

Valoe Corporation Business Review January – March 2022

THE FIRST QUARTER OF 2022

In January – March 2022, the net sales of Valoe Group, under the IFRS standards, were EUR about 0.5 million (in 2021 EUR 0.3 million). The EBIT was ca. EUR -1.0 million (EUR -1.4 million), the profit for the period was ca. EUR -1.6 million (EUR -1.8 million). The EBITDA was about EUR -0.6 million (EUR -1.1 million). At the end of the reporting period, Valoe Group’s equity ratio including capital loans was 4.4 percent (18.5 %).

During the first quarter of 2022, our business operations made expected progress. The interest in vehicle-integrated solar applications increased; our cooperation with its main partners was strengthened, and the projects with a long development period moved to the industrialization phase, which precedes mass production. As we disclosed in March 2022, we agreed with Sono Motors GmbH on the industrialization of solar cell assemblies, and Sono Motors assigned us for the next phase of the Sion’s development program. Furthermore, during the reporting period, we launched the development of the first solar applications for marine vessels together with our customer.

	<b>1-3/2022</b>	<b>1-3/2021</b>	<b>1-12/2021</b>
Net Sales	466	268	2,148
EBITDA	-626	-1,108	-1,580
Operating Profit	-1,049	-1,438	-3,173
Profit for the Period	-1,571	-1,830	-4,776

VALOE’S FUTURE OUTLOOK

**Market Guidance**

Valoe Group’s net sales for the financial year 2022 will clearly increase, and loss at the EBITDA level will decrease compared to the previous year.

**Markets**

Raw material prices continued rising. The price of silicon wafers, the most important raw material for us, continued rising as well. Supply chains’ logistical problems caused by the Ukraine war and the Covid-19 pandemic further deteriorated. At the same time, the European Union emphasized the importance of solar energy by investing heavily in photovoltaic applications. Thus, the competitive position of European manufacturers has improved and, in our view, will continue to improve. The global demand for traditional solar panels is high and is expected to further grow.

The interest in vehicle-integrated solar applications increased. In the EU's solar strategy published on 18 May 2022 EU designated the vehicle-integrated solar applications as one of the focus areas in the coming years.

### **Value Focuses on Vehicle-Integrated Photovoltaics (VIPV)**

Thanks to years of development of our OddForm® components, we feel we are in a good position now as solar electrification of vehicles is starting. We see that the automotive-related solar market has very high growth potential as several major vehicle manufacturers begin integrating photovoltaic solutions into their vehicles. According to the plans we are aware of, a number of vehicles with solar integration will be launched by well-known brands before 2025. In addition, we are involved in several projects run by smaller electric vehicle manufacturers, which, if successful, will bring solar-powered hybrid vehicles and all-day solar-powered light vehicles to the market.

In 2020, Allied Market Research Inc. disclosed a forecast according to which the emerging market for Vehicle Integrated Photovoltaics (VIPV) will multiply. Allied Market Research estimated that the current, still tiny market will grow to more than USD 4 billion by 2030. Based on the information we have received from our European customers, we are confident that the forecasted trend is correct, but the growth will materialize faster than expected.

### **New Development at the Juva and Lithuania Plants**

During and after the reporting period, we have started testing the production processes of the first OddForm® components to be mass-produced at our Juva plant. Our most significant task for the rest of the year is to create production capability to produce large quantities of components. The task is a big challenge for our relatively small organization. For example, the quality standards the automotive industry sets are higher than in the traditional solar energy market.

We are preparing to deploy all the capacity already invested Lithuania. Until now, the main focus of the Vilnius operations has been on improving cell efficiency. The efficiency now achieved often exceeds the efficiency of the best mainstream PERC cells on the market. In the future, it will be possible for an IBC cell to achieve much higher efficiencies than PERC cells. We are pleased with the achievements of our Lithuanian cell team, given the scarce resources available there.

In the summer of 2021, Valoe commenced a project to certify the quality system for the automotive industry. Implementing the automotive industry's quality standards that go beyond usual standards requires the participation and success of the entire organization. The work has progressed well, and we believe we will achieve the necessary certifications well in advance before the actual mass production begins.

Both factories are about to start a recruitment program to increase resources so that we are ready to serve our customers when needed.

### **MANAGING DIRECTOR IIKKA SAVISALO: We Are at the Threshold of Strong Growth.**

The volume and the result of our operations were in line with our estimates for the reporting period. We expect the growth forecasted in our market guidance to occur mainly in the second half of the financial year when our deliveries to our most significant customers are estimated to start. We are working to industrialize the production of OddForm® components we have developed and to meet the automotive

industry's needs. As the first projects approach the mass production phase, we are determined to strengthen our team and ramp up our new machines in both Juva and Vilnius.

In 2021, during the reporting period and after that, we focused almost all our resources on photovoltaic systems to be integrated into vehicles and other means of transport. The size of our target market can be estimated in terms of the production volumes of cars. According to the European Automobile Manufacturers' Association (ACEA), a total of 12.1 million vehicles were produced in Europe in 2021.

If, for example, at least one solar energy component was utilized in 50% of vehicles and the average price of one Valoe photovoltaic component, for example, was EUR 500 per vehicle, the value of our European target market alone could be estimated at around EUR 3 billion. Our objective is to be one of the leading suppliers in this market segment.

Although we already today can produce a significant number of cells and panels in our production plants, substantially bigger investments are required to increase production to meet our prospects. In the automotive industry, projects require completely different production volumes than we had previously planned. We strive to grow fast. Car projects take a long time, usually 5 to 7 years. If we want to take advantage of the opportunities created by the estimated market growth, we must very soon be able to produce several large projects simultaneously.

We are aware of the financial challenges. Our option to increase our capacity is to set up a new production line within the traditional car production chain in our partners' premises and funded by them. This approach is typical for the production plans of large car manufacturers especially. In such cases, our revenue model would be based on delivering production machinery, cells, conductive back sheets, and semi-finished products as well as royalties related the process technology.

When preparing for deliveries to the automotive industry, our key challenge in all options is to arrange the own necessary financing. Project funding from our customers would reduce the need for capital and create credibility.

#### EVENTS AFTER THE REPORTING PERIOD

In April 2022, Valoe issued a convertible bond of max. EUR 3.0 million to strengthen the company's working capital situation and capital structure. The Convertible Bond is a capital loan. The loan shall be withdrawn in two tranches. The first tranche of the Convertible Bond amounts to a maximum of EUR 1,000,000 and the second tranche amounts to a maximum of EUR 2,000,000. The second tranche shall be issued provided that the Annual General Meeting of the Company on 25 May 2022 grants the required authorizations to the Board of Directors. As disclosed on 24 April 2022, the Board of Directors of the company decreased the subscription price to EUR 0.070 per share. Based on the subscriptions made pursuant to the loan shares of Convertible Bond the company shall issue a maximum amount of 42,857,142 new shares or treasury shares of the Company. No interest shall be paid to the capital of the Convertible Bond.

#### RISKS AND UNCERTAINTIES

Our business growth expectations are based on existing and new development projects to supply photovoltaic applications, particularly for transport and the industrialization of the projects.

The rapid growth of our new market and growth-related investments will significantly increase our financing needs. Securing sufficient funding involves significant risks, and the lack of long-term and

sufficient financing can limit our growth. If a major car manufacturer ordered a photovoltaic application for any of its cars, it would mean significant investments at our module and cell factories this year. Even if the customer were to provide part of the required funding, if our share of the financing were postponed, the start of production would be delayed, which might result in a reduction or loss of orders.

The shortage of components and difficulties in the supply of raw materials have increased worldwide, which has already slowed down the final assembly of the production line at the Mikkeli plant. The shortage of components could delay the increase in production capacity in both Juva and Lithuania plants.

Raw material prices and procurement costs have risen sharply. If the increases in our prices were to decline the competitiveness of our customers' technical solutions, our orders could be reduced or, in some cases, be cancelled, which would have an adverse effect on the company's financial position.

Certain statements in this Business Review, market guidance, and especially the non-binding estimations in Valoe's strategy are targeted to the future and based on the management's current estimations. They involve risks and uncertainty by their nature and may be affected by changes in the general financial situation or business environment.

These and other risks have been described in detail in the company's Annual Report disclosed on 29 April 2022 that is available on the company's web pages [www.valoe.fi](http://www.valoe.fi).

In Mikkeli 24 May 2022

Valoe Corporation

Board of Directors

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[www.valoe.com](http://www.valoe.com)

Valoe Corporation specializes in the clean energy, especially in photovoltaic solutions. Valoe provides automated production technology for solar modules based on the company's own technology; production lines for modules, solar modules, and special components for solar modules. Valoe's head office is located in Mikkeli, Finland.