB's new employer branding

Rewarding efforts

As an international company, X-FAB employs people from many different regions around the world with different ethnic origins and social backgrounds, resulting in a broad range of individual needs. Being aware of those needs and driven by the responsibility for the Company's staff as well as the aim of long-term employment, X-FAB strives to meet those needs. Nowadays, the modern world demands a high level of self-responsibility and flexibility, especially for working parents and those with responsibilities for caring for the elderly. Therefore, X-FAB offers flexible working time models and strives to find individual working time solutions for its employees. In particular, during the pandemic, X-FAB offered a full "Flex@Work" approach

by offering mobile working wherever the tasks were suitable for remote work.

X-FAB grants leisure time for private matters, such as moving and marriage, and supports working parents financially in case of their children's illness. As part of collective bargaining agreements, German employees above a certain age are offered the possibility to reduce their weekly working hours, if appropriate. The flexibility to start and end the working day at variable times at X-FAB's Asian site was a benefit that was well perceived to balance personal and private matters. Moreover, X-FAB's company pension scheme supports its employees financially after their transition to retirement. In 2021 a collective bargaining agreement applicable to German employees was introduced and more than 480 employees benefited from a company pension scheme.

X-FAB cares about its employees' increased health awareness and growing interest in an active way of life. X-FAB supports activities at its different sites to keep the employees healthy, such as internal sport groups, soccer teams, and running groups, or reduced pricing for fitness clubs. Furthermore, a variety of fitness activities and trial lessons as well as fitness and health checks are offered to employees.

Work environment
X-FAB is interested in a good working atmosphere for its employees and strives at providing a pleasant and inspiring working environment. Cafeterias, lunchrooms, and subsidized meals are offered to employees. Furthermore, chill-out rooms and staff rooms with journals, internet access, and free nonalcoholic drinks are available to support employees during their work breaks.

Even during significant pandemic restrictions, X-FAB ensured that local cafeterias stayed open for the well-being of the employees. Even during weekends as well as night shifts X-FAB staff had the opportunity to use the cafeteria and breakout rooms.

X-FAB rewards outstanding employee performance with incentive cash payments during the year and in the form of bonuses. Both individual employees and teams who undertake extraordinary efforts for X-FAB's benefit are acknowledged by the Company's corporate management.

In 2021 each X-FAB employee was rewarded with an extra bonus at the end of the year, honoring the extraordinary efforts during the coronavirus pandemic. In some countries special governmental schemes were used to provide these bonuses under special tax conditions.

6.3.2 Social commitment

X-FAB encourages its employees to engage in nonprofit and educational activities that contribute to the communities X-FAB is active in. In several sessions, each employee is trained in the company values with the implementation of those values in everyday work life being recorded in a learning management system (LMS) aiming at personal development. Eventually, this leads to even more innovation and higher ethical standards, which also has a positive impact outside the working environment.

Social awareness and responsibility
X-FAB identified opportunities for global and local activities that contribute to the communities in which X-FAB is operating. X-FAB has also raised money to support local programs as well as international charity organizations, such as United Way Worldwide.

In December 2021, X-FAB hosted its traditional Christmas donation campaign. The beneficiary was the France Alzheimer Association, which provides help and support to affected families and finances innovative projects leading to better treatments in the future. X-FAB donated USD 0.25 for each click on the Company's Christmas webpage. As a result, X-FAB was able to hand over a check in the amount of EUR 2,500 as the campaign got 10,000 clicks in total.

Blood donation is one of the most important activities for making a direct personal contribution. X-FAB supports such collective efforts by organizing regular blood donation campaigns several times a year. For employees it is a matter of course to voluntarily support the Red Cross through blood donation. Due to the pandemic regulations all blood donations were put on hold but will be activated as soon as it is possible.

In 2021 X-FAB supported several social donation campaigns in Kuching, Sarawak. X-FAB donated about 110 food baskets and 116 boxes with face masks for the "Do Nation" campaign to villages in Serian, Sarawak. Another donation was sent to The Salvation Army Children's Home to fulfill the wish lists of 52 kids including stationary, household expenses, food and drinks as well as a Christmas tree with decorations.

X-FAB also supports sports events with a charity background by enabling its employees to attend these events. This not only helps to increase team spirit but also supports local organizations and sports clubs.

Educational awareness and responsibility
It is important to X-FAB to invest in the education and skill development of the young and children as the next generation by sponsoring books and other educational material to kindergartens, supporting lectures at universities (e.g. providing design courses in engineering schools), investing in education competitions, and organizing summer schools ("Microchip Summer University"). To provide opportunities for practical training and work experience in technical fields, X-FAB offers internships to high school and university students and also offers students company tours on request. Besides its sponsoring activities, X-FAB maintains close relations with high schools, colleges, and universities to support students by offering internships and career guidance. X-FAB also works with local universities and supported

the SEMI High Tech University for high school graduates considering a future career in a science, technology, engineering, or mathematics (STEM) field. In 2021 several activities were still put on hold or converted to virtual collaboration activities due to the Covid-19 regulations in place.

Back in 2019, X-FAB France, as the only French semiconductor company was invited to participate in a Pan-European project, funded by the European Commission called METIS (microelectronics, training, industry, skills). As part of ERASMUS+ the consortium, which consists of over 30 participating parties from industry, education, university, and training, X-FAB actively contributes to the success of the program. In 2021 X-FAB continued to participate in several activities within the program and will continue to work in this project until 2024.

Various scientific and engineering competitions are supported either by providing knowledge to the participants or by serving as judges, e.g. at the student robotics competition. X-FAB works with many global and local partners to improve educational opportunities for kids and the young, e.g. by supporting corresponding technical clubs. Besides the educational responsibility towards society, X-FAB cares about gender equality and the development of girls in STEM jobs. X-FAB actively contributed by sponsoring and running STEM days for girls. Most of these activities were put on hold or were stopped in 2021 but X-FAB will continue to support these programs in the coming years.

In 2021 X-FAB mainly used social media channels, such as Facebook and LinkedIn, to inform the general public about social activities and job opportunities. For the first time an X-FAB Instagram channel was launched, which is used exclusively to enhance X-FAB´s employer branding in social media. Within a few weeks the number of followers increased significantly, which helps to raise awareness of X-FAB as an attractive company.

In addition, each X-FAB site participates in college and university career fairs in order to recruit interested students and to provide information about career opportunities. Besides the presence at job fairs, X-FAB also participated in numerous technical exhibitions and conferences to offer its employees the possibility to gain and exchange professional knowledge and to network. Most of these events were held virtually and therefore social media has been playing a vital role for the external communication. X-FAB developed a social media campaign to serve customers as well as the general public.

6.3.3 Healthy work environment

Employees' well-being and safety
X-FAB ensures that all company activities are performed in a manner that considers the health and safety of employees, contractors, suppliers, customers, and the general public with no adverse impact on the environment through manufacturing operations and products by operating an EHS management system that is certified according to ISO 14001:2015.

Education and training to improve employees' EHS awareness, safety, and well-being is critical for X-FAB. Regular safety-related training and instruction help to avoid accidents and injuries. Each location has an associated company doctor performing routine medical examinations, such as eye examinations, vaccinations, travel-related medical consultations, etc. Security personnel (internal and outsourced) are also trained to company policies.

Additionally, periodic safety briefings are performed and a global EHS week program has been established. At the annual EHS week, information about health protection, safety, sustainability, and environmental topics is offered to all employees via information desks, posters, and other events. Company tours offered by coworkers are designed to increase employees' awareness of hazards in the workplace and several training sessions are offered to improve their skills in first aid and firefighting. Furthermore, a variety of fitness activities and trial lessons as well as fitness and health checks are offered to employees. In addition to these dedicated training sessions and events, information on environmental and quality awareness is provided and made accessible to all employees via the company intranet.

At all X-FAB locations, accidents are tracked according to local laws but there is no globally harmonized procedure to collect additional information related to accidents or occupational diseases. However, X-FAB tracks accidents in the operations department the same way at all manufacturing locations.

Based on this information, X-FAB recorded 35 accidents in 2021, which caused 7,194 work hours lost, resulting in a frequency rate of 6.42 and a severity rate of 164.95. There was one fatal work-related accident in 2021. An employee of X-FAB Texas was killed during maintenance work done at the deionized water system.

Safety improvement programs that took place in 2021:

- replacement of 208-volt switch gears to reduce the potential of sporadic triggering and/or malfunction in the event of a short circuit, therefore preventing the risk of fire (Dresden); and
- replacement of control system facility as previous system has become obsolete (Dresden).

Hygiene concepts for cleanrooms
At each of X-FAB's production sites, a large share of employees work in a cleanroom where the use of rubber gloves, special clothes, and shoes is a requirement. It is necessary to avoid particle and ion contamination or electrostatic discharge as it would negatively impact the functionality of the semiconductor products manufactured. X-FAB aims to prevent any medical harm as well as ensure a safe working environment and employees' well-being.

X-FAB has therefore established cleanroom concepts to maintain a high level of hygiene and health including specific protection plans. For example, to prevent skin diseases, there is a skin protection plan in place with skin care products available at any time for each employee. For orthopedic reasons, cleanroom shoes are individualized and ergonomic. Cleanroom clothes are partially personalized. Ear plugs are available for noise protection.

Preventive maintenance
Maintenance activities are the basis for the safe operation of equipment and tools. To prevent equipment malfunctions and failures X-FAB uses a global procedure to manage a preventive maintenance system. Even though the system's focus is on securing the productivity of the equipment, operational safety is one of the objectives covered. The execution of the global procedure is secured with local instructions, which manage the preventive maintenance regime for each production site. The maintenance instructions and schedule include information based on vendor manuals, experiences during operation, tool performance parameters, major incidents, product quality, and audit findings. Furthermore, two types of preventive maintenance actions exist: actions triggered by a time interval, and actions triggered by reaching special tool parameters describing the current tool wear.

This all together helps to confirm that the overall tool status remains excellent and to prevent accidents caused by machine malfunctions such as electrical hazards, leakage of dangerous materials, or mechanical issues.

6.4 Governance

Further information on corporate governance can be found in section 7 of the annual report.

6.4.1 Anti-corruption and bribery
X-FAB's business practices follow the principles of fair competition with particular focus on professional behavior. X-FAB respects consumer interests by abiding by regulations that protect consumers, and by using appropriate sales, marketing, and information practices in accordance with the ICC International Code of Advertising Practice and the OECD Guidelines for Multinational Enterprises.

In particular, X-FAB rejects corruption and bribery as stated in the relevant UN Convention against corruption from 2003, and promotes transparency, trading with integrity, responsible leadership, and company accountability.

In order to prevent corruption, X-FAB is aiming for an increased awareness from its employees through comprehensive and repetitive sessions on the company values and strict regulations as outlined in the company handbook. These sessions are attended by all employees and emphasize the corporate values, such as integrity and respect, as well as X-FAB´s code of conduct. Training is organized at least once every two years, and every employee has to attend. New employees are provided with special initial training during their on-boarding. An Ethics and Conflict of Interest policy is part of X-FAB´s code of conduct. Furthermore, anti-corruption is mentioned in the Company's rules and handbooks, which are part of each employment contract. Concerns about unethical behavior are reported either via the workers' council or directly to Human Resources.

As an alert system to confidentially report any violation, in 2018 X-FAB installed a Whistle Blower Policy, which was disclosed to all employees globally. All employees worldwide can report incidents anonymously in their native language. All reports are treated confidentially, and there is a strict no-retaliation policy.

No incidents were reported in 2021.

Ethics training is provided to all employees. At the start of employment with X-FAB, each new employee receives a copy of the work regulations, which comprise policies on harassment prevention and the acceptance of gifts, and includes a definition of infractions that lead to legal actions such as contract termination. Actions taken in response to incidents of corruption comprise all legal actions according to the corresponding national laws. In addition to following all national laws regarding ethical and anti-corruption behavior, X-FAB does not influence politics, neither by participating in political activities nor by donating or supporting parties in elections.

6.4.2 X-FAB's supply chain
As a manufacturer of a large variety of products, X-FAB relies on a number of suppliers. It is part of the Company's corporate ethics to strive for long-term partnerships with its suppliers. The selection and auditing of suppliers is carried out by means of a global, cross-site procedure valid for all X-FAB sites. Part of this procedure is a classification of suppliers, based on, among others, the supplied quantity as well as the frequency of supply: tier 1 suppliers, strategic suppliers, and all others that do not qualify for one of the two categories. In order to be approved as a new supplier, depending on the categorization, the supplier has to pass a process audit according to the requirements of the automotive standard VDA 6.3 (the German Association of the Automotive Industry) and answer various questions, including on environmental topics. The existence of an environmental management system and compliance with RoHS or REACH are important criteria for X-FAB during the selection process for new suppliers.

6.4.2.1 Selection and categorization of X-FAB suppliers
X-FAB has implemented and maintains a supplier selection and monitoring process which is compliant with the quality management system standards ISO 9001 and IATF 16949 as well as with the environmental management system standard ISO 14001. Suppliers of strategic materials are requested to confirm

compliance with X-FAB's list of banned substances and have to provide transparent information regarding their quality and environmental management systems as well as with respect to the composition of the supplied materials. Those aspects are intensively checked and validated by X-FAB's supplier quality management and procurement organization before any new strategic material or supplier is released. This is done via on-site audits and contractual agreements. After the initial release, which has to be authorized by a multidisciplinary team, the compliance of suppliers with the relevant requirements and their overall performance are continually monitored by X-FAB.

Requirements to qualify as an X-FAB strategic supplier

- Certified quality management system according to ISO 9001
- Certified environmental management system according to ISO 14001
- Demonstrated compliance of quality management system according to IATF 16949
- Commitment to a code of conduct, e.g. ZVEI Code of Conduct or equivalent
- Conflict minerals reporting if applicable

X-FAB has a global approach towards sourcing of main supplies to run the factories and therefore local suppliers are only taken into account if they meet the high quality standards.

6.4.2.2 Audits and continual improvement of suppliers

X-FAB stores all certificates and completed questionnaires from its suppliers in a database that is accessible for all X-FAB sites in order to improve the harmonization and standardization of supplier management. The most important suppliers are subject to a supplier assessment once a year. If X-FAB's requirements are not met by at least 85%, the supplier must submit proposals for improvement to stay under contract with X-FAB. In addition to these annual assessments, a regular audit exists to verify the existence of a management system.

In 2021, supplier audits according to the quality management system standards ISO 9001, IATF 16949, and VDA 6.3 for process audits have been performed by X-FAB's supplier quality management organization at 17 different suppliers for strategic materials (e.g. chemicals, gases, wafers) or services, one located in the United States, six in Europe, and ten in Asia. These audits also focused on environmental and other aspects according to X-FAB's standards.

Supplier	Category	Location	Audit type and result
Supplier 1	Chemicals	Germany	Supplier audit / rating A
Supplier 2	Photochemicals	Netherlands	Supplier audit / rating A
Supplier 3	Photochemicals	Belgium	Supplier audit / rating A
Supplier 4	Reticles	Germany	Supplier audit / rating A
Supplier 5	Chemicals	Germany	Supplier audit / rating A
Supplier 6	Wafers	Japan	Supplier audit / rating A
Supplier 7	Gases	Singapore	Supplier audit / rating B
Supplier 8	Reticles	United Kingdom	Supplier audit / rating A
Supplier 9	Photochemicals	Japan	Supplier audit / rating A
Supplier 10	Chemicals	Japan	Supplier audit / rating A
Supplier 11	Chemicals	Japan	Supplier audit / rating A
Supplier 12	Wafers	United States	Supplier audit / rating A
Supplier 13	Wafers	China	Supplier audit / rating A
Supplier 14	Chemicals	South Korea	Supplier audit / rating A
Supplier 15	Gases	South Korea	Supplier audit / rating B
Supplier 16	Chemicals	Japan	Supplier audit / rating B
Supplier 17	Gases	Malaysia	Supplier audit / rating A

Fig. 6.20: Supplier audits performed by X-FAB in 2021

Supplier Corrective Action Requests (SCAR)
In 2021, in total 61 SCARs had to be issued towards different suppliers, the majority of which have not been critical with respect to the continuity or quality of the wafer manufacturing processes at X-FAB nor the products of our customers. However, all SCARs have been tracked and the effectiveness of the defined corrective and preventive actions has been checked and validated by X-FAB's supplier quality management organization.

Engagement with non-compliance suppliers to reach compliance
In 2021, seven new quality assurance agreements with suppliers of X-FAB have been implemented, in order to ensure the supplier's commitment to several key requirements with respect to quality and environmental management and other aspects. Furthermore, X-FAB actively supported various potential suppliers to achieve conformance to the X-FAB requirements for strategic suppliers.

To prove the financial sustainability of its suppliers in 2021 X-FAB has continued to deploy, as a pilot, the access to an international database that allows us to check the financial health of suppliers as well as their revenues. The aim is not only to ensure that very small suppliers are not in a situation of financial dependency towards X-FAB, i.e. X-FAB's business volume must not represent more than 25% of a supplier's revenue), but also to check the financial sustainability of some critical suppliers.

Furthermore, X-FAB has introduced a supplier award system to encourage its suppliers to continuously commit to environmental protection and social aspects. An annual "Supplier Excellence Award" is awarded to the best local supplier for each X-FAB site. The supplier with the highest value in the supplier assessment is nominated as "Supplier of the Year."

6.4.2.3 Handling of conflict minerals
X-FAB is aware of the Dodd–Frank Act requirements regarding, among others, the sourcing of tin, tantalum, tungsten, and gold from conflict regions and is accepting its responsibility along the supply chain. Thus, X-FAB requests all its relevant suppliers to source minerals from regions that are conflict-free. The commitment of X-FAB suppliers to these requirements is documented in a central company database to ensure traceability and transparency.

RoHS and REACH

RoHS is the short form of the "Directive 2011/65/EU of the European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment." It aims to address the global issue of consumer electronics waste. It pertains to manufacturing of various types of electronic and electrical equipment without the use of six different hazardous materials. It is the responsibility of the company that puts the product on the market to comply with the directive. REACH stands for Registration, Evaluation, Authorization, and Restriction of Chemicals. The purpose of this European Union regulation is to address the production and use of chemical substances and their potential impacts on both human health and the environment. Whereas RoHS bans substances that are present in electrical equipment, REACH pertains to all chemicals including those used to make a product. This can include materials, solvents, paints, chemicals, and more.

X-FAB has described a product declaration committing that to the best of its knowledge, X-FAB products do not contain materials that had been sourced from mines in conflict regions in the eastern region of the Democratic Republic of Congo. X-FAB does checks on smelters to ensure that they are certified conflict-free by comparing them against the list of compliant smelters under the Responsible Mining Alliance (RMA) website.

All strategic material suppliers for materials containing tungsten, tantalum, tin, and gold must complete the Conflict-Free Smelter Reporting Template.

X-FAB is also working with suppliers on other minerals disclosures. These include cobalt and mica reporting. Currently, X-FAB is working with suppliers to ensure it sources from conflict-free cobalt smelters. X-FAB products do not contain mica.

6.4.3 Data security

Customer data privacy
The protection of customer data is of highest importance to X-FAB and all stakeholders and is crucial to safeguarding X-FAB´s reputation and brand. X-FAB currently does not apply a customer data deletion concept due to adherence with the IATF automotive standard, which allows for deletion only after at least 15 years of inactivity. X-FAB deactivates data records whenever requested and has not received any customer complaints about data privacy. X-FAB applies an email opt-out system for customer data for hotline news, webinars, and customer surveys. These are maintained via different technologies, including the ERP system, the survey, and the email marketing tool in an automated or semi-automated way.

To test and further improve X-FAB's information security management system, X-FAB Semiconductor Foundries GmbH and X-FAB Dresden GmbH & Co. KG are certified according to ISO 27001 with regards to customer data. In 2020, X-FAB Global Services GmbH also received ISO 27001 certification.

Cybersecurity
As X-FAB employees are the first line of defense and the human firewall protecting X-FAB from potential cyber threats, X-FAB IT has organized cybersecurity awareness trainings for all employees. By adopting the KnowBe4 Automated Security Awareness Training Solutions, cyber security awareness training, including awareness of phishing campaigns, is rolled out regularly to ensure employees are aware of and able to detect cybersecurity threats. Apart from increasing awareness, employees are encouraged to report any suspicious email received to phishing@xfab.com to verify the authenticity of an email and to reduce any potential phishing scams.

6.4.4 X-FAB's responsibility towards its customers and society

In line with its EHS policy, X-FAB continually works on the reduction of its environmental impact via legal compliance and also promotes human rights values among suppliers and customers. It is X-FAB's policy to ensure that all purchased materials are compliant with current government and safety constraints on restricted, toxic, and hazardous materials and that all environmental standards, applicable to the country of manufacture and sale, are fulfilled.

X-FAB follows RoHS and meets the requirements of REACH. X-FAB thereby confirms that all its products are halogen-free and do not contain intentionally introduced lead (Pb), cadmium (Cd), mercury (Hg), hexavalent chromium (Cr6+), polybrominated biphenyl (PBB), polybrominated diphenyl ether (PBDE), bis(2-ethylhexyl) phthalate (DEHP), butyl benzyl phthalate (BBP), dibutyl phthalate (DBP), or diisobutyl phthalate (DIBP). Furthermore, RoHS and REACH-conformant safety data sheets are available for all X-FAB products and are accessible to every X-FAB customer on the Company's website. Finally, all products do not contain any of the substances in the ECHA (European Chemicals Agency) Candidate List of Substances of Very High Concern.

There is a global procedure in place to control and avoid negative health and safety impacts, requiring that every X-FAB product is tested at every stage of development. In addition, all X-FAB products are inspected annually by an external laboratory for hazardous substances, and the Company's customers are informed about the results by means of product declarations.

It is part of the Company's ethics that products are not sold into countries that are listed on an embargo list for corresponding products. During 2021, X-FAB was compliant with laws in relation to this provision and the use of X-FAB products and did not have to pay any fines for violations.

6.5 EU taxonomy

The European Green Deal is a set of initiatives by the European Commission with the overarching objective for the EU to become climate neutral by 2050. In this context and in order to channel investments of the financial sector to more sustainable technologies and businesses, the EU has developed a common classification system, referred to as the EU taxonomy, which is aimed to provide guidance to companies, investors, and policymakers on which economic activities can be considered environmentally sustainable.

The EU taxonomy defines specific performance criteria to assess an economic activity's contribution towards six environmental objectives: climate change mitigation, climate change adaptation, the sustainable use and protection of water and marine resources, the transition to a circular economy, pollution prevention, and control and the protection and restoration of biodiversity and ecosystems. Technical screening criteria for each environmental objective have been defined through delegated acts.

On December 9, 2021, the EU adopted the Delegated Act on climate mitigation and climate adaptation, laying out the technical screening criteria that define whether an economic activity substantially contributes to the objective of climate change mitigation or climate change adaptation. This also includes minimum safeguards that must be secured for the other four environmental objectives of the taxonomy, the so-called Do No Significant Harm (DNSH) criteria.

These new reporting requirements are being introduced gradually. For 2021, companies only need to disclose the proportion of their business activities that is eligible under the taxonomy with respect to the environmental objectives of climate change mitigation and adaptation. However, the interpretation of the EU taxonomy is unclear with many rules, regulations, and guidelines still being under development.

Assessment by X-FAB

The EU taxonomy currently does not list an activity that specifically describes X-FAB's business. The activity that most closely describes X-FAB's business is activity 3.6, "Manufacturing of other low carbon technologies." However, it is clear that X-FAB is an enabler of technologies that significantly reduce energy consumption and greenhouse gas (GHG) emissions. By providing robust analog/mixed-signal CMOS processes, MEMS, and wide-bandgap semiconductors, X-FAB contributes to the creation of sustainable and energy-efficient products in various fields, such as mobility and the energy sector. Sensors and power devices improve the energy efficiency of

electric vehicles and optimize the energy use of the drivetrain. High-voltage technologies including silicon carbide support the transition to renewable energy by enabling the efficient generation, conversion, and storage of energy.

However, based on the eligibility criteria, X-FAB's products and technologies must directly enable substantial life-cycle GHG emission reductions in other sectors of the economy compared to the best performing alternative technology/product/solution available on the market. In this context, reference is made to the Draft Commission notice on the interpretation of certain legal provisions of the Disclosures Delegated Act under Article 8 of the EU Taxonomy Regulation on the reporting of eligible economic activities and assets which states that "for the first year(s) of eligibility reporting in accordance with Article 10 of the Disclosures Delegated Act, those activities [i.e. enabling activities] can only be considered as eligible-to-be-transitional or eligible-to-be-enabling and reported, i.e. marked as such, on a voluntary basis."

Due to the insufficient guidance to determine under which conditions this aim is met, X-FAB opts to have 0% of the Company's total net sales, capex, and opex disclosed as eligible.

TEAM
WORK

We promote cooperation and commitment within our teams and across departments to achieve best results.

7. CORPORATE GOVERNANCE STATEMENT

The Royal Decree of May 12, 2019 (published in the Belgian Official Gazette on May 17, 2019) designated the Belgian Corporate Governance Code 2020 as the reference code for Belgian listed companies. This Code is available for download on the website of the Belgian Corporate Governance Committee (www.corporategovernancecommittee.be).

In view of the "comply-or-explain" principle of the Code, section 7.12 gives an overview of the provisions of the Belgian Corporate Governance Code 2020 that X-FAB does not comply with, along with an explanation of the reasons for non-compliance.

X-FAB aligned its Corporate Governance Charter with the 2020 Code on Corporate Governance in the first quarter of 2020. The Corporate Governance Charter can be consulted on the "Investors" page of the Company's website.

7.1 Shareholders

X-FAB seeks to guarantee transparent and clear communication with its shareholders. Active participation of the shareholders is encouraged by X-FAB.

In order to achieve this goal, shareholders can find important and relevant information on X-FAB's website. X-FAB publishes its annual reports, half-year reports, statutory reports, quarterly results, and financial calendar on its website in the "Investors" section. X-FAB realizes that the publication of these reports and information benefits its trust-based relationship with its shareholders and other stakeholders.

Furthermore, X-FAB is committed to guaranteeing shareholder rights.

- At the Shareholders' Meeting, the Chairman will lead the meeting in such a manner that there will be sufficient time to answer questions that shareholders may have relating to the annual report, special reports, and/or the items on the agenda.
- At the latest 30 days prior to the general meeting, the agenda and other relevant documents are published in different locations including X-FAB's website and the Belgian Official Gazette.
- Shareholders representing at least 10% of the share capital have the right to add items and/or resolution proposals to the agenda.
- During the general meeting, shareholders have the right to vote on each item on the agenda. If they cannot attend the general meeting, they have the right to appoint a proxy.
- The minutes of the general meeting with the voting results will be kept in a special register after the general meeting.

Chapter 8 shows the shareholder structure of X-FAB based on the transparency notifications received.

7.2 Management structure

X-FAB has opted for a "one-tier" governance structure whereby the Board of Directors is the ultimate decision-making body, with overall responsibility for the management and control of the Company. The Board of Directors is vested with the power to perform all acts that are necessary or useful for the realization of the Company's purpose, except for those actions that are specifically reserved by law or the Articles of Association to the shareholders' meeting or other management bodies. As such, the Board, among others, defines the general policy orientations, decides on major strategic, financial, and operational matters, and oversees the management.

The Board has established committees (an Audit Committee and a Remuneration and Nomination Committee) to analyze specific issues and advise the Board on those issues. The decision-making power remains within the responsibility of the Board of Directors itself.

The daily management of X-FAB has been delegated by the Board of Directors to the Chief Executive Officer, Sensinnovat BV, permanently represented by Rudi De Winter, who can represent the Company with his sole signature within and outside the framework of the daily management. For actions that fall outside the scope of the daily management, X-FAB is also validly represented by two directors acting jointly.

The Chief Executive Officer is the chairman of the Executive Management. The Executive Management is responsible for leading X-FAB in accordance with the global strategy, values, planning, and budgets as set out and approved by the Board of Directors. The Executive Management is also responsible for screening the various risks and opportunities that the Company might encounter in the short, medium, or longer term, as well as for ensuring that systems are in place to identify and address these risks and opportunities.

7.3 Board of Directors

Composition
In accordance with Article 15 of X-FAB's Articles of Association, the Board of Directors consists of at least five members and may be comprised of a maximum of nine members. At least three members should be independent in accordance with Article 7:87 BCCA. As of the date of this annual report, the Board of Directors comprises nine members, three of which are indeed independent. At least half of the Board of Directors consists of non-executive members and there is at least one executive member. Independent directors qualify as non-executive directors.

The term of office of directors under Belgian law is limited to six years (renewable) but the Corporate Governance Code recommends that it be limited to four years. Directors of X-FAB are appointed for a
The directors of X-FAB are:

period of four years by the majority of the votes cast at the general meeting, after having received a recommendation of the Remuneration and Nomination Committee. In the same way the general meeting may revoke a director at any time. There is no age limit for directors, and directors with an expiring mandate can be reappointed within the limits stipulated in the BCCA.

The Chief Executive Officer is the only member of the Board of Directors that has an executive mandate. The Chairman of the Board is Tan Sri Datuk Amar Dr. Hamid Bin Bugo.

The composition of the Board of Directors already takes into account Article 7:86 BCCA which requires that one third of its members have to be of a different gender.

Name	Age	Mandate expires	Position
Datuk Amar Ahmad Tarmizi Bin Haji Sulaiman (until April 29, 2021)	59	/	Non-executive director
Hasmawati Binti Sapawi (from April 29, 2021 until July 27, 2021)	52	/	Non-executive director
Dato Sri Wan Lizozman Bin Wan Omar (from July 27, 2021)	57	2025	Non-executive director
Sensinnovat BV (Represented by Rudi De Winter)	61	2025	Managing Director, CEO
Roland Duchâtelet	75	2025	Non-executive director
Thomas Hans-Jürgen Straub	67	2025	Non-executive director
Tan Sri Datuk Amar Dr. Hamid Bin Bugo	76	2025	Non-executive director (Chairman from 27 July 2021)
Aurore NV (Represented by Christine Juliam)	61	2022	Non-executive and independent director
Christel Verschaeren	57	2025	Non-executive and independent director
Estelle Iacona	49	2025	Non-executive and independent director
Vlinvlin BV (Represented by Ling Qi)	51	2023	Non-executive director

Sensinnovat BV is represented by Rudi De Winter. Mr. De Winter joined X-FAB in 2011 as Co-CEO and became CEO in 2014. Between 1996 and 2011 he served as the Chief Executive Officer and Managing Director of Melexis NV. Prior to that date, Mr. De Winter served as a development engineer at Mietec Alcatel (Belgium) from 1984 to 1985 and as a development manager at Elmos GmbH (Germany) from 1985 to 1989. In 1990, Mr. De Winter became director together with Mr. Duchâtelet of XTRION NV, the parent company of X-FAB. Mr. De Winter holds a degree in electronic engineering from the University of Ghent.

Roland Duchâtelet started his career serving in various positions in production, product development, and marketing functions for several large and small companies. He contributed to the start-up of two other semiconductor manufacturers: Mietec Alcatel (Belgium) from 1983 to 1985 as business development/sales manager and Elmos GmbH (Germany) from 1985 to 1989 as marketing manager. Mr. Duchâtelet is the co-founder of the parent company of X-FAB. He holds a degree in electronic engineering and applied economics and an MBA from the University of Leuven.

Thomas Hans-Jürgen Straub has more than 30 years of experience in the management of semiconductor companies. From 1982 to 1990, Mr. Straub served as Head of Central Planning at the Kombinat Mikroelektronik in Erfurt. Thereafter, Mr. Straub was a member of the managing board of PTC Electronic AG, a holding company that managed 18 subsidiaries. From 1991 to 1999, Mr. Straub served as president of several companies, including Mikroelektronik und Technologie-Gesellschaft mbH, Dresden and Thesys Gesellschaft für Mikroelektronik mbH, Erfurt. From 1999 to 2014, Mr. Straub served as Chief Executive Officer of X-FAB. Mr. Straub holds a diploma in

economics from the Hochschule für Ökonomie Berlin (Berlin Business School).

Tan Sri Datuk Amar Dr. Hamid bin Bugo has worked as personnel manager for Malaysia LNG Sdn Bhd, a joint venture between Petronas, Shell, and Mitsubishi. He was the first general manager of the Land Custody and Development Authority, Sarawak, and was permanent secretary to the Ministry of Resource Planning, and state secretary of Sarawak. Tan Sri Datuk Amar Dr. Hamid bin Bugo has also served as a board member of several corporate and governmental agencies and charitable organizations. After graduating with a degree in economics and political science from the University of Canterbury, New Zealand, he gained a postgraduate diploma in teaching from Christchurch Teachers' College, New Zealand, and a certificate in business studies from the Harvard Institute of Development Studies, USA. Tan Sri Datuk Amar Dr. Hamid bin Bugo was awarded an honorary PhD in commerce by Lincoln University, New Zealand. Currently, he is Chairman of Petroleum Sarawak Berhad and Sapura Resources Berhad.

Dato Sri Dr. Wan Lizozman Haji Wan Omar is the State Financial Secretary of Sarawak. Before that he served as Deputy State Financial Officer and formerly as Permanent Secretary in the Ministry of Urban Development and Natural Resources as well as the Ministry of Housing Sarawak. Besides his role as State Financial Secretary, Dato Sri Dr. Wan Lizozman Haji Wan Omar is chairman of two Malaysian state government-linked companies as well as a director of various state-owned companies. Moreover, he is a board member of the Sarawak Economic Development Corporation (SEDC) and the Sarawak Timber Industry Development Corporation (STIDC). His academic qualifications include a certificate in Southeast Asian studies from Columbia University, New York City, USA, a bachelor of science degree in economic and political science from the University of Northern Illinois, USA, followed by a master's degree in international affairs (economic development) from the School of International & Public Affairs, Columbia University, New York City, USA. In 2014, he was awarded a PhD in business studies from UNIMAS (University Malaysia Sarawak).

Aurore NV is represented by Christine Juliam. She started her career in clinical research at MSD in Belgium before moving into product management, and subsequently into sales, marketing, and business planning responsibilities. In July 1996, she started to work for Abbott Belgium as director of its pharmaceutical product division and joined Nycomed as Managing Director Belgium/Luxembourg in 2006. From 2011 onwards she was Region Head for France, the Netherlands, Belgium, and Luxembourg for Nycomed, which was acquired by Takeda in the same year. Subsequently, Ms. Juliam managed Takeda Italy and France as country manager between 2013 and 2017. In 2021, Ms. Juliam started as General Manager at Orifarm. Christine Juliam has a doctor of medicine degree from the University of Ghent, a license in marketing from St. Aloysius College in Brussels, a master's in management from Solvay Commercial School in Brussels, and an MBA from Northwestern University.

Christel Verschaeren served for 29 years at IBM. She held different technical positions as well as commercial leadership positions in general business, channel sales, and inside sales. She led business operations for IBM Belgium/Luxembourg for three years. In 2005, she became Director of Business Transformation and IT for IBM Europe. From 2010 until 2012 she served as Director Global Organizational Change Management. From 2012 until 2016 she was the VP of CIO Services in EMEA. Ms. Verschaeren holds a master's in economics from the University of Antwerp.

Estelle Iacona was a director of EM2C laboratory (CNRS, École Centrale Paris) from 2008 to 2012 after which she became Dean and Vice-President Research of the École Centrale Paris until December 2014. In 2014, she also became Dean and Vice-President Research and Industrial Partnership of the École Supérieure d'Electricité (Supélec) in Paris. From 2015 until 2016 she served as Dean and Vice-President Research of the CentraleSupélec. After four years as Executive Vice-President for Academic Affairs, research professor at CentraleSupélec, and member of the board of École Centrale Casablanca, she currently serves as Senior Vice-President at Paris-Saclay University. Ms. Iacona holds an engineering degree and a master of science from the University of Nantes (Polytech'Nantes) and a PhD in physics of transfer from the École Centrale Paris.

Vlinvlin BV is represented by Ling Qi. She has more than 20 years of international business management experience in China. After she won a provincial English language competition among thousand contenders, she organized international trade fairs and trade missions for the city government of Shenyang, and was the personal translator of the mayor of Shenyang. She left politics to host a weekly TV program with news and interviews of foreign expats in China. In 1996, her media career went on as vice-president with responsibility for international marketing and sales of the animation film company OHY. In 2000, Ms. Ling Qi married Belgian director Wouter Dierickx and founded Sophie Animation Ltd. Currently, Ms. Ling Qi is CEO of two mid-size multimedia and animation film companies. Alongside her media business, Ms. Ling Qi has been consultant for foreign invested companies in China and a Belgian private bank. She holds a degree in international trade and English from the University of Liaoning and obtained a certificate of Dutch at UFSIA Antwerpen.

Appointment and replacement of directors

The Articles of Association (Article 16) and the X-FAB Corporate Governance Charter contain specific rules concerning the (re)appointment, the induction, and the evaluation of directors. Directors are appointed for a term not exceeding four years by the general meeting of shareholders, who can also revoke their mandate at

any time. An appointment or dismissal requires a simple majority of the votes cast.

If and when a position of a director prematurely becomes vacant within the Board, the remaining directors have the right to temporarily appoint a new director until the next general meeting which shall confirm such appointment. Said appointment will then be included in the agenda of the next general meeting.

The Remuneration and Nomination Committee makes recommendations to the Board with regard to the appointment of directors, the CEO, and the other members of the Executive Management. The Committee will consider proposals made by the members of the Board or other relevant parties.

Functioning of the Board
The internal regulation of the Board is part of the Corporate Governance Charter. In principle, the Board of Directors meets on a quarterly basis. Additional meetings may be called with appropriate notice at any time to address specific needs of the business. A meeting of the Board of Directors must in any event be convened if requested by at least two directors.

The Board convened seven times in 2021 and discussed, among others, the following topics:

- the financial results of the Group;
- the business plan and capital expenditure;
- the budget for the financial year 2022; and
- the revolving credit facility.

Datuk Amar Ahmad Tarmizi Bin Sulaiman was excused for two meetings and was represented by proxy at one other meeting of the Board. Christel Verschaeren could not attend one meeting, and Estelle Iacona was represented by proxy at one meeting. Other than that, all Board members attended all meetings.

Under the lead of the Chairman, the Board regularly evaluates its scope, composition, and performance and that of its committees, as well as the interaction with the Executive Management. The next evaluation will be performed in 2022.

7.4 Committees

Audit Committee
The Audit Committee advises the Board of Directors on accounting, audit, and internal control matters as further detailed in the Company's Corporate Governance Charter. The Audit Committee also assists the Executive Management in its assessment and follow-up of the auditor's recommendations.

The Audit Committee is composed of four non-executive members: Aurore NV, represented by Christine Juliam, independent director and Chair; Christel Verschaeren, independent director; Tan Sri Datuk Amar Dr. Hamid bin Bugo, non-executive director; and Estelle Iacona, independent director.

According to Article 7:99 BCCA the members of the Audit Committee maintain a collective expertise in the field of the Company's activities. At least one of them shall have accounting and audit expertise. Given his education as well as extensive experience as a board member for a number of different companies, Tan Sri Datuk Amar Dr. Hamid bin Bugo complies with this requirement.

In 2021, the Audit Committee met four times. During these meetings the audit plan and key audit matters were discussed with the external auditor. Other topics covered were IT security, the new audit partner, and the results of the internal audit. All members of the Audit Committee as well as the external auditor attended all meetings. The internal auditor was present at two meetings.

Remuneration and Nomination Committee
The Remuneration and Nomination Committee advises the Board of Directors principally on matters regarding the appointment and remuneration of directors and members of the Executive Management.

The Remuneration and Nomination Committee is composed of four non-executive members: Christel Verschaeren, Chairman; Aurore NV, represented by Christine Juliam, independent director; Tan Sri Hamid Bin Bugo, non-executive director; and Estelle Iacona, independent director.

The Remuneration and Nomination Committee met three times in 2021. During these meetings matters such as the remuneration of the Executive Management and the (re)appointment of directors were discussed. All members of the Remuneration and Nomination Committee attended all meetings.

7.5 Executive Management

Composition
The Executive Management is composed of the following members:

Name	Age	Position
Rudi De Winter	61	Chief Executive Officer
Alba Morganti	53	Chief Financial Officer
Jörg Doblaski	43	Chief Technology Officer
Lee Boon Chun	52	Chief Executive Officer, X-FAB Sarawak
Dr. Jocelyne Wasselin	63	Chief Executive Officer, X-FAB France
Lloyd Whetzel	64	Chief Executive Officer, X-FAB Texas
Dr. Gabriel Kittler	43	Chief Executive Officer, X-FAB Erfurt
Rico Tillner	39	Chief Executive Officer, X-FAB Dresden

Functioning
The Executive Management Team is composed of the CEO, the CFO, the CTO, and the site managers of X-FAB France, X-FAB Sarawak, X-FAB Texas, X-FAB Erfurt, and X-FAB Dresden. The members are appointed and removed by the Board of Directors after having received the advice of the CEO and the Remuneration and Nomination Committee.

The Executive Management Team exercises the duties assigned to it by the Board of Directors and the CEO, under the ultimate supervision of the Board of Directors.

The CEO leads the Executive Management Team, within the framework established by the Board of Directors and under its ultimate supervision. The CEO chairs the Executive Management Team.

7.6 Diversity policy

The Remuneration Committee and the Board of Directors ensure that diversity criteria such as age, gender, and background are taken into consideration in its selection processes and management of succession planning.

At the end of the reporting year, four of the nine members of the Board were female, thereby reaching the best possible equilibrium in terms of gender diversity. The composition of the Board is in line with the requirements of the BCCA on diversity. The Executive Management Team also consists of a diverse team in terms of age, background, and gender.

7.7 Remuneration report

The remuneration of the directors and the Executive Management is governed by X-FAB's remuneration policy which can be found at www.xfab.com/investors. The remuneration policy was approved by the Shareholders' Meeting on April 29, 2021. This remuneration report has been prepared in accordance with Article 3:6, §3 BCCA as introduced by law on April 28, 2020.

Total remuneration

The application of the remuneration policy during 2021 for the directors and executives led to the effective remuneration as shown in the table on the next page.

Roland Duchâtelet waived his right to receive any remuneration as a non-executive Board member. In 2021 Vlinvlin BV (represented by Ling Qi) received additional remuneration of USD 21,954 for consultancy services provided to the Strategy department above and beyond her work as director of the Company. Hans-Jürgen Straub received an additional USD 11,833 for his mandate on the supervisory board of X-FAB Semiconductor Foundries GmbH. Sensinnovat BV was reimbursed for expenses amounting to USD 7,234.

Members of the Executive Management who are employed by X-FAB Group companies under an employment contract also benefit from group insurance policies in their respective home countries providing various pension, life insurance, disability, and medical insurance benefits, all of which are defined contribution schemes. All these group insurance elements are in line with home country market practices and only represent a minor portion of their respective remuneration packages.

in U.S. dollars					
Name, position	1. Fixed remuneration			2. Variable remuneration	
	Base salary	Fees	Other benefits	One-year variable	Multi-year variable
Datuk Amar Ahmad Tarmizi Bin Haji Sulaiman, Non-executive director	5,786.39	–	–	–	–
Hasmawati Binti Sapawi, Non-executive director	4,328.55	–	–	–	–
Dato Sri Wan Lizozman Bin Wan Omar, Non-executive director	7,634.72	–	–	–	–
Roland Duchâtelet, Non-executive director	–	–	–	–	–
Thomas Hans- Jürgen Straub, Non-executive director	17,749.65	–	11,833.10	–	–
Tan Sri Dr. Hamid bin Bugo, Non-executive director	29,582.75	–	–	–	–
Aurore NV (Represented by Christine Juliam), Independent director	29,582.75	–	–	–	–
Christel Verschaeren, Independent director	29,582.75	–	–	–	–
Estelle Iacona, Independent director	29,582.75	–	–	–	–
Vlinvlin BV (Represented by Ling Qi), Non-executive director	17,749.65	–	21,953.95	–	–
Sensinnovat BV, permanently represented by Rudi De Winter, Executive, CEO	295,822.75	–	7,234.47	73,956	73,957
Executive Management excl. Sensinnovat BV	1,092,949.66	–	82,909.68	250,542.04	–

in U.S. dollars					
Name, position	**3. Extra-ordinary items**	**4. Pension expense**	**5. Total remuneration**	**6. Proportion of fixed and variable remuneration**	
Datuk Amar Ahmad Tarmizi Bin Haji Sulaiman, Non-executive director	–	–	5,786.39	Fixed:	100%
Hasmawati Binti Sapawi, Non-executive director	–	–	4,328.55	Fixed:	100%
Dato Sri Wan Lizozman Bin Wan Omar, Non-executive director	–	–	7,634.72	Fixed:	100%
Roland Duchâtelet, Non-executive director	–	–	–	Fixed:	100%
Thomas Hans- Jürgen Straub, Non-executive director	–	–	29,582.75	Fixed:	100%
Tan Sri Dr. Hamid bin Bugo, Non-executive director	–	–	29,582.75	Fixed:	100%
Aurore NV (Represented by Christine Juliam), Independent director	–	–	29,582.75	Fixed:	100%
Christel Verschaeren, Independent director	–	–	29,582.75	Fixed:	100%
Estelle Iacona, Independent director	–	–	29,582.75	Fixed:	100%
Vlinvlin BV (Represented by Ling Qi), Non-executive director	–	–	39,703.60	Fixed:	100%
Sensinnovat BV, permanently represented by Rudi De Winter, Executive, CEO	–	–	450,969.79	Fixed:	67%
				Variable:	33%
Executive Management excl. Sensinnovat BV	–	78,726.92	1,505,128.30	Fixed:	83%
				Variable:	17%
			2,161,465.10		

Application of the performance criteria
CEO
The variable remuneration for the CEO contains short, medium and long-term elements:

- short term: 25% is based on performance criteria measured over one financial year;
- medium term: 12.5% is based on performance criteria measured over two financial years; and
- long term: 12.5% is based on performance criteria measured over three financial years.

The cash bonus for the CEO is calculated by reference to yearly established targets to reflect global business performance criteria, which are measured on an X-FAB Group consolidated basis. Where financial indicators are used these are based on reported figures determined in accordance with IFRS accounting standards. The targets are as follows:

- 50% of the cash bonus (the short-term element) depends on the achievement of the target EBIT of X-FAB measured over the performance year in order to link the bonus to the operational result of X-FAB;
- 50% of the cash bonus (the medium and long-term element) is dependent on X-FAB generating revenue growth that outperforms the industry average over the last one or two years, whereby the industry reference growth is determined by reference to the McLean Report 2022 by IC Insights (https://www.icinsights.com/). The forecasts for optoelectronics, sensors and actuators, and discrete (O-S-D) devices is used as a reference value.

Short-term cash bonus (one-year variable)
The results for performance year 2021 are shown in the table below. In 2021 the EBIT was USD 77.2 million, thereby outperforming the maximum performance target of USD 10 million. This means that 100% of the short-term cash bonus will be paid out.

Performance criteria	a)	Minimum threshold performance (in USD tsd.)	a)	Maximum performance (in USD tsd.)	a)	Measured performance (in USD tsd.)
	b)	Corresponding remuneration	b)	Corresponding remuneration	b)	Actual remuneration outcome
Global business performance	a)	$ 2,500	a)	$ 10,000	a)	$ 77,192
Relative weighting 50%	b)	$ 0	b)	$ 73,956	b)	$ 73,956
Total bonus		**$ 0**		**$ 73,956**		**$ 73,956**

Medium and long-term cash bonus (two and three-year variable)
The two and three-year variable remuneration of the CEO depends on X-FAB generating revenue growth over the last one or two years exceeding the industry average using the statistics for the optoelectronics, sensors and actuators, and discrete (O-S-D) devices market published in the McClean Report 2022 by IC Insights as a reference value.

The results for performance year 2021 are shown in the table below. In 2021, the revenue growth was 38% compared to 2020. The industry average amounted to 18%. The revenue growth compared to 2019 was 30% while the industry averaged 21%. This results in the bonus calculation as depicted in the following table.

Performance criteria	a)	Threshold performance	a)	Measured performance
	b)	Corresponding remuneration	b)	Actual remuneration outcome
Revenue growth over the last year	a)	Revenue growth >18%	a)	38 %
	b)	$ 36,978		$ 36,978
Revenue growth over the last two years	a)	Revenue growth >21%	b)	21 %
	b)	$ 36,978		$ 36,978
Total bonus		**$ 73,957**		**$ 73,957**

Other members of the Executive Management
The variable remuneration for the other members of the Executive Management consists of a short-term cash bonus expressed as a fixed amount:

- 50% is based on a global business performance measured through the achievement of the target EBIT of the Company in order to link the bonus to the operational result of the Company; and
- 50% is based on an assessment of individual, department, or site performance measured through achievement of pre-established targets within the criteria determined by the CEO.

Currently no long-term incentives are foreseen for members of the Executive Management.

The results for performance year 2021 are shown in the table below. In 2021 the EBIT was USD 77.2 million, thereby outperforming the maximum performance target of USD 10 million. This means that 100% of the short-term cash bonus that is linked to the operational result of the Company will be paid out. Two members of the Executive Management received a discretionary bonus.

Performance criteria	a)	Minimum threshold performance (in USD tsd.)	a)	Maximum performance (in USD tsd.)	a)	Measured performance (in USD tsd.)
	b)	Corresponding remuneration	b)	Corresponding remuneration	b)	Actual remuneration outcome
Global business performance	a)	$ 2,500	a)	$ 10,000	a)	$ 77,192
Relative weighting 50%	b)	$ 0	b)	$ 113,887	b)	$ 113,887
Individual/team performance	a)	Determined individually	a)	Determined individually	a)	Determined individually (incl. discretionary)
Relative weighting 50% + Discretionary	b)	$ 0	b)	$ 113,887	b)	$ 136,655
Total bonus		**$ 0**		**$ 227,774**		**$ 250,542**

Share-based remuneration
The remuneration policy of X-FAB does not provide for share-based remuneration for directors or executives.

Evolution of the remuneration and performances of X-FAB
The table below provides an overview of the annual change in total remuneration, developments and performance of X-FAB, and the average remuneration of employees.

Non-financial performance criteria are not linked to remuneration and are therefore not reported. We refer to section 6 of this annual report for an overview of non-financial topics. To ensure comparability, the annual change in remuneration is only reported since the implementation of Directive (EU) 2017/828 as regards the encouragement of long-term shareholder engagement.

Name	2017	2018	2019	2020	2021
Annual change of remuneration (Executive management)					
• Fixed remuneration	–	–	–	–	-4.1%
• Variable remuneration	–	–	–	–	+100%
Annual change in the developments and performances (in thousands of USD)					
• Performance criteria (EBIT)	50,489	32,919	-43,865	-14,617	77,192
• Net profit	89,758	22,554	-48,540	13,530	83,640
Annual change in the average remuneration of employees on consolidated basis*	–	2.26%	-6.06%	0.91%	8.39%

**The average employee remuneration was calculated with the numbers as reported in note 6.6 (wages and salaries) in this annual report (personnel expenses and average number of employees). Social security, pension, and benefit costs are excluded.*

In 2021 the ratio between the highest and lowest remuneration was 81.7 to 1. The highest remuneration of a member of the Executive Management used for this comparison includes the base salary, pension, and other benefits paid in 2021.

All figures are presented on an X-FAB Group consolidated basis in the above table. Information is provided from 2017 onwards, after X-FAB went public.

Severance payments
No severance payments were made as no management contract with a member of the Executive Management was terminated in 2021.

Use of clawback provisions
No clawbacks were applied in 2021.

Vote of the shareholders
The remuneration report for the financial year ended December 31, 2020, was approved at the annual shareholders' meeting held on April 29, 2021, with a 99.0% majority of the 75.9% validly votes cast. As the remuneration report was approved with a large majority and X-FAB still believes in the principles included therein, X-FAB will retain its remuneration policy.

7.8 Policy on certain transactions

Terms and conditions of transactions with related parties
All related party transactions were made on terms equivalent to those that prevail in arm's length transactions.

Conflicts of interest of the Board of Directors
According to Article 7:96 BCCA a member of the Board of Directors is required to inform the other directors about any item on the agenda of the Board that will cause a direct or indirect conflict of interest of a financial nature to him/her. In this event, the respective director may not participate in the deliberation and voting on this agenda item.

Pursuant to Article 7:97 BCCA, companies listed on the stock exchange must follow a special procedure before decisions are taken or operations are executed concerning (i) the relations of the listed company with an affiliated company, except its subsidiaries, and (ii) the relations between a subsidiary of the listed company and an affiliated company of the subsidiary, other than a subsidiary of the subsidiary. Prior to the decision or transaction, a committee composed of three independent directors, if deemed necessary assisted by one or more independent experts, must prepare written advice for the Board of Directors. The auditor delivers an opinion regarding the accuracy of the information contained in the committee advice and in the minutes of the Board of Directors' decision.

The advice of the committee, an excerpt from the minutes of meetings of the Board of Directors, and the opinion of the auditor have to be recorded in the annual report of the Company.

In 2021, there have been no conflicts of interest for which the procedure of Articles 7:96 or 7:97 BCCA needed to be applied.

Other transactions with directors and Executive Management
As determined by section 6 of the X-FAB Corporate Governance Charter, members of the Board of Directors should arrange their personal and business affairs in such a way as to avoid conflicts with X-FAB. Moreover, the members of the Board of Directors and the Executive Management are not permitted to enter, either directly or indirectly, into agreements with X-FAB or any of its subsidiaries for the provision of paid services or goods, unless explicitly authorized by the Board of Directors. Such agreements must always be at arm's length. Please refer to note 12 on related party transactions.

In 2021, there were no transactions between the Company and its directors or Executive Managers involving a conflict of interest.

Insider trading
In compliance with the 2020 Belgian Code on Corporate Governance and EU regulation on market abuse (EU No. 596/2014) the X-FAB Insider Trading Policy was updated and approved by the Board of Directors in 2020.

X-FAB complies with the Belgian provisions on insider trading and market abuse. In this respect a list is kept up to date of all people with managerial responsibilities as well as all other people who have access to sensitive information which could have an effect on the share price.

The purpose of the X-FAB Insider Trading Policy is to prevent the abuse of inside information. Before trading any company shares, the members of the Board and the Executive Management have to receive the green light from the Compliance Officer and have to report back once the transaction has been completed. Furthermore, the members of the Board and the Executive Management as well as their closely associated persons have to notify all their transactions above a certain threshold in X-FAB shares to the Belgian Financial Services and Markets Authority, which will publish these notices on its website.

Compliance with the X-FAB Insider Trading Policy will be supported and verified by the Compliance Officer.

7.9 Internal control and risk assessment procedures in relation to financial reporting

The internal control and risk assessment procedures in relation to the process of financial reporting are coordinated by the CFO. Such procedures are in place to ensure that the financial reporting is based on reliable information and that the continuity of the financial reporting in conformity with the IFRS accounting principles is guaranteed.

The process of internal control in relation to the financial reporting is based on the following principles:

- Data on transactions or use of assets of the Company are registered accurately and saved in an automated global enterprise resource planning (ERP) system by the different X-FAB business units.
- Accounting transactions are registered in globally standardized operating charts of accounts.
- The financial information is prepared and reported in first instance by the accounting teams in the different legal entities of X-FAB worldwide.
- Consequently, the finance managers at the different X-FAB sites will review the prepared and reported local financial information before sending it to the Global Finance Department.
- In the Global Finance Department, the financial information will receive its final review before it is included in the consolidated financial statements.

X-FAB is validly represented by the sole signature of the CEO for all aspects within and outside the daily management of the Company. Specific powers are granted to members of the Executive Management to represent X-FAB in matters that relate to the functional area for which they are responsible. For actions that fall outside the scope of the daily management, the Company is validly represented by two directors acting together.

In the event of the detection of certain deficiencies, this will be reported to the Executive Management to determine which appropriate measures can be taken.

The risk assessment in connection with the financial reporting is based on the following principles:

- Risks that the Company is confronted with are detected and monitored by the responsible persons of the different departments of the Company.
- The automated ERP system provides the responsible persons of the departments with permanent access to the financial information relevant to the business activities of their functional area for monitoring, controlling, and directing purposes.
- Closing the accounts at the end of every month warrants that the financial consequences of the identified risks are monitored closely to be able to anticipate to possible adverse evolutions.
- The financial results are also reviewed monthly on a global level.
- A data protection system based on antivirus software, internal and external backup of data, and the controlling of access rights to information protects the Company's information and guarantees the continuity of the financial reporting. The adequacy and integrity of these IT systems and procedures are reviewed regularly.
- In accordance with the 2020 Belgian Code on Corporate Governance, X-FAB has set up an internal audit function for its financial department, whose resources and skills are adapted to assess the financial reporting and the risk management of the Company. The Audit Committee receives a periodic summary of the internal audit activities.

7.10 Description of certain information from the Articles of Association and elements pertinent to a takeover bid

Capital structure
The registered capital of X-FAB amounts to EUR 657,456,850.68 and is represented by 130,781,669 equal shares without par value. The shares are in registered or dematerialized form.

Restrictions on the transfer of securities
The Articles of Association contain no restrictions on the transfer of the shares. The Board of Directors is furthermore not aware of any restrictions imposed by law on the transfer of shares by any shareholder, except in the framework of market abuse regulations.

Restrictions on the exercise of voting rights
Each share entitles the holder to one vote. The Articles of Association contain no restrictions on the voting rights and each shareholder can exercise their voting rights provided they are validly admitted to the general meeting and their rights have not been suspended. Pursuant to Article 11 of the Articles of Association the Company is entitled to suspend the exercise of the rights attaching to securities belonging to several owners until one person is appointed towards the Company as representative of the security.

No one can vote at the general meeting using voting rights attached to securities that have not been reported in due time in accordance with the Articles of Association and with the law.

The Board is not aware of any other restrictions imposed by law on the exercise of voting rights.

Agreements among shareholders
XTRION NV and Sarawak Technology Holdings Sdn. Bhd. have entered into a shareholders' agreement as shareholders of X-FAB (the "Shareholders' Agreement").

The Shareholders' Agreement applies for as long as each of the shareholders holds more than 5% of the shares in X-FAB. The Shareholders' Agreement addresses certain matters relating to the governance of X-FAB as well as the transfer of shares in X-FAB held by the parties to this Shareholders' Agreement.

Pursuant to the terms of the Shareholders' Agreement, XTRION NV and Sarawak Technology Holdings Sdn. Bhd. each have the right to appoint two directors on the Board of Directors. The Shareholders' Agreement furthermore provides for certain restrictions on the ability of XTRION NV and Sarawak Technology Holdings Sdn. Bhd. to transfer their shares in X-FAB.

Amendments to the Articles of Association
Matters involving special legal quorum requirements include, among others, amendments to the Articles of Association, issues of new shares, convertible bonds, or warrants, and decisions regarding mergers and demergers, which require at least 50% of the share capital to be present or represented. If the quorum is not reached, a second meeting may be convened at which no quorum shall apply.

Matters involving special majority requirements include, among others, decisions regarding mergers and demergers, which require a majority of at least 75% of the votes cast.

Authorities of the Board to issue, buy back, or dispose of own shares
The Articles of Association foresee that the Board of Directors may increase the registered capital of the Company in one or several times by a (cumulated) amount of maximum EUR 657,456,850.68. Such authorization may be renewed in accordance with the relevant legal provisions. The Board of Directors may exercise this power for a period of five (5) years as from the date of publication in the Annexes to the Belgian State Gazette of the amendment to these Articles of Association approved by the Shareholders' Meeting on March 16, 2017 (i.e. April 26, 2017).

The Board of Directors is further authorized by Article 13 of the Articles of Association to acquire own shares in the Company, either directly, by a person acting in his/her own name on behalf of the Company, or by a direct subsidiary within the meaning and the limits set out by Article 7:221 BCCA, under the following conditions:

- This authorization applies for a number of own shares, profit-sharing certificates, or associated certificates that is at most equal to that which, after acquisition, results in a total number of own shares held by the Company equal to the set limit of 20% as stipulated in Article 5 of the SE Regulation juncto Articles 7:215 ff. BCCA.
- Under this authorization a share should be acquired at a price that will respect the legal requirements, but that will in any case not be more than 10% below the lowest closing price in the last 30 trading days preceding the transaction and not more than 5% above the highest closing price in the last 30 trading days preceding the transaction.
- This authorization was valid for five years from March 16, 2017 and, accordingly, expired on March 17, 2022.

By resolution of the Shareholders' Meeting held on March 16, 2017, the Board of Directors is authorized to divest itself of part of or all the Company's shares, profit-sharing certificates, or associated certificates.

- This can be done at any time and at a price it determines, on or outside the stock market or in the framework of its remuneration policy, to employees, directors, or consultants of the Company or to prevent any serious and imminent harm to the Company.
- The authorization covers the divestment of the Company's shares, profit-sharing certificates, or associated certificates by a direct subsidiary within the meaning of Article 7:221 BCCA.
- The authorization is valid without any time restriction, except when the divestment is to prevent any serious and imminent harm, in which case the authorization was valid until April 26, 2020.

Authorities of the Board to proceed with a capital increase
As per the Articles of Association, the Board of Directors was expressly empowered to proceed with a capital increase in any and all forms, including but not limited to a capital increase accompanied by the restriction or withdrawal of the preferential subscription rights, even after receipt by the Company of a notification by the Financial Services and Markets Authority (FSMA – "Autoriteit voor Financiële Diensten en Markten"/"Autorité des Services et Marchés Financiers") of a takeover bid for the Company's shares. Where this is the case, however, the capital increase must comply with the additional terms and conditions laid down in Article 5 of the SE Regulation juncto Article 7:202 BCCA. The powers conferred on the Board of Directors remained in effect for a period of three years from the date of the amendment to the Articles of Association approved by Shareholders' Meeting held on March 16, 2017 and, accordingly, expired on March 17, 2020. These powers may be renewed for a further period of three years by resolution of the Shareholders' Meeting, deliberating and deciding in accordance with applicable rules. If the Board of Directors decides upon an increase of authorized capital pursuant to this authorization, this

increase will be deducted from the remaining part of the authorized capital.

Other elements
The Company has not issued securities with special control rights.

No agreements have been concluded between the Company and its directors or employees providing for compensation if, as a result of a takeover bid, the directors should resign or are made redundant without valid reason or if the employment of the employees is terminated.

7.11 Auditor

KPMG Bedrijfsrevisoren BV, whose registered office is situated at 1930 Zaventem, Luchthaven, Brussel Nationaal 1K, was appointed as statutory auditor of the Company. Mr. Jos Briers, auditor, was appointed as the permanent representative of the auditor.

The audit fee for the audit of the consolidated financial statements amounted to USD 453,000, excluding value-added taxes. Additional fees were charged in 2021 for other services amounting to USD 36,000 excluding value-added taxes. Non-audit related services mainly relate to certification engagements and tax compliance services. Reference is made to note 7.7.

7.12 Compliance with the 2020 Belgian Code on Corporate Governance

X-FAB complies with the principles of the Code 2020. In view of the "comply-or-explain" principle of the Code the following overview sets out those provisions of the Code that X-FAB does not comply with, along with an explanation of the reasons for non-compliance:

- Contrary to recommendation 7.9 of the Code 2020, the members of the Executive Management are not required to hold a minimum threshold of shares in the Company. Further, the Company does not grant shares, options, or other rights to acquire shares to its members of the Executive Management. However, it should be noted that the CEO is an important shareholder of the Company. The Board of Directors believes that the stock price of a company does not always correctly reflect the performance of that company since there are many external factors that also have an influence on the price of a financial instrument. The financial numbers that impact the level of the business component of the variable remuneration, i.e. the EBIT target, are a more important element driving the valuation of the Company. As such, the directors believe there is a clear alignment between shareholders on the one hand and management on the other.
- Contrary to recommendation 7.6 of the Code 2020 for non-executive directors, the directors do not receive shares in the Company as part of their remuneration. The purpose of the recommendation is to better align the interests of non-executive directors with regard to long-term shareholder interest. At X-FAB, that long-term shareholder perspective is sufficiently represented on the Board of Directors since the CEO as well as one director are important (indirect) shareholders of the Company.

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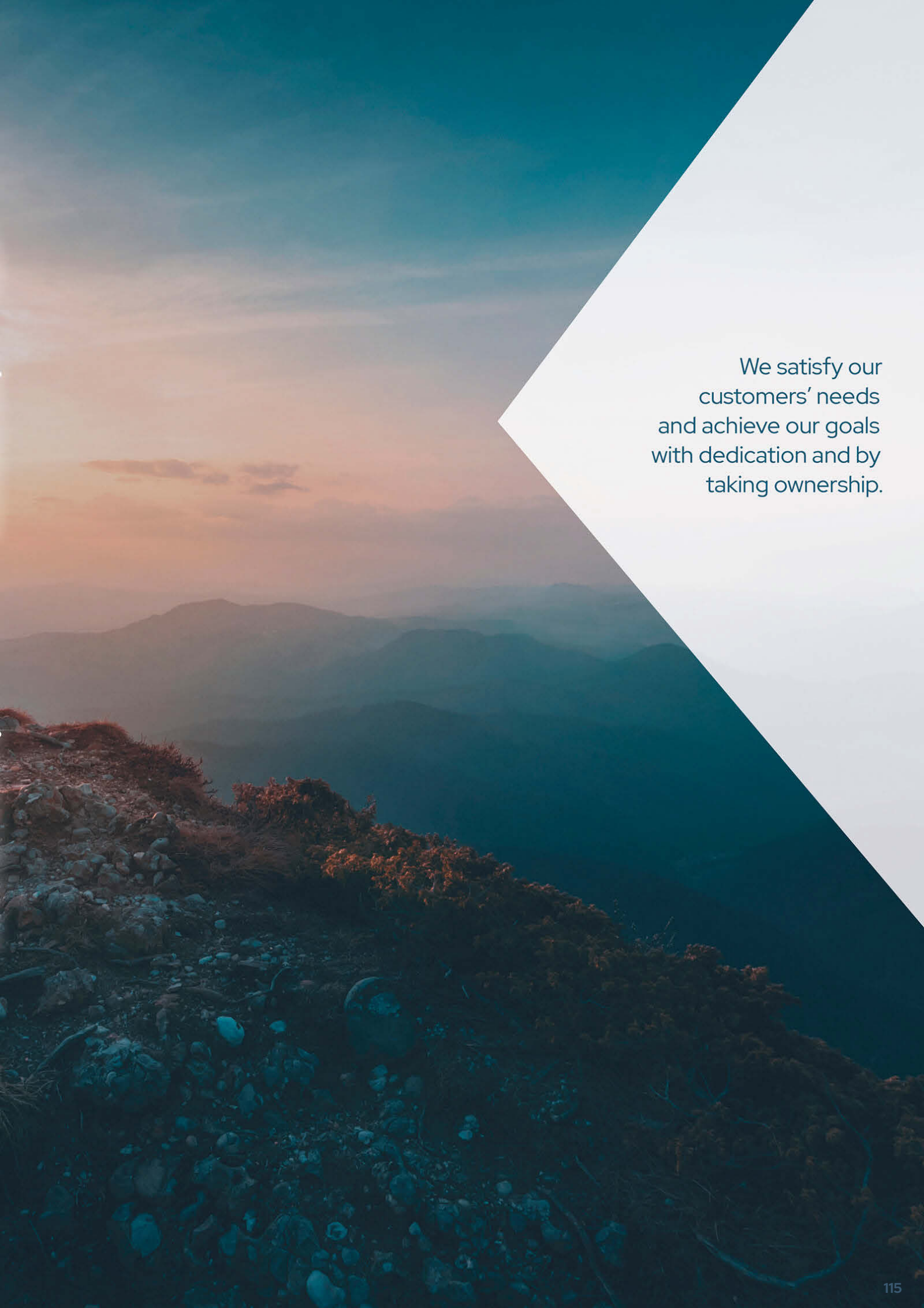


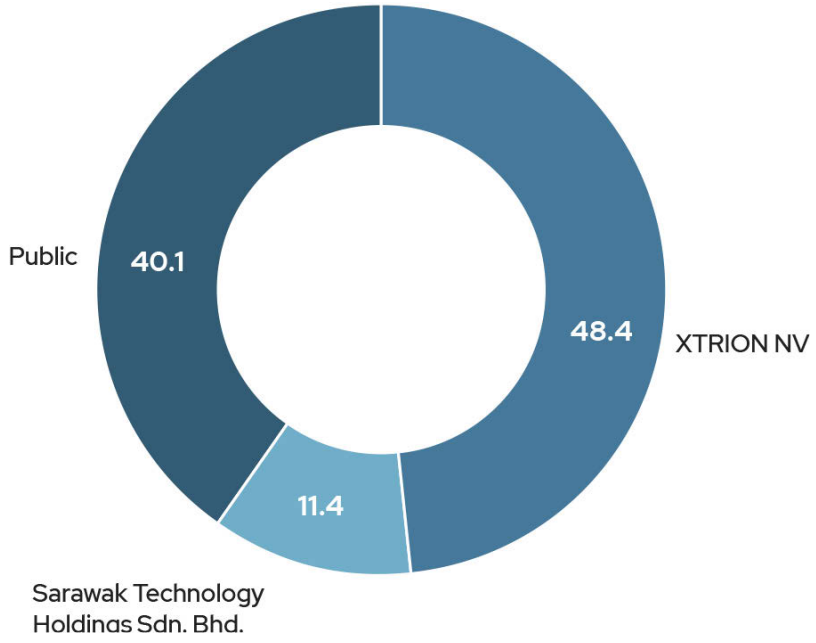
We satisfy our customers' needs and achieve our goals with dedication and by taking ownership.

8. SHAREHOLDER INFORMATION

Shareholder structure

	NUMBER OF SHARES	SHARE IN %
XTRION NV	63,333,563	48.4
Sarawak Technology Holdings Sdn. Bhd.	14,948,655	11.4
Public	52,499,451	40.1
TOTAL	**130,781,669**	**100.0**

Total number of votes: 130,781,669



Share information

First day of listing:	April 6, 2017
Stock exchange:	Euronext Paris
Ticker:	XFAB
ISIN:	BE0974310428
Number of shares outstanding on December 31, 2021:	130,781,669
Market capitalization on December 31, 2021:	EUR 1,195,344,454.66

Financial calendar

April 28, 2022
Publication of Q1 2022 results
Annual shareholders' meeting

July 28, 2022
Publication of Q2 2022 results

September 6, 2022
Publication of Half-Year Report 2022

October 27, 2022
Publication of Q3 2022 results

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9. X-FAB SILICON FOUNDRIES SE STATUTORY ACCOUNTS

The separate financial statements of X-FAB Silicon Foundries SE, the Group's parent, have been audited in accordance with Belgian statutory requirements. The auditor's report is unqualified and certifies that the financial statements have been prepared in accordance with Belgian GAAP, and that they give a true and fair view of the financial position and results of X-FAB Silicon Foundries SE in accordance with all legal and regulatory requirements.

The separate financial statements, together with the separate management report of the board of directors to the general assembly of shareholders as well as the auditor's report thereon, will be filed with the National Bank of Belgium in accordance with the relevant statutory filing due dates. In addition, they are available on the Company's website or can also be obtained on request at the registered office of the company at Transportstraat 1, 3980 Tessenderlo.

The separate financial statements are reproduced below in condensed form.

The condensed statutory financial statements of X-FAB Silicon Foundries SE are presented in thousands of EUR as the functional currency of the statutory accounts is the EUR.

Participations in affiliated companies are recognized at their acquisition cost.

Condensed non-consolidated statement of profit and loss
For the year ended December 31

in thousands of EUR	2021	2020
Operating income		
Turnover	11,775	9,933
Operating charges		
Cost of services and other expenses	(11,650)	(9,683)
Wages and salaries, social security costs and pension costs	(105)	(163)
Depreciation	(8)	(8)
Operating profit	**12**	**79**
Finance income		
Income from financial fixed assets	56,371	50,212
Income from current assets	–	–
Other financial income	1,015	18
Finance costs		
Debt charges	(19)	(1)
Other financial charges	–	(488)
Net financial result	**57,367**	**49,741**
Profit before taxes	**57,379**	**49,820**
Income tax	(316)	–
Profit for the period	**57,063**	**49,820**

Condensed non-consolidated statement of financial position

in thousands of EUR	December 31, 2021	December 31, 2020
ASSETS		
Fixed assets		
Other equipment	9	24
Financial assets		
Affiliated companies		
Investments in affiliates	927,250	847,250
Loans issued to affiliated companies	239	26,019
Total fixed assets	**927,498**	**873,293**
Current assets		
Amounts receivable within one year		
Other receivables	60,417	36,802
Cash and cash equivalents	16,133	35,991
Total current assets	**76,550**	**72,793**
Total assets	**1,004,048**	**946,086**
EQUITY AND LIABILITIES		
Equity		
Capital		
Share capital - issued	657,457	657,457
Share premium	92,902	92,902
Reserves		
Legal reserves	12,402	9,549
Reserve for treasury shares	562	562
Accumulated profits	234,900	180,690
Total equity	**998,223**	**941,160**
Current liabilities		
Amounts payable within one year		
Trade payables	5,825	4,810
Other current liabilities	–	–
Taxes	–	116
Accrued charges and deferred income	–	–
Total current liabilities	**5,825**	**4,926**
Total equity and liabilities	**1,004,048**	**946,086**

10. RISK FACTORS

An investment in shares involves risks and uncertainties. Prior to making a decision to invest in shares of X-FAB, the information provided in this annual report and, in particular, the risks and uncertainties described below should be read and considered carefully. The occurrence of any of these risks could adversely affect the Company's business, results of operations, and/or financial condition.

Risks relating to X-FAB's business and the semiconductor industry

Structural trends in the markets for the end-user products produced by X-FAB's customers, or material volatility in demand for these products, may limit X-FAB's ability to maintain or increase sales and profit levels.
A significant portion of X-FAB's revenues is derived from customers who use ICs manufactured by the Group as components for the production of a wide range of products including automotive, industrial, medical, and communications devices. If consumer demand for these products is volatile, or past and expected structural growth trends in these industries do not continue, it may lead to reduced demand for X-FAB's analog/mixed-signal ICs.

A global systemic economic or financial crisis, increased political uncertainty, or increased economic protectionism could negatively affect X-FAB.
X-FAB's business is subject to inherent and indirect risks arising from general and sector-specific economic conditions in the markets in which it operates. In recent years, several major systemic economic and financial crises and events leading to political uncertainty have negatively affected global business conditions, the semiconductor industry, and a variety of consumer and industrial markets. X-FAB's protection against downturns is limited, since a substantial majority of customer contracts do not contain minimum order requirements, and as a result any decline or slow GDP growth, whether caused by political uncertainty, changes in trade regulation, or broader economic conditions, which leads to reduced consumer and industrial spending, may adversely impact X-FAB's customers and result in lower demand for its analog/mixed-signal ICs.

A significant portion of X-FAB's revenue comes from a relatively limited number of customers, with its largest customer being a related party.
X-FAB's largest customer, Melexis, accounted for 39% of the Group's revenue in 2021, while the Group's top three customers accounted for 49% of revenue and its top five customers accounted for 55% of revenue during the year. None of X-FAB's customers are prohibited by contract from purchasing from other semiconductor suppliers. In the past, customers have switched to other semiconductor suppliers with little or no notice, or have notified the Group that they would source semiconductors for new end-user products from other semiconductor manufacturers. Changes in X-FAB's relationships with its top customers, the loss of one or more of these customers, or a change in the competitive position of any of these customers could have a material adverse impact on X-FAB. Further, Melexis is a related party, as it is controlled by X-FAB's largest shareholder, XTRION (which is beneficially owned by Roland Duchâtelet, Rudi De Winter, and Françoise Chombar, and the permanent representative of X-FAB's CEO, Rudi De Winter, is married to Françoise Chombar who served as the CEO of Melexis until the end July 2021 and is currently chair of the board of directors of Melexis. Conditions of the commercial relations between X-FAB and Melexis are in line with those that would have been agreed upon between independent parties in comparable circumstances. The arm's length character of these conditions are analyzed, determined, and tested in accordance with the principles and best practices in this respect as detailed in the OECD's 2017 Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations. Notwithstanding due care taken in the Group's transfer pricing analyses, there can be no assurance that the tax authorities or courts will not take a position contrary to the Group's position.

Due to X-FAB's relatively fixed-cost structure, its ability to grow profitability is dependent on its ability to maintain appropriate utilization levels.
The profitability of X-FAB's operations is closely tied to its level of utilization. X-FAB's ability to improve or maintain utilization levels depends, among other things, on the general economic environment, the success of its major customers, and its ability to offer the technologies and processes required for it to stay competitive. Failure to maintain or improve utilization levels could have a material adverse impact on X-FAB.

X-FAB faces difficulties in forecasting demand and may therefore be unable to match its production capacity to demand.
Difficulties in projecting future business levels make it more difficult to reach and to maintain optimal utilization levels and adequately predict capacity needs across X-FAB's operations. Because customers usually place orders on a short-term basis, X-FAB may face difficulties to predict demand accurately. Significant capacity problems or inability or delay in shifting production to another fab could harm X-FAB's relationships with its customers and lead to lost sales. Furthermore, small changes in sales at the OEMs may trigger inventory corrections throughout the supply chain. As it can take about ten months from placing an order at X-FAB to assembling the final product at the

OEM, a small variation in sales combined with a negative or positive market segment growth could cause overreactions in the supply chain that amplify the effects on X-FAB's operations, since X-FAB is at the end of the supply chain.

X-FAB may be unsuccessful in its attempts to increase its production capacity and capabilities.
As part of its strategy to expand capacity, X-FAB intends to expand capabilities and capacity at the Group's existing sites. This depends on the timely availability of equipment as well as the ability to install and qualify such new equipment on a timely basis. Although X-FAB does not have any current targets for future acquisitions, the Group may acquire additional companies or production sites over the medium term. X-FAB may also seek to grow its production capacity through the development of new manufacturing sites. Failure to integrate any acquired company, fab, or technology successfully, or to achieve desired synergies, may inhibit X-FAB's future expansion.

X-FAB may not realize all the anticipated benefits from its acquisition of Altis' core business.
X-FAB acquired the Altis assets in 2016, including a fab located in Corbeil-Essonnes, France. The integration process includes a series of technology introductions, capacity enhancements, adoptions of Group-wide systems, and implementation of cost-efficiency measures. X-FAB may encounter delays or interruptions in this integration process, among others due to delays in customer qualifications in the fab or a need to make additional capital expenditures. There can be no assurance that this integration will be successful, that X-FAB will meet targeted synergies or financial returns at the new facility, or that X-FAB will be able to keep all existing customers to secure satisfactory fab utilization during the business transition.

X-FAB's expectations of an increase in market share by foundries might not occur.
A key component of X-FAB's strategy is its belief that the market for foundries will grow, due to increased outsourcing of analog/mixed-signal ICs by IDMs and increasing prevalence of fabless companies. Although this trend has been prevalent in the digital IC market, it may not develop to the same extent in the market for analog/mixed-signal ICs. If increasing market growth for foundries were to slow or reverse, it could have a material adverse impact on X-FAB.

X-FAB may face increasing competition.
Although X-FAB operates in a narrow market segment within the broader semiconductor manufacturing industry, the Group faces competition from other semiconductor producers, some of which have greater manufacturing, financial, research and development, and marketing resources than X-FAB does. In the long term, these competitors may win a higher portion of new customers than X-FAB, or win existing customers from X-FAB. If X-FAB cannot provide the same level of design and engineering support, capacity, or advanced capabilities as competitors, it may have a material adverse effect on X-FAB.

X-FAB may face competitive pricing pressures.
Competitors may have an impact on X-FAB's selling prices and demand for its services. Although X-FAB has not experienced significant pricing pressure in the past, there can be no assurance this will be the case in the future. Significant declines in average selling prices (ASPs) could have a material adverse effect on X-FAB.

X-FAB may face price increases from its suppliers.
X-FAB manufactures analog/mixed-signal ICs, utilizing proprietary process technologies and third-party silicon wafers and other raw materials. Changes in the availability or prices of such wafers, raw materials, electricity, spare parts, etc. can have an effect on the operating margin if the additional costs cannot be included in the prices for X-FAB's own customers.

In 2021, raw wafer costs accounted for 14% of total cost of sales. For most raw wafer types, X-FAB uses more than one supplier to secure availability of required volumes but also to remain flexible. However, having several suppliers per wafer type also means a greater effort to acquire the necessary qualifications for these suppliers.

X-FAB is subject to risks associated with currency fluctuations.
X-FAB records its financial results in US dollars but receives revenues and incurs costs in a variety of currencies, including euros and Malaysian ringgit. Changes in the exchange rate of the US dollar to the euro or Malaysian ringgit could result in translational losses in a given year, as compared to prior operating periods, or in a mismatch between local currency expenses and US dollar revenues. X-FAB strives for a natural hedging of the business, which would make X-FAB's profitability development largely independent from exchange rate fluctuations; however, this may not be effective in preventing exchange rate losses.

Price, credit, liquidity, and cash flow risks and risks associated with the use of financial instruments are described in note 10 to the X-FAB consolidated financial statements in chapter 5.

X-FAB is subject to risks associated with any form of cyber criminality.
X-FAB's operations may be disrupted due to the unauthorized use or theft of critical data as well as sabotage, viruses, or any other malicious activity targeted at the Company's IT infrastructure. This could have an impact on the confidentiality, integrity, and availability of data and/or IT systems of the Company. X-FAB has taken measures to make the Company's IT infrastructure robust and secure and has implemented state-of-the-art security and control frameworks and technology. Any significant interruption or failure of X-FAB's IT systems or any significant breach of security could have an adverse effect on the Company's business, operational results, financial condition, and cash flows.

X-FAB is also subject to the following risks:

- X-FAB depends on successful technological advances.
- X-FAB depends on successful materials, machinery, and component procurement for its manufacturing processes.
- X-FAB's business may temporarily be negatively impacted due to disruptions in the supply chain or market demand caused by a pandemic or epidemic.
- X-FAB may be unable to recruit or retain the personnel required for its growth strategy.
- X-FAB may be affected by reductions in government subsidies and grants and could fail to comply with the conditions and obligations under such subsidy programs.
- Industry studies, forecasts, and growth rates relating to the semiconductor market as a whole may not be indicative of X-FAB's operations within the analog/ mixed-signal semiconductor market.
- X-FAB's ability to compete successfully and achieve future growth will depend, in part, on its ability to protect its proprietary technology.
- X-FAB may be subject to claims for alleged infringement of third parties' intellectual property rights.
- X-FAB depends on intellectual property rights of third parties, and failure to maintain or acquire licenses could harm the Group's business.
- X-FAB could be adversely affected by manufacturing interruptions.
- X-FAB's business could be adversely affected by changes in export control regulations, trade restrictions, and economic sanctions.
- If X-FAB experiences difficulty in achieving acceptable device yields or process performance as a result of manufacturing problems, it could result in delayed deliveries.
- X-FAB's insurance coverage may not be adequate to compensate for any interruptions or loss of business.
- X-FAB's operations may be impacted by disruptions both at its own or its suppliers' operations caused by severe weather conditions whose occurrence is increasing due to climate change.
- X-FAB could incur material costs to comply with regulation, including environmental and health and safety laws, especially as a result of climate change. Changes in such regulations could require significant changes in the production process or could even require purchasing additional equipment.
- X-FAB may be subject to litigation, disputes, or other legal proceedings.
- X-FAB carries a significant amount of deferred tax assets on its balance sheet.
- Low or negligible employee motivation as well as the occurrence of accidents due to human failure may negatively impact X-FAB's business.
- Cultural differences may lead to misalignment among X-FAB sites, negatively impacting X-FAB's business.
- X-FAB may be subject to penalty payments if labor rights or environmental provisions are being violated.
- X-FAB's public image may be adversely affected based on the impact of its business on the environment.

Risks related to the shares

- The interests of X-FAB's principal shareholder may not necessarily be aligned with X-FAB's interests or the interests of the holders of the shares.
- Future sales of substantial amounts of X-FAB's ordinary shares, or the perception that such sales could occur, could adversely affect the market value of the shares.
- X-FAB may not be able to pay dividends.
- Investors with a reference currency other than euros will become subject to foreign exchange rate risk when investing in shares.
- Any sale, purchase, or exchange of shares may become subject to financial transaction tax.
- Certain provisions of the Belgian Companies and Associations Code and the Articles of Association may affect potential takeover attempts and may affect the market price of the shares.

Forward-looking information

This annual report may include forward-looking statements. Forward-looking statements are statements regarding or based upon management's current intentions, beliefs, or expectations relating to, among other things, X-FAB's future results of operations, financial condition, liquidity, prospects, growth, strategies, or developments in the industry in which it operates. By their nature, forward-looking statements are subject to risks, uncertainties, and assumptions that could cause actual results or future events to differ materially from those expressed or implied thereby. These risks, uncertainties, and assumptions could adversely affect the outcome and financial effects of the plans and events described herein.

Forward-looking statements contained in this annual report regarding trends or current activities should not be taken as a report that such trends or activities will continue in the future. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise, unless legally required. You should not place undue reliance on any such forward-looking statements, which speak only as of the date of this annual report.

The information contained in this annual report is subject to change without notice. No re-report or warranty, express or implied, is made as to the fairness, accuracy, reasonableness, or completeness of the information contained herein, and no reliance should be placed on it.

11. GLOSSARY

Analog M/S	Analog mixed-signal
AEC	Automotive Electronics Council
AIM	Automotive, industrial, medical
BCCA	Belgian Code on Companies and Associations
Belgian Companies Code	The Belgian Act of May 7, 1999 containing the Companies Code as amended from time to time
Belgian GAAP	Belgian generally accepted accounting principles, which refers to the financial reporting framework applicable in Belgium
BiCMOS	Bipolar complementary metal-oxide-semiconductor
CAGR	Compound annual growth rate
CCC	Consumer, communications, computer
CDA	Compressed dry air
CMOS	Complementary metal-oxide-semiconductor
Company	X-FAB Silicon Foundries SE
DNA	Deoxyribonucleic acid
EBIT	Earnings before net finance cost and income taxes, which is equivalent to operating profit, as presented in the historical financial information
EBITDA	Earnings before net finance cost, income taxes, depreciation, and amortization.
EHS	Environmental, Health and Safety
Epi	Epitaxy, which is the process of depositing a thin layer of single crystal material over a single crystal substrate
ERP	Enterprise resource planning
ESG	Environmental, social, governance
EU	The European Union
EUR, euros, or €	The common currency of the EU member states that are part of the Eurozone
EV	Electric vehicle
Fab	Wafer fabrication facility
FSMA	The Belgian Financial Services and Market Authority
FTE	Full-time equivalent
GDP	Gross domestic product
GHG	Greenhouse gases
GRI	Global Reporting Initiative

GVG	X-FAB Dresden Grundstücks-Vermietungsgesellschaft mbH & Co. KG
IATF	International Automotive Task Force
IC	Integrated circuit
ICC	International Chamber of Commerce
IDM	Integrated device manufacturer
IFRS	International Financial Reporting Standards as adopted by the European Union
IoT	Internet of things
IP	Intellectual property
kW	kilowatt
MEMS	Micro-electro-mechanical systems
METIS	Microelectronics training, industry and skills
MFI	X-FAB MEMS Foundry Itzehoe GmbH
M-MOS	M-MOS Semiconductor Sdn. Bhd.
MW	Megawatt
NPS	Net promoter score
NRE	Non-recurring engineering
NVM	Non-volatile memory
OECD	Organization for Economic Cooperation and Development
OEM	Original equipment manufacturer
PDK	Process design kit
REACH	Registration, Evaluation, Authorization, and Restriction of Chemicals
RF	Radio frequency
PFC	Perfluorinated carbons
RFID	Radio-frequency identification
RoHS	Restriction of the use of certain hazardous substances
SCAR	Supplier corrective action request
SE Regulation	Council Regulation (EC) No 2157/2001 of October 8, 2001 on the Statute for a European company (SE)
SiC	Silicon carbide
SiGe	Silicon germanium
SOI	Silicon-on-insulator
STEM	Science, technology, engineering and mathematics
TSV	Through-silicon via

VDA	German Association of the Automotive Industry
WSPM	Wafer starts per month
X-FAB SE, or the Company	X-FAB Silicon Foundries SE
X-FAB SE Group, or the Group	X-FAB Silicon Foundries SE together with its subsidiaries
X-FAB GmbH	X-FAB Semiconductor Foundries GmbH
X-FAB Dresden	X-FAB Dresden GmbH & Co. KG and X-FAB Dresden Verwaltungs-GmbH
X-FAB France	X-FAB France SAS
X-FAB Texas	X-FAB Texas Inc.
X-FAB Sarawak	X-FAB Sarawak Sdn. Bhd.
X-FAB Japan	X-FAB Japan K.K.
XMF	X-FAB MEMS Foundry GmbH
ZVEI	Electrical Industry Association, Germany

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X-FAB Silicon Foundries SE

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