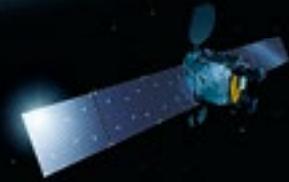


ANNUAL REPORT 2016



# SPACE FASCINATION



# OHB SE FIGURES

## THE GROUP

in EUR 000	2016	2015	2014	2013	2012
1. Revenues	699,184	719,706	728,147	680,121	615,982
2. Total revenues	728,386	730,368	772,954	700,063	632,729
3. EBITDA	55,081	52,135	53,416	52,803	46,110
4. EBIT	42,700	40,214	40,400	36,353	30,997
5. EBT	38,009	36,698	33,874	29,728	23,979
6. Net income for the period	22,212	20,975	25,713	19,436	14,818
7. Earnings per share (EUR)	1.28	1.21	1.48	1.12	0.85
8. Total assets	682,914	638,725	640,613	585,407	538,757
9. Equity	183,590	168,751	145,402	132,705	117,332
10. Cash flow from operating activities	72,726	3,591	-35,020	-34,111	17,559
11. Equity investments	50,200	24,616	25,048	23,632	21,571
12. thereof capital spending	1,966	39	40	1,046	760
13. Employees on December 31	2,298	2,056	2,086	2,412	2,493

## THE SHARE

in EUR	2016	2015	2014	2013	2012
1. Closing price	18.54	20.97	19.70	17.55	15.15
2. Year high	20.78	23.60	25.06	18.63	16.50
3. Year low	17.02	16.59	17.45	14.76	11.16
4. Market capitalization at year-end (in EUR million)	324	366	344	307	265
5. Number of shares	17,468,096	17,468,096	17,468,096	17,468,096	17,468,096
6. Dividend (Euro)	0.40*	0.40	0.37	0.37	0.37

\* Subject to approval by the shareholders

# 728

**EUR MILLION**  
Consolidated total revenue

# 55

**EUR MILLION**  
EBITDA

# 43

**EUR MILLION**  
EBIT

**20**

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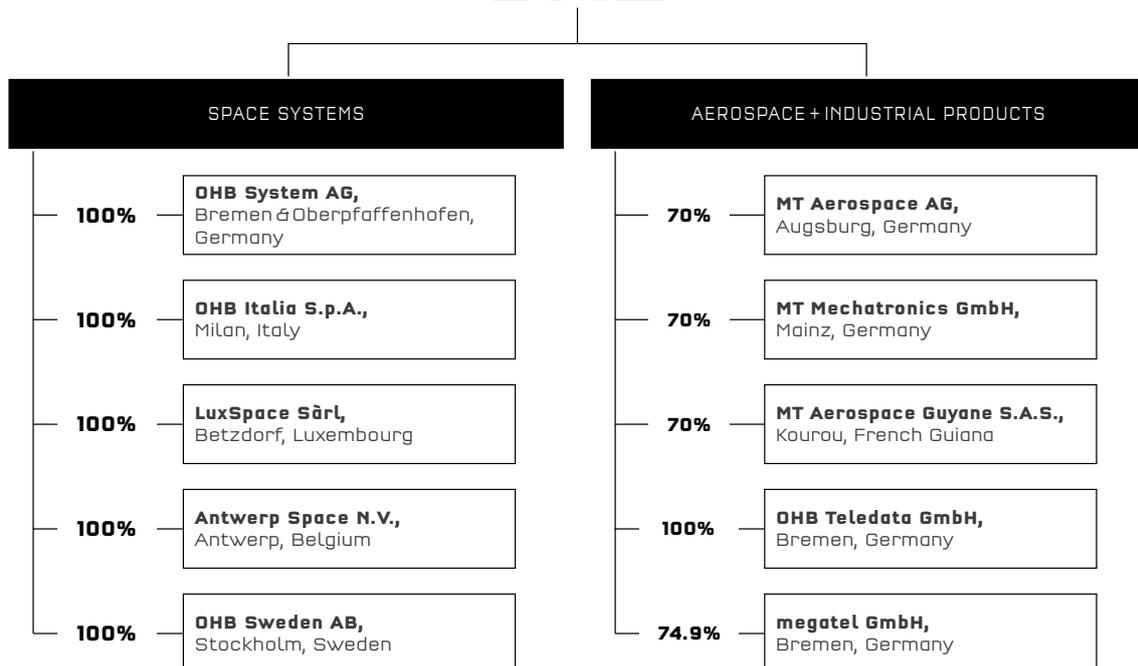
# OHB SE AT A GLANCE

**OHB SE is a European aerospace and technology group** and one of the most important independent forces in the European space industry. With 35 years of experience in developing and executing innovative space technology systems and projects and its range of specific aviation/aerospace and telematics products, the OHB Group is superbly positioned to face international competition.

Over the last few years, it has broadened its geographic footprint within Europe and now has facilities in many important ESA member countries. These strategic decisions on locations and the deliberate separation of functions across Europe allow the Group to participate in numerous European programs and missions. The two "Space Systems" and "Aerospace + Industrial Products" business units reflect the convergence of these activities and the focus on specific core skills.

The **"Space Systems"** business unit focuses on developing and executing space projects. In particular, it is responsible for developing and manufacturing low-orbiting and geostationary small satellites for navigation, research, communications and earth observation including scientific payloads. Its manned space flight activities chiefly entail the assembly and operation of the International Space Station ISS, Columbus and ATV. The exploration segment works on studies and models for exploring our solar system, primarily the moon and Mars. In addition, efficient reconnaissance satellites and broadband wireless transmission of image data form core technologies for security and reconnaissance.

The **"Aerospace + Industrial Products"** business unit is primarily responsible for manufacturing aviation and space products as well as engaging in other industrial activities. In this area, OHB has established itself as a leading supplier of aerospace structures for the aviation and space industry; among other things, it is the largest German supplier of components for the Ariane-5 program. In addition, OHB is an experienced provider of mechatronic systems for antennas and telescopes and is involved in several major radio telescope projects. OHB telematics systems serve the logistics industry around the world by offering efficient transport management and consignment tracking facilities.



# SUBSIDIARIES OF OHB SE IN EUROPE

**OHB** SYSTEM AG  
Bremen



**MT** AEROSPACE AG  
Bremen



**LUXSPACE**  
SÀRL  
Luxembourg



**OHB**  
SWEDEN AB  
Stockholm



**MT**  
MECHATRONICS  
GMBH  
Mainz



**ANTWERP**  
SPACE N.V.  
Antwerp



**MT**  
AEROSPACE  
GUYANE S.A.S.  
Kourou



**MT**  
MECATRONICA  
LTDA  
Santiago de Chile

**MT**  
AEROSPACE AG  
Augsburg



**OHB**  
SYSTEM AG  
Oberpfaffenhofen



**OHB ITALIA** S.P.A.  
Milan



# LETTER TO THE SHARE- HOLDERS

**Dear shareholders,  
customers and  
business associates,**

OHB SE entered the new year with a premiere: In the early hours of January 28 of this year, a geostationary communications satellite engineered and built by OHB System was launched for the first time. Built for our customer Hispasat and named H36W-1, the satellite reached the ESA space center in Kourou, French-Guiana in early December 2016 after intensive testing and was readied for launching. This marked a further new step for OHB as it was the first satellite to be assembled using OHB System's modular SmallGEO platform. With its flexible configurability, this platform can be used for many different purposes and will allow OHB to enter the decisive markets of the future, addressing commercial and institutional customers in telecommunications as well as the increasingly important earth observation segment. The Electra mission is also based on this platform. In the first quarter of 2016, the Luxembourg satellite operator SES and OHB System signed a contract for the next development phase of the project under which OHB will be developing a fully electric satellite platform aimed at reducing satellite mass and launch costs.

## MANAGEMENT BOARD

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**Ulrich Schulz,**

Born in 1951, degree in engineering  
Member of the Management Board of  
OHB SE since 2000

**Klaus Hofmann,**

Born in 1960, degree in business  
administration  
Member of the Management Board of  
OHB SE since 2015

**Marco Fuchs,**

Born in 1962, attorney at law  
Member of the Management Board of  
OHB SE since 2000

**Dr. Fritz Merkle,**

Born in 1950, degree in physics  
Member of the Management Board of  
OHB SE since 2014



LETTER TO THE SHAREHOLDERS



## LETTER TO THE SHAREHOLDERS

Extensive experience and knowledge gained from the ExoMars 2016 mission, which received a great deal of media coverage when it was launched in March will also help all the parties involved in preparing the follow-up ExoMars 2020 mission. In October, the trace gas orbiter, to which OHB made a significant contribution, reached its orbit around Mars, where it will be examining the Martian atmosphere and sending the data that it collects back to the earth. Alongside this scientific mission, a further two launches were executed with OHB's involvement. As the industrial prime contractor, OHB System AG is responsible for supplying a total of 22 Galileo FOC\* navigation satellites. Following the successful placement of a further six satellites last year – four of which were simultaneously launched on board an Ariane 5 in November 2016 – a total of 14 OHB-engineered satellites are in orbit, with eight more expected to follow in 2017 and 2018. In December, ESA and the European Commission announced the commencement of the first Galileo services.

The companies within the business unit Aerospace + Industrial Products also enjoyed success last year, with MT Aerospace benefiting from deliveries of components for seven Ariane 5 launches. By the end of the year, this vehicle had successfully completed a total of 76 consecutive launches, making it the world's most reliable launcher. Development of the next-generation ARIANE 6, which is scheduled to replace the current model in 2020, is progressing well. In November, ESA released the remaining part of the budget for the principal contractor Airbus Safran Launchers granted by ESA's Ministerial Council in 2014 for the development of the launcher. As of the date on which this report went to press, MT Aerospace AG and Airbus Safran Launchers were still in negotiations on development activities. In any case, MT is superbly

positioned and holds around 50% of the German portion of a total of 23% in the development and production of the ARIANE 6.

The smaller OHB Group companies also secured a number of interesting contracts last year. Antwerp Space, for example, is supplying the communications subsystem for the Jupiter mission Juice. Together with other missions, it is being integrated at the new ISO-8 clean-room facilities in Antwerp that were opened in October. OHB Sweden was awarded a contract to supply the chemical propulsion system as well as the fluidic part of the micro-propulsion system for the EUCLID science satellite. Scheduled for launch in 2020, EUCLID will be exploring dark energy and dark matter. Under a contract signed with the European Maritime Safety Agency, LuxSpace will be providing global real-time feeds of satellite-based AIS (SAT-AIS) data for ship tracking and other maritime navigational, safety and security applications together with ORBCOMM Inc.



## IN DECEMBER, ESA AND THE EUROPEAN COMMISSION ANNOUNCED THE COMMENCEMENT OF THE GALILEO INITIAL SERVICES

Marco Fuchs  
Chief Executive Officer

The adoption of the ESA budget for 2017 in a total amount of EUR 5.8 billion for the first time (including the budget of the European Union) and the decision to fund certain projects (ExoMars 2020, for example, has received a larger budget) were important results of the Ministerial Council of the 22 ESA member countries held in early December 2016 in Lucerne, Switzerland. This year, decisions are expected to be made on the award of the following important contracts:

- The Heinrich Hertz mission of DLR (German Aerospace Center)
- The ESA ExoMars 2020 mission in conjunction with Roscosmos

## LETTER TO THE SHAREHOLDERS

- The award of the development contract for the Ariane 6 tanks and structures to principal contractor Airbus Safran Launchers (following the award by CNES of the contract for the development of the mechanical systems to MT Mechatronics GmbH in October 2016)
- The award of the third lot of the outstanding Galileo satellites by ESA/EC.

Dear shareholders, your company's business success is also reflected in the dividend which you receive. The Management Board and the Supervisory Board will be asking the shareholders to approve a dividend of EUR 0.40 (previous year: EUR 0.40 distributed for the first time) per share at this year's annual general meeting.

## OUTLOOK FOR 2017

Given the OHB companies' promising position in the market, we expect to receive further significant projects in the course of the year. At the same time, we will continue to work on the many interesting contracts that we have already been awarded. Furthermore, we will be closely observing trends in the market and concentrating on intensifying the networking of our European space capabilities while simultaneously expanding them. Based on the current high order backlog of around EUR 1.6 billion (previous year: EUR 1.7 billion), the Management Board expects consolidated total revenues to rise to EUR 800 million in 2017 as a whole. At EUR 60 million and EUR 44 million, respectively, EBITDA and EBIT should also exceed the previous year.

The Management Board would like to thank our entire staff at all of OHB SE's companies for their services, dedication and innovative ideas last year. The Group's success rests on their shoulders. We are grateful to our customers who realise technically sophisticated projects through a trustful and positive cooperation together with us. Going forward, we will jointly continue our European success story with enthusiasm and spirit.



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Bremen, March 20, 2017  
**Marco Fuchs**  
Chief Executive Officer

## REPORT OF THE SUPERVISORY BOARD



### SUPERVISORY BOARD

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**Robert Wethmar,**

Deputy chairman of the Supervisory Board of OHB SE, Member of the Supervisory Board since 2012, Born in 1961, attorney at law, LL.M., Partner at law firm Taylor Wessing, Hamburg

**Christa Fuchs,**

Chairwoman of the Supervisory Board of OHB SE, Member of the Supervisory Board since 2002, Born in 1938, business woman, Managing shareholder of VOLPAIA Beteiligungs-GmbH, Bremen

**Prof. Heinz Stoewer,**

Deputy chairman of the Supervisory Board of OHB SE, Member of the Supervisory Board since 2005, Born in 1940, degree in engineering, Professor em. Space Systems Engineering, Technical University of Delft, Netherlands, Managing director of Space Associates GmbH, Munich

## REPORT OF THE SUPERVISORY BOARD

### Dear shareholders,

in 2016, the Supervisory Board performed its duties with great care in accordance with the applicable statutory requirements, the provisions of the Company's bylaws and its rules of conduct. The Supervisory Board is responsible for overseeing the Management Board by monitoring its activities and exerting influence. This latter function plays a decisive role in the Company's success not only in the short term but also on a medium and long-term basis.

The Management Board briefed the Supervisory Board regularly and comprehensively on order intake, total revenues, earnings and capacity utilization at OHB SE as well as within the individual business units. The Management Board answered all of the Supervisory Board's questions in full and comprehensively. The Supervisory Board sought and received ongoing information on corporate planning, strategic development and the main acquisition projects and advised the Management Board on individual matters relating to corporate acquisitions and project tenders.

The Supervisory Board held six ordinary meetings at which it deliberated on the Group's performance, the reports submitted by the Management Board, the status of current projects, pending tender processes, planned acquisitions and the corporate budget for 2017. Ordinary meetings of the Supervisory Board in 2016 were held on March 16, April 8, May 25, September 13, November 14 and December 14 at the Company's offices in Bremen.

The meeting held on March 16, 2016 was chiefly devoted to the Management Board's report on the Group's performance in the period commencing January 1, 2015 and ending December 31, 2015, the current state of business as well as the forecasts for 2016. For this purpose, the Management Board submitted the annual financial statements, the consolidated financial statements and the management reports for OHB SE and the Group for 2015. The lead statutory auditor from BDO AG Wirtschaftsprüfungsgesellschaft, Hamburg, personally presented the audit report and elaborated on it at this meeting. The Supervisory Board approved the annual financial statements and the consolidated financial statements of OHB SE. The Report of the Supervisory Board including the declaration of consent of the Related Parties Report prepared by the Management Board was also approved. The Supervisory Board took note of and adopted the Management Board's proposal for the allocation of the unappropriated surplus and the distribution of

a dividend of EUR 0.40 (previous year: EUR 0.37) per share for approval by the shareholders. The chairman of the OHB SE employee representative council attended this first meeting for 2016 as a guest.

The main items discussed at the meeting of the Supervisory Board held on April 8, 2016 concerned the agenda for the second ordinary annual general meeting of OHB SE on May 25, 2016 including motions and the current status

of preparations for the annual general meeting. As a result of the proposed change in the statutory auditor, OHB SE already complies with the future statutory requirements stipulating a regular change in the statutory auditors of listed companies from July 1, 2016.

The meeting held on May 25, 2016 after the second ordinary annual general meeting of OHB SE was the constitutive meeting of the newly elected Supervisory Board, at which Ms. Christa Fuchs was again elected

## THE PURPOSE OF OHB VENTURE CAPITAL GMBH IS TO SUPPORT START-UPS OUTSIDE INSTITUTIONAL BUSINESS

Christa Fuchs  
Chairwoman of the  
Supervisory Board

## REPORT OF THE SUPERVISORY BOARD

chairwoman and Prof. Heinz Stoewer and Robert Wethmar deputy chairmen of the Supervisory Board. The Management Board and the Supervisory Board engaged in a preliminary review of the annual general meeting, which had just been held in a constructive and open atmosphere. In addition, the Management Board reported on the Group's business performance in the first quarter of 2016 as well as the current state of business, specific project challenges and future new space activities. Mr. Fuchs reported on the establishment of OHB Venture Capital GmbH with registered offices in Oberpfaffenhofen. The purpose of this company is to support research and startups outside institutional business.

The main business conducted at the Supervisory Board's meeting of September 13, 2016 entailed brief reports on the planned individual projects, efforts to avert industrial espionage as well as status reports on conditions at the subsidiaries.

In addition, the Management Board reported on business performance in the first half of the year as well as the current state of business in 2016. Mr. Fuchs provided an update on the leases between the OHB operating companies and the Fuchs Family's real estate companies. The Supervisory Board unanimously approved a target share of women of 33% for the Supervisory Board and 0% for the Management Board. These targets are to apply until December 31, 2018.

The Supervisory Board's meeting of November 14, 2016 dealt with future personnel planning and appointments to Group management positions. In this connection, Mr. Fuchs outlined the current and expected future market environment and the challenges arising from this for the OHB Group. The Supervisory Board discussed the situation on individual companies' management boards and senior management together with the options arising

from this for future personnel development and appointments for these positions.

Held shortly before the end of the year on December 14, 2016, the Supervisory Board's final meeting for the year dealt primarily with the Group's business performance in the first nine months of 2016 and expected earnings for 2016. As well as this, the Management Board reported on individual incorporation activities and presented the current corporate budget for 2017/2018 including the human resources and financial plans. Moreover, a report was also submitted on the internal audits which had been performed within the Group in 2016 as well as the audit schedule for 2017. These were duly approved by the Management Board and Supervisory Board. The Legal department tabled the compliance report for 2016 and reported on the main events. The Management Board and the Supervisory Board also jointly issued

the declaration of conformity to the German Corporate Governance Code stipulated by Section 161 of the Stock Corporation Act.

# 27

### April GIRLS-DAY

OHB SE has been taking part in this career orientation project annually since 2002

OHB SE together with its Supervisory Board and Management Board is committed to good and responsible corporate governance. This commitment is shared by the majority shareholders and the Group's entire management. In addition to observing high statutory and ethical standards, employees with their keen sense of responsibility attach top priority to minimizing environmental impact, the achievement of the greatest possible quality as well as the safety, health and equality of all staff. Looking ahead over the next few years, one objective will be to interest more women in the exciting and interesting career opportunities awaiting them in aviation/aerospace, a sector which is still heavily dominated by men, and to encourage more girls and women to embark on a technical career. In this respect, the now traditional "Girls' Day", which the Group organizes and which will be taking place this year on April 27, 2017, merely marks

## REPORT OF THE SUPERVISORY BOARD

the beginning of a whole series of activities and measures aimed at arousing women's interest in a career in this industry. Special partnerships with universities and tertiary-education institutions, the two foundation professorships sponsored by OHB in Bremen and Munich as well as training and skills development for women and the targeted development of female staff right up to the management and executive level will provide additional ongoing support for this program in the future.

### CORPORATE GOVERNANCE

The Management Board also submitted a corporate governance report to the Supervisory Board in accordance with Section 3.10 of the German Corporate Governance Code in connection with the corporate governance declaration stipulated by Section 289a of the German Commercial Code. The corporate governance declaration can be examined at OHB SE's website. The Supervisory Board regularly discussed the application and further development of the principles of corporate governance within the Company. On December 14, 2016, the Management Board and the Supervisory Board issued an updated declaration of conformance in accordance with Section 161 of the German Stock Corporation Act and made this available permanently to shareholders at the Company's website.

### APPROVAL OF THE ANNUAL FINANCIAL STATEMENTS FOR 2016

The annual financial statements, the consolidated financial statements and the related management reports of OHB SE for 2016 were audited by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Bremen, and issued with an unqualified auditor's report.

These documents were made available to all members of the Supervisory Board in sufficient time. At the Supervisory Board's balance sheet meeting held on March 20, 2017, these documents were discussed in the presence and with the involvement of the statutory auditor.

The Supervisory Board did not raise any objections and accepted the results of the audit. It approved the consolidated financial

statements, as a result of which they are now deemed to have been duly adopted. The Supervisory Board concurred with the Management Board's proposal for the allocation of the Company's unappropriated surplus. The related parties report prepared by the Management Board was audited by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Bremen, and given the following unqualified audit certificate:

"Having examined and assessed the related parties report in accordance with our duties, we hereby confirm that

1. the facts stated in the report are correct,
2. the Company's transactions as detailed in the Report were not unreasonably high."

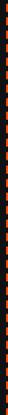
The Supervisory Board raises no objections following its own examination and therefore approves the Management Board's related parties report.

The Supervisory Board wishes to thank the Management Board, all employees and the employee representatives for the work performed. They have once more made a contribution to a very successful year for OHB SE.



Bremen, March 20, 2017  
**Christa Fuchs**  
Chairwoman of the Supervisory Board

SPACE FASCINATION

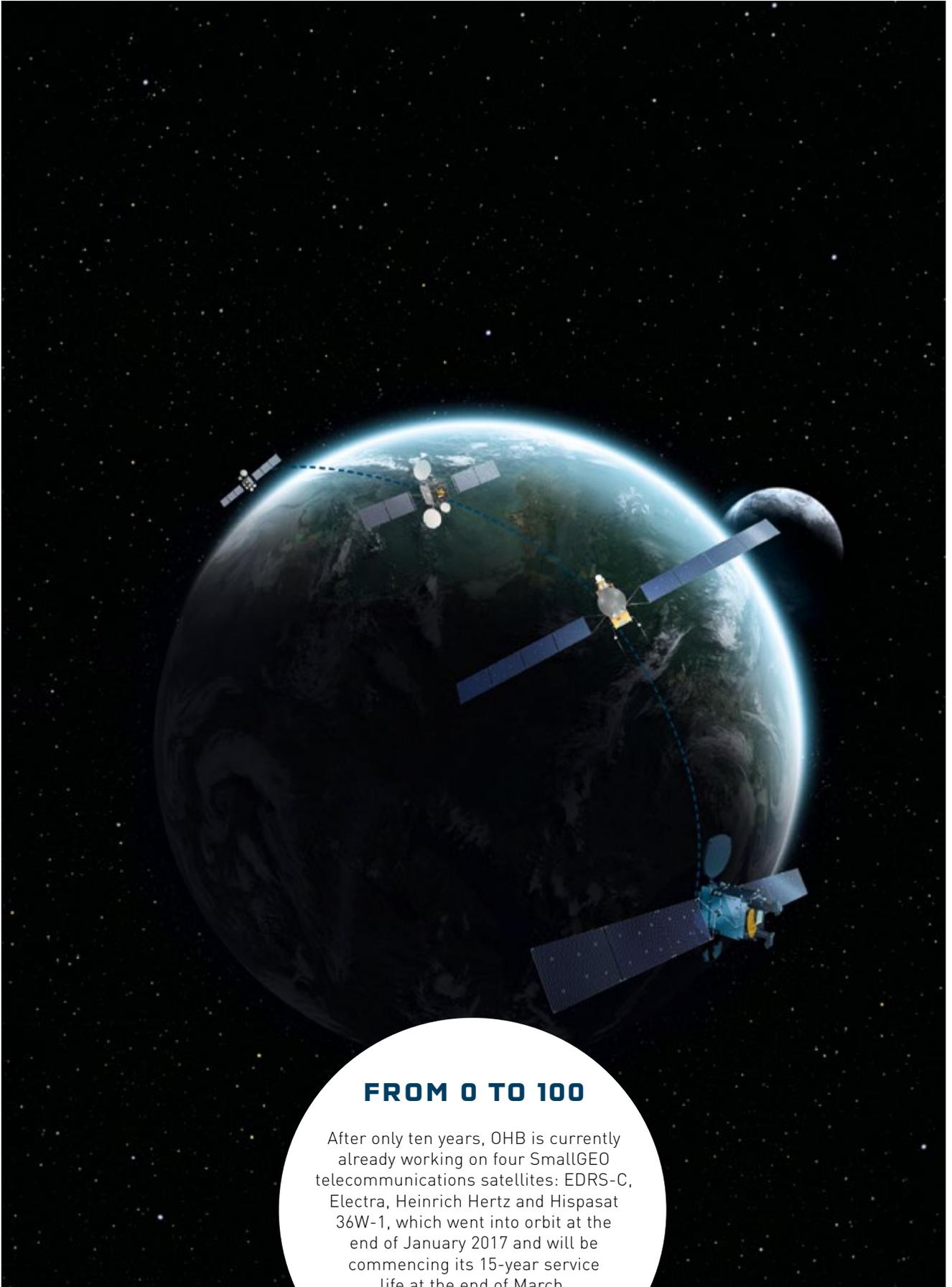


# WEIGHT- LESS “

We are operating in a medium which despite the hostile conditions reveals its fascination in the verifiability of the laws of physics that play a key role in satellite engineering. Satellites must be robust and agile so that they can be controlled at a distance of 36,000 kilometers over a service life of 15 years.”

**GUY PEREZ**

**Chief Technical Officer and Head  
of Telecommunications Satellites  
OHB System AG**



**FROM 0 TO 100**

After only ten years, OHB is currently already working on four SmallGEO telecommunications satellites: EDRS-C, Electra, Heinrich Hertz and Hispasat 36W-1, which went into orbit at the end of January 2017 and will be commencing its 15-year service life at the end of March.

FASCINATION AND BENEFITS

# THE NEW CAPABILITIES

**Satellite communications have long since become part of our day-to-day lives. We take it for granted that we are able to watch the Olympic Games live, access the Internet via satellite and obtain virtually any products available in the global market thanks to sophisticated logistic communications systems. We are rarely aware of the technological and economic feats required to achieve this. Yet, this is part of OHB's daily routine.**

Guy Perez is CTO and the member of OHB System's Management Board responsible for telecommunications satellites. Even with a track record of more than 30 years in the space industry,

Even with a track record of more than

# 30

years in the space industry, OHB CTO Guy Perez has never lost his enthusiasm for the challenging task of developing complex systems and helping to establish new business segments.

he has never lost his enthusiasm for the challenging task of developing complex systems and helping to establish new business segments. "We are able to work on satellites from a blank sheet of paper through to the development and execution stage and beyond to actual operations. From the beginning until the end, we have it in our hands to meet the technical requirements to our customers' satisfaction."

Indeed, a good ten years ago, geostationary telecommunications satellites were uncharted territory for OHB. At that time, for example, the Company was already well established with its solutions for low-orbiting satellites such as the SAR-Lupe radar reconnaissance system or contributions to the ISS.

However, it did not have any experience with geostationary satellite systems. For this reason, OHB couldn't convince in the competition for SatcomBW2, the satellite communications system for the German federal armed forces, despite the promising technical and economic approaches. Instead of resigning itself to its fate, the Group amassed the necessary system competence step by step – first on its own and then with the support of DLR not least of all with the aim of convincing ESA to include the development of small geostationary communications satellites, also known as SmallGEOs, as its own line in its ARTES program. This resulted in a win-win situation for all parties involved. OHB received an opportunity to establish itself in a fast-growing market, Germany regained system capabilities

## SMALLGEO

The small telecommunications satellites are OHB's new and promising business segment.





**GLOBAL  
COMMUNICATIONS**

Worldwide networking, the “Internet of Things” and global availability pose high challenges for the satellite communications of today

FASCINATION AND BENEFITS



## FASCINATION AND BENEFITS

# MAN POWER AND TEAM SPIRIT DRIVE BUSINESS FORWARD

for the construction of small telecommunications satellites after an absence of just under 25 years and satellite operators were able to rely on increasingly powerful and less expensive satellites thanks to greater diversity and competition.

Guy Perez is very enthusiastic about the work being performed in this new segment: "I love the fact that we at OHB were able to turn a lost contract into such a success story. Compared with other companies, OHB is able to develop and build different kinds of geostationary telecommunications satellites with proven or new technology within a very short space of time, particularly in the area of propulsion systems. I think that this is very impressive. And then there is the human factor, which should not be underestimated. Generally speaking, space is not yet fully industrialized or robotized. Rather, it is man power and team spirit that drive business forward. At OHB, this ethos is more



pronounced and ambitious than with the large groups as we are still a relatively young and highly innovative company. This is aided by our flat hierarchical structure which greatly facilitates direct communications with the Executive Team."

This team-oriented expertise is not only required for the technical aspects of complex telecommunications satellite systems but also for the economic factors. Thanks to growing demand for ever higher data rates and capacity for carrying digital media, this market is interesting but also hotly contested. "That is why it is important for us to continue optimizing processes and lowering costs. This calls for skilled coordination by people. We are working steadily on this and not just in the area of telecommunications. We have devoted a great deal of effort to building up these new system capabilities, optimizing the transfer of knowledge from one project to another and, in this way, increasingly shortening production cycles. Today, we are in a better position to assert ourselves in global competition for commercial and institutional business," the CTO says.

## SPIN-OFF

The MTG weather satellites were also developed on the SmallGEO platform.

More than 300 geostationary communications satellites currently provide us with multimedia services of all kinds. According to a report of the Federal Ministry for Economic Affairs and Energy, around 20 satellites must be replaced each year on the basis of a service life of 15 years to maintain the present availability.



HISPASAT 36W-1



# GROUND- BREAK- ING

We have frequently been pioneers in the past. And we were again in this particular case. Germany had lost its engineering skills for telecommunications satellites. Bringing SmallGEO system capabilities back to Germany was just as exciting a prospect as OHB's commitment to building up these core skills so resolutely."

**Dr. Dieter Birreck**  
head of the Hispasat 36W-1 project

## FIRST SMALLGEO SATELLITE IN SPACE



### **HISPASAT 36W-1 LAUNCH**

The first geostationary telecommunications satellite built by OHB was sent to its orbit at an altitude of just under 36,000 kilometers on board a Soyuz launcher that lifted off from the space center in Kourou, French-Guiana. There, it is to be put into operation at the end of March 2017 and supply Spain, Portugal, the Canary Islands and South America with multimedia services for a good 15 years.

HISPASAT 36W-1

A  
NEW  
ERA

In his capacity as project manager, Dr. Dieter Birreck oversaw **the development** of OHB's first SmallGEO, Hispasat 36W-1. He describes the last few years as "a very interesting period in which we learned a lot, as we had previously never worked on a project of such complexity." The satellite has been designed for a long service life of 15 years. Geostationary orbits are exposed to harsh conditions such as solar storms and extreme temperatures that the satellite must be able to withstand. What is more, orbit corrections must be precise to within one tenth of a degree so that satellite coverage remains stable.

"The first satellite is always a major step. We have developed, managed and implemented a complete and highly complex design, which we tested intensively during an

eleven-month trial phase. We are very confident of achieving good performance in orbit from the end of March," says Dieter Birreck, who is now writing history at OHB for the second time, having already been involved in the SAR-Lupe project. "Submitting the SAR-Lupe bid with a relatively small team, performing so well and prevailing over our large peers was quite a remarkable feat. Then as now we were driven by the certainty that we were able to achieve the goals that we had set ourselves, that it was worth the effort and that we would be entering new markets. What makes this all the more remarkable is that Germany had lost its engineering skills for telecommunications satellites. The telecommunications market enjoys a special status as it is commercially very challenging due to the international competition but is also characterized by steady demand for new missions. Consequently, it accounts for the largest portion of the space market. OHB has devoted a great deal of effort and also money to amassing these core skills and to bringing system capabilities for SmallGEOs back to Germany. As in the past, we are performing genuine pioneering work," explains Birreck, who greatly appreciates "working with many outstanding engineers who are all pursuing the same goal."



THE FIRST  
SATELLITE IS  
ALWAYS A  
MAJOR STEP

Dr. Dieter Birreck

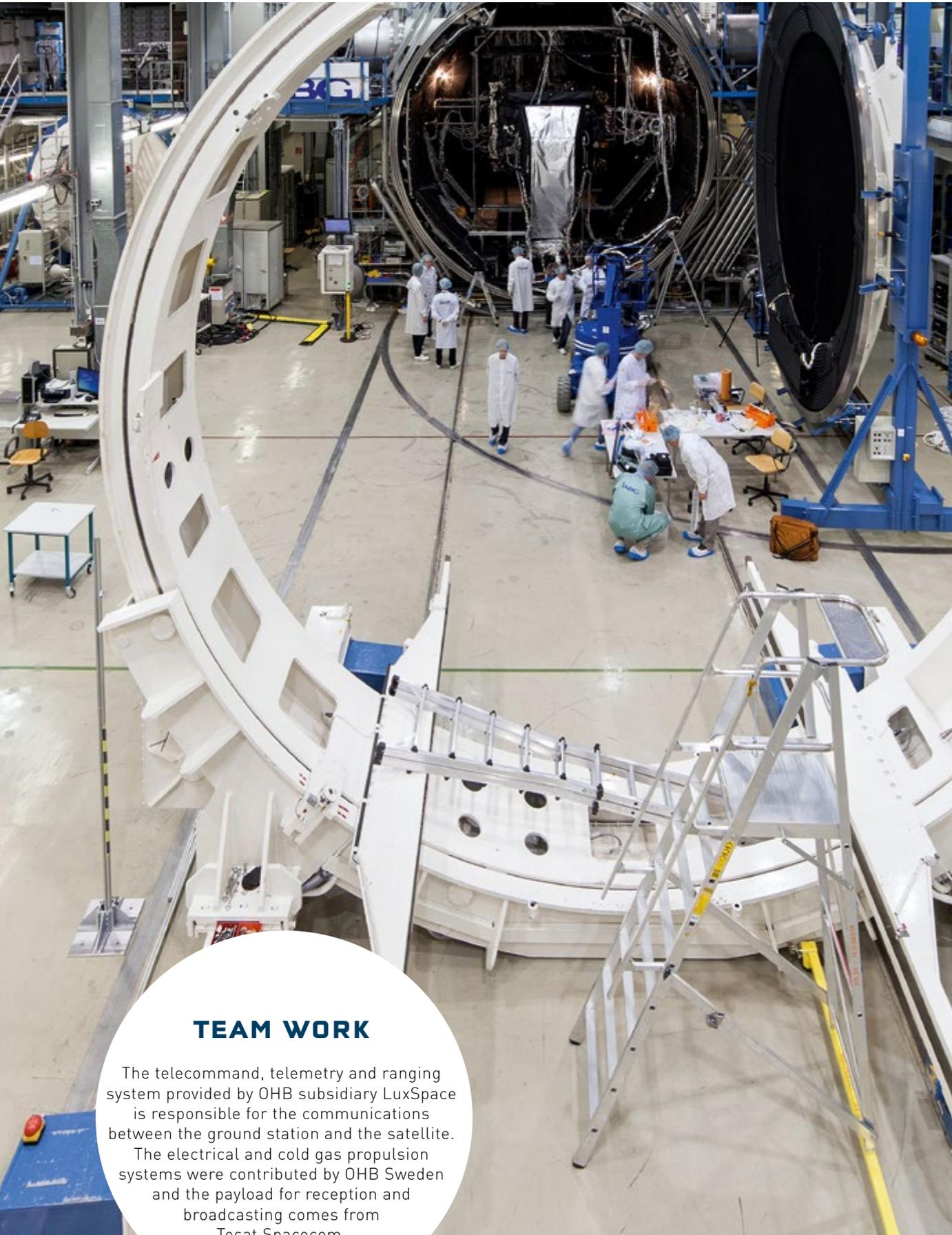
NOVELTIES

The launch of a geostationary satellite was not only **a premiere for OHB**. In accordance with the customer's wishes, this was also the first time that a Soyuz vehicle was used to launch a satellite from Kourou into a geostationary transfer orbit.

**The satellite is fitted** with three propulsion systems: a chemical drive is responsible for placing the satellite in its geostationary orbit, while an electric one is used for orbit corrections and a cold gas propulsion system is also on board for emergencies.



## FIRST SMALLGEO SATELLITE IN SPACE



### TEAM WORK

The telecommand, telemetry and ranging system provided by OHB subsidiary LuxSpace is responsible for the communications between the ground station and the satellite.

The electrical and cold gas propulsion systems were contributed by OHB Sweden and the payload for reception and broadcasting comes from Tesat Spacecom.

EDRS-C



# POINT- EDLY ..

Creativity and a systematic approach are crucial in space as we are constantly pushing back the limits of what is feasible. Keeping a geostationary satellite in such a stable orbit that its highly sensitive laser can maintain communications with a low-orbiting satellite located roughly 40,000 kilometers away is quite a feat.”

**ANDREAS LINDENTHAL**  
CHIEF OPERATING OFFICER  
OHB SYSTEM

## FIRST DEDICATED RELAIS SATELLITE FOR EDRS



### **EDRS-C HIGH-SPEED-DATA**

EDRS-C is the second SmallGEO and the first dedicated satellite for the European Data Relay System EDRS, the integration process in the cleanroom in Bremen is well advanced.

The aim of EDRS is to create a new standard in space based communications: higher data rates, which will be transferred more secure and quasi real-time.

EDRS-C

# THE NEW PRECISION

When the contract for EDRS-C **was signed in May 2013**, work on the first SmallGEO Hispasat 36W-1 had already made considerable progress and preliminary elements such as the structural concept and the expertise that had already been gained with respect to numerous modules, devices and their suppliers could already be leveraged. "Yet, the EDRS-C holds a special position within the SmallGEO range as it not only accommodates the telecommunications payload from Avanti but also a laser communications terminal. This calls for a high



degree of stability and, hence, a substantially more precise attitude control system. This poses a true challenge particularly with smaller satellites," explains Andreas Lindenthal. A further key aspect in this connection is the need to suppress the microvibrations generated by the reaction wheels for example. "The requirements that the thermal system must meet also differ from those of the predecessor due to the laser." A good development team is needed to design a satellite meeting such special requirements over a service life of 15 years. At OHB roughly 100 people are working together towards meeting this goal. "We have great employees and are at the technological vanguard with respect to SmallGEOs." "Now that we have successfully launched our first telecommunications satellite, we are being noticed all around the world in this segment. We can now actively mold this market and offer our technical solutions." OHB specializes in small satellites that are increasingly growing in appeal thanks to developments in the launcher market. "If you also consider our full electrification project, it's fair to say that we really do have a top portfolio."

WE HAVE GREAT  
EMPLOYEES AND ARE AT  
THE TECHNOLOGICAL  
VANGUARD WITH RESPECT  
TO SMALLGEOS

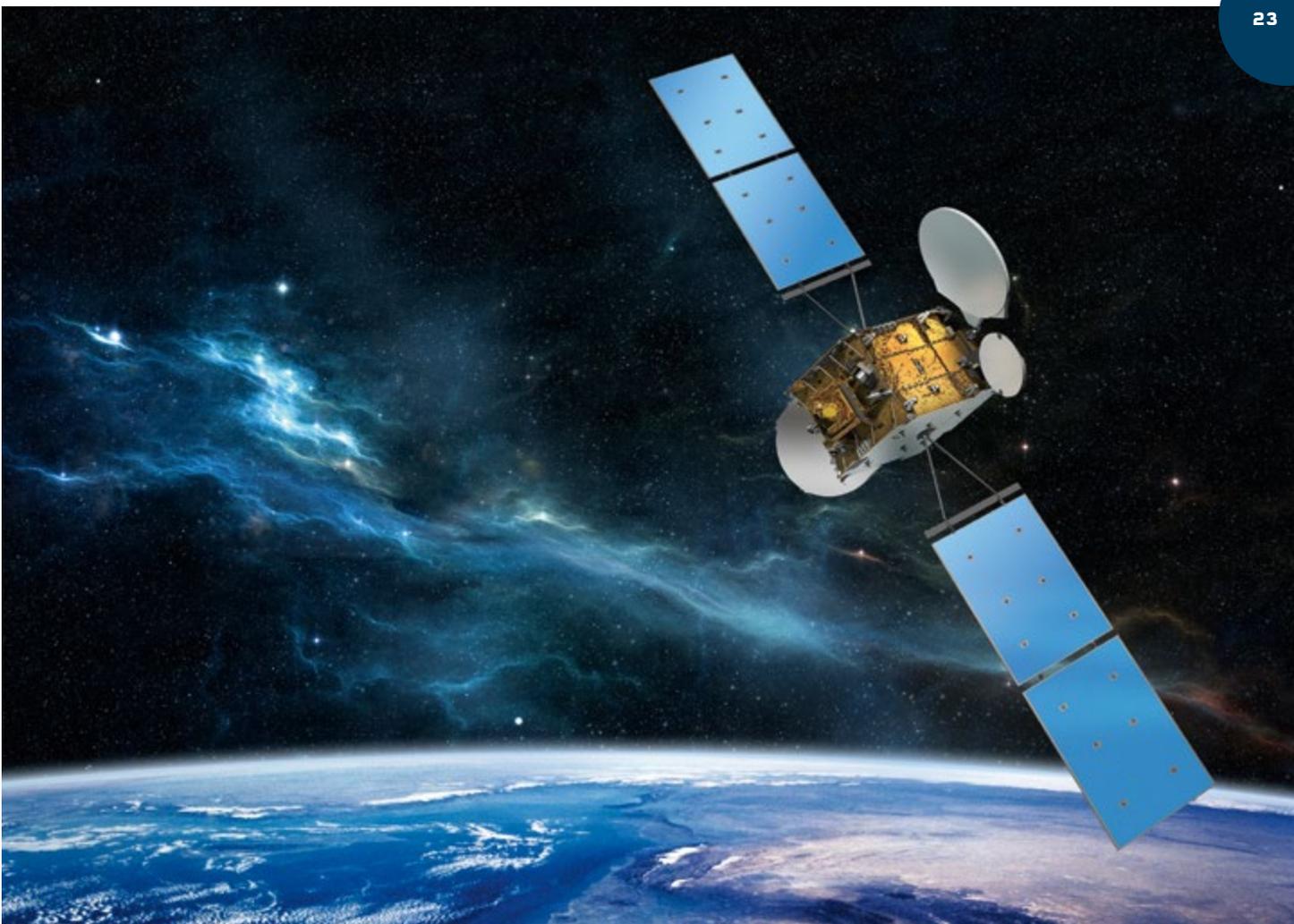
Andreas Lindenthal

## FIRST DEDICATED RELAIS SATELLITE FOR EDRS

### LASER-COMMUNICATIONS

The system forms part of a constellation of geostationary relay satellites that will be receiving data from low-flying satellites and transmitting it to the earth in the future.

EDRS transmits 1.8 megabits per second in real time. This data is particularly important in civil protection.



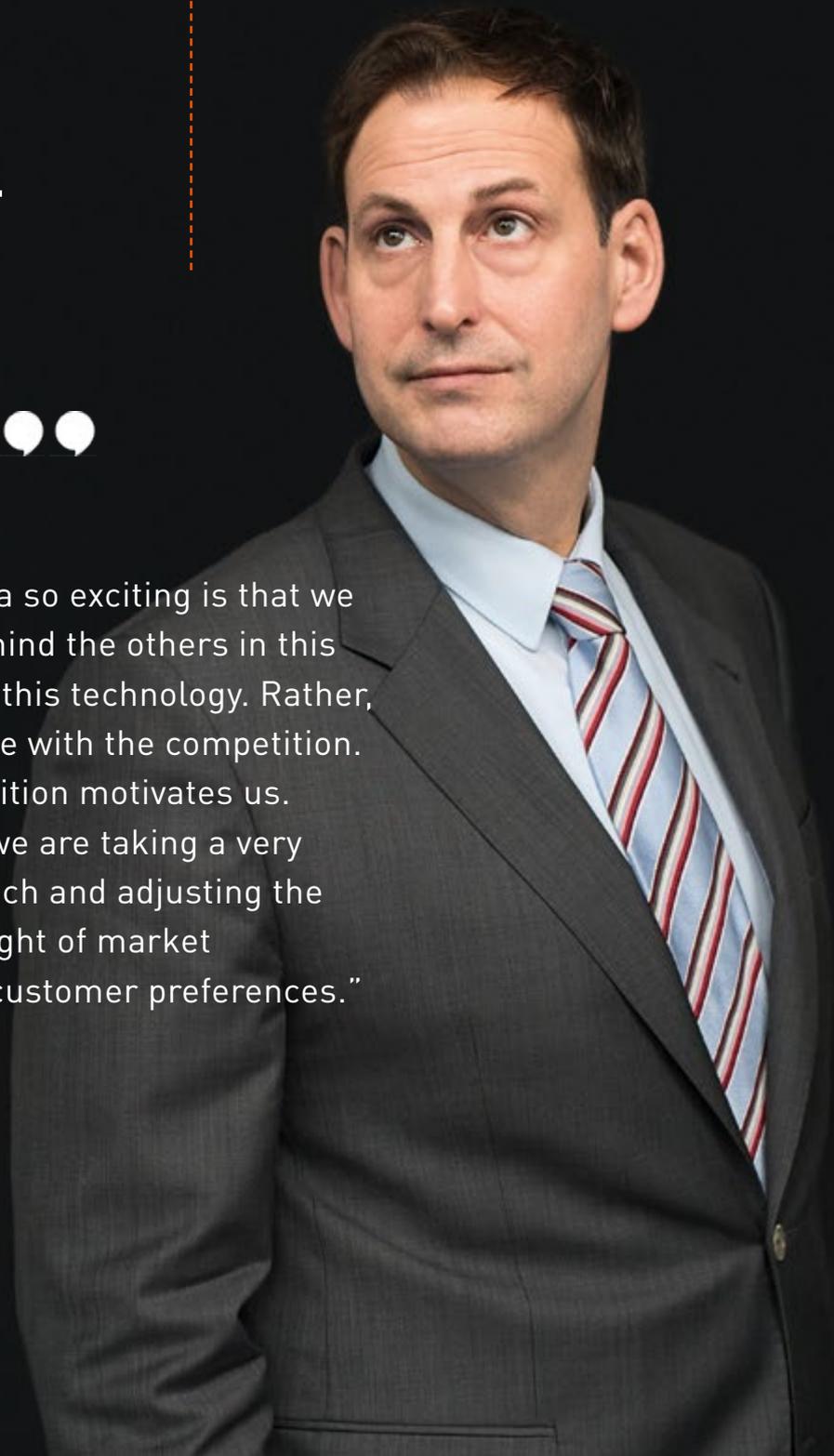
ELECTRA



# COM- MER- CIAL”

What makes Electra so exciting is that we are not chasing behind the others in this satellite class with this technology. Rather, we are keeping pace with the competition. Indeed, the competition motivates us. At the same time, we are taking a very commercial approach and adjusting the technology in the light of market requirements and customer preferences.”

**DR. ALEXANDER SCHNEIDER**  
head of the Electra project



## FIRST SMALL GEO WITH SOLELY ELECTRICAL PROPULSION SYSTEM



### DEVELOPMENT OF ELECTRA

With Electra, OHB System is developing an extremely competitive small geostationary satellite platform based on a solely electric propulsion system for launching satellites with a mass of around three tons. To achieve this goal, the world's largest satellite operator SES established a preliminary private public partnership with the ESA and OHB System in 2013. After two-and-a-half years of intensive studies, a contract for the further development and execution of the project was signed in February 2016.

ELECTRA

THE  
NEW  
LIGHT-  
NESS



**“Electra is** highly promising in a number of different respects. With its solely electric propulsion system and resultant weight savings, the platform can hold more payload, thus offering additional benefits for customers. Payload performance is always the core design criterion,” explains Dr. Alexander Schneider, head of the Electra project at OHB System. Prior to holding this position, he was responsible for the structural and thermal design of SmallGEO for three years and then oversaw EDRS-C from the bidding through to the order stage for four years. “We have adopted

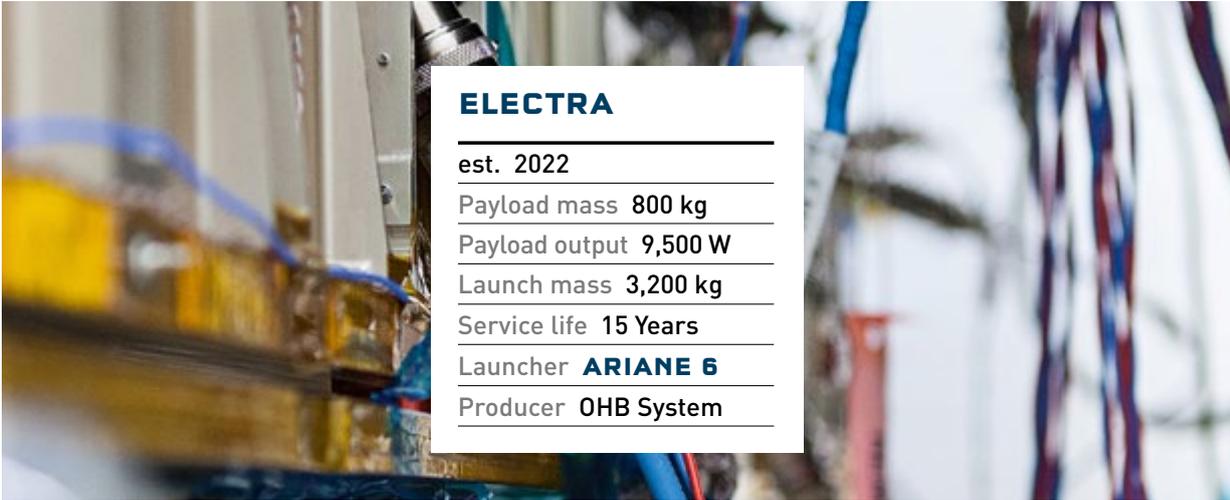
an extremely commercial approach in line with requirements in the telecommunications market. We have to find out exactly what customers want, what the target prices are, which suppliers are suitable and, particularly, what we can do better than the competition,” Schneider says.

Boeing “surprised” the market in 2012 when it launched two solely electric satellites with an output of 7 KW each. This was the benchmark that the Electra team wanted to exceed. “At that time, we had achieved 7 KW for a payload mass of 600 kg. That meant that we had to eke out the maximum in all areas. With the solely electric propulsion system and the use of new technologies we have already reached an output of 9.5 KW and a payload mass of 800 kg. Operators’ investments must be amortized as quickly as possible. It is with this in mind that we have configured the satellite to ensure that this threshold is reached at an earlier stage. In my opinion, the scope that we have here is very exciting. Extremely lightweight structures are no longer necessary as the weight now does not count towards satellite propellant requirements. This opens up entirely new possibilities for us. Moving forward, we want to address the institutional and the commercial market with one or two Electra satellites a year. We are already in a good position to achieve this thanks to the constructive collaboration with our project partners,” says Schneider.

THE FULLY ELECTRIC CONFIGURATION OF THE SMALLGEO PLATFORM IS A STRATEGIC PRODUCT FOR OHB, WHOSE IMPORTANCE FOR FUTURE CONTRACTS GOES SUBSTANTIALLY BEYOND THE TELECOMMUNICATIONS SEGMENT

Marco Fuchs. CEO

**FIRST SMALL GEO WITH SOLELY ELECTRICAL PROPULSION SYSTEM**



**ELECTRA**

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est. 2022

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Payload mass 800 kg

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Payload output 9,500 W

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Launch mass 3,200 kg

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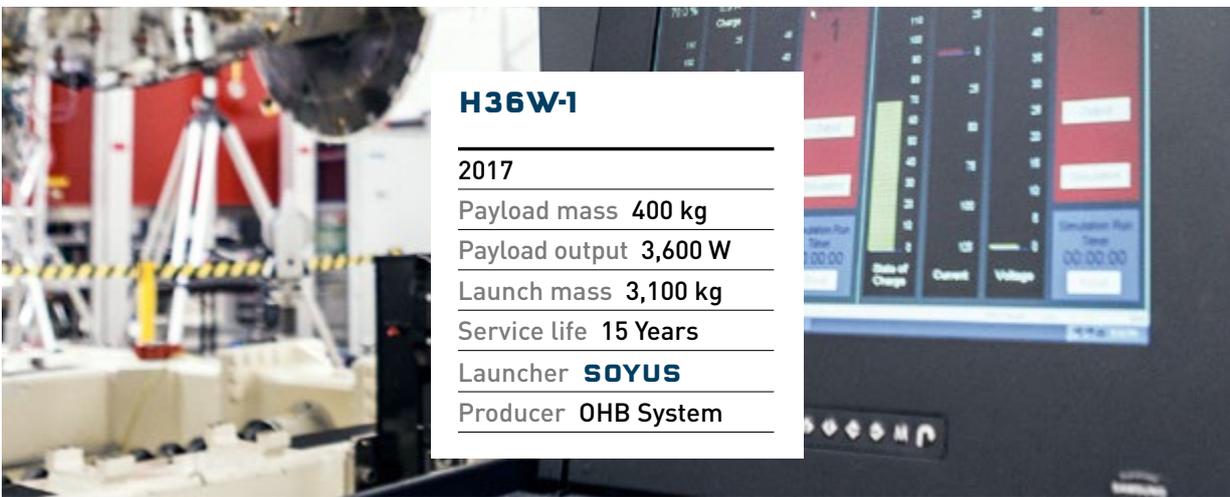
Service life 15 Years

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Launcher **ARIANE 6**

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Producer OHB System



**H36W-1**

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2017

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Payload mass 400 kg

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Payload output 3,600 W

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Launch mass 3,100 kg

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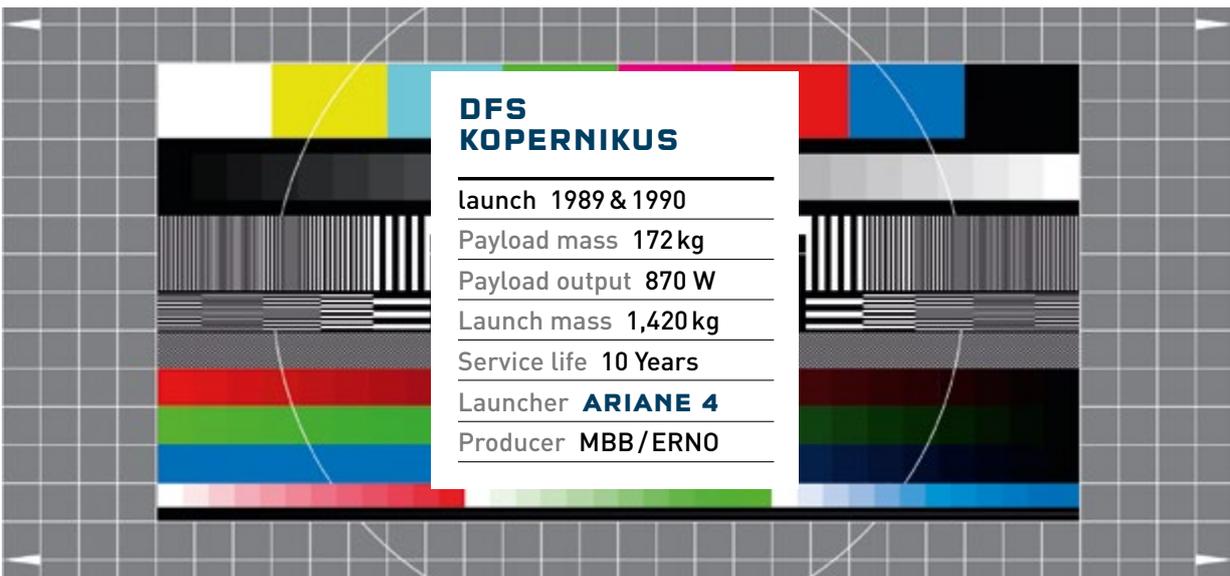
Service life 15 Years

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Launcher **SOYUS**

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Producer OHB System



**DFS  
KOPERNIKUS**

---

launch 1989 & 1990

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Payload mass 172 kg

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Payload output 870 W

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Launch mass 1,420 kg

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Service life 10 Years

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Launcher **ARIANE 4**

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Producer MBB/ERNO

The capabilities of telecommunications satellites are being continually enhanced through innovative solutions and technical improvements

HEINRICH HERTZ

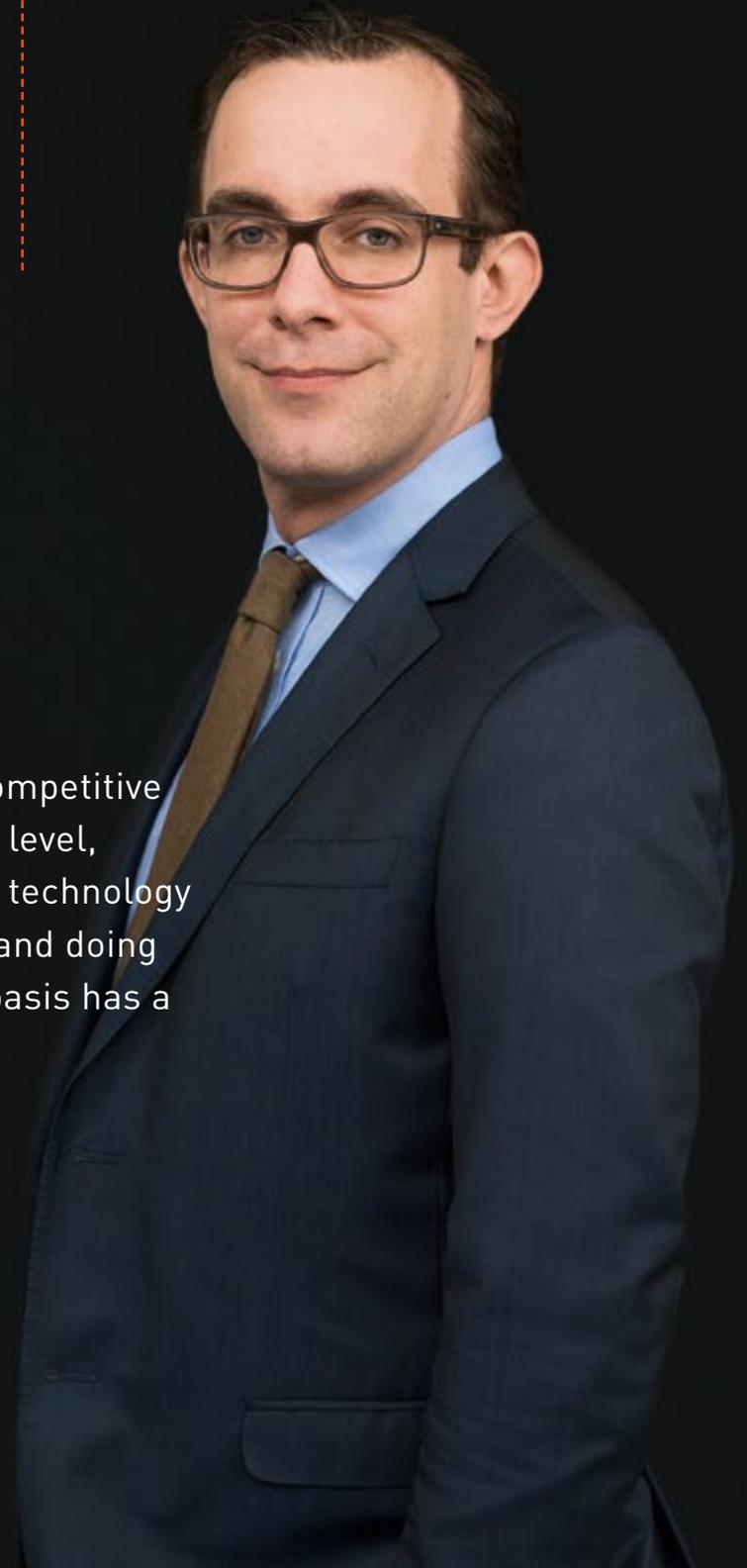


# COM- PETI- TIVE ..

Making satellites from Germany competitive again on a system and sub-system level, controlling this extremely complex technology at a distance of 36,000 kilometers and doing all this on an economically viable basis has a special appeal all of its own."

**DOMINIK LANG**

Director of Marketing & Sales, head of the Heinrich Hertz project for Phases 0-B





## HEINRICH HERTZ

Heinrich Hertz is a national satellite mission being pursued by DLR in conjunction with the German Federal Ministry of Economics and Technology and the German Federal Ministry of Defense. Following the conclusion of the mission involving the last German telecommunications satellite DFS Kopernikus in 2002, Heinrich Hertz is the first communications satellite to be developed and built in Germany again and will be making a crucial contribution to German research, business and security. Working with many German partners, agencies and institutions, OHB as the industrial prime contractor has successfully completed Phases 0-B.

HEINRICH HERTZ

# THE NEW STANDARD

Heinrich Hertz (H2Sat) is an extremely ambitious project for testing and validating roughly twelve new technologies for satellite communications in space. In addition, the German federal armed forces will be using the additional payload capacity to supplement their existing SATCOMBw satellite communications, which are already in operation.

Heinrich Hertz is playing a great role in the German Federal Government's goal of making Germany competitive again in this

area and of permanently regaining lost system skills. OHB is pursuing this aim by systematically developing small geostationary communications satellites. "Heinrich Hertz will benefit the most from the experience that we have already gained with the preliminary SmallGEO projects," says Director of Marketing & Sales, head of the Heinrich Hertz project for Phases O-B. "The Heinrich Hertz mission is the logical continuation of the range that we always wanted to establish with SmallGEO. What we are doing is utilizing our standard platform, expanding our skills in the latest and most innovative payload technologies and implementing key elements on the ground. In this way, OHB can demonstrate its capabilities in all aspects of satellite communications," adds Lang.

## THE HEINRICH HERTZ MISSION IS THE LOGICAL FURTHER DEVELOPMENT OF THE SMALLGEO RANGE

Dominik Lang

H2Sat will have two users. The German Federal Ministry for Economic Affairs and Energy will enable research institutions, universities and the German space industry to test and validate new technologies such as powerful antennae, processes, traveling wave tubes, filters, databus architectures and ionic drives over an extended period in extreme ambient conditions in space. New and innovative data transmission processes are also being tested



### BMVG ON BOARD

Dr. Gerd Gruppe, Major General Benedikt Zimmer and Andreas Wolke following the signing of the execution agreement for the Heinrich Hertz mission at DLR.



## FIRST GERMAN TELECOMMUNICATIONS SATELLITE SINCE DFS KOPERNIKUS

to address the sharp rise in requirements with respect to data volumes, security and mobility on the ground and in the air in the future. With its very flexible payload, Heinrich Hertz features key elements that can be activated and configured in orbit to meet these numerous requirements. It must be possible for frequencies to be adjusted and altered; at the same time, the geographic coverage is variable. Heinrich Hertz is testing various payload computer technologies to provide the high computing power required.

“Our Heinrich Hertz offering includes the complete system including the ground stations. This is an end-to-end system that broadens our general SmallGEO system skills. We have now assembled all the elements that we need to gain a foothold in the international commercial telecommunications satellite market and to be the premier choice for satellite communications solutions for and from Germany in the future,” says Lang.

### HEINRICH RUDOLF HERTZ

In 1886, the German physicist was the first to transmit electromagnetic waves across a free space from a transmitter to a receiver, thus laying the foundations for modern communications and media technology.

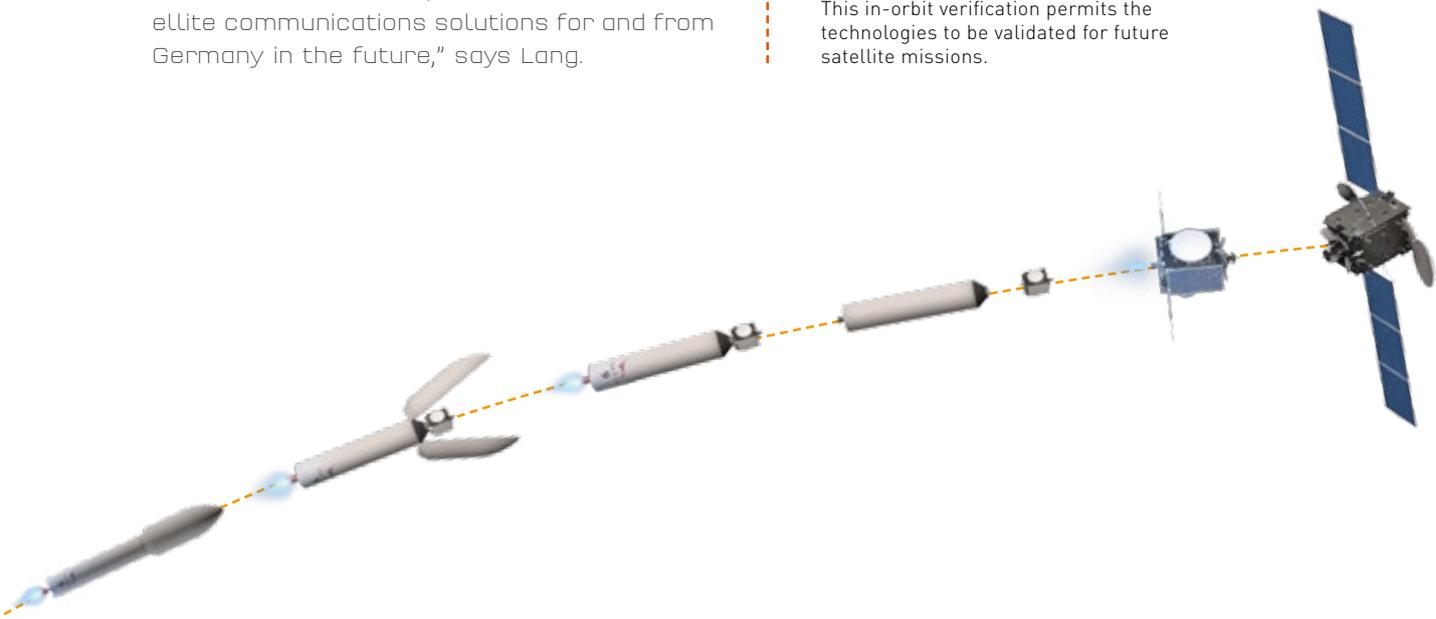
(Source: DLR)

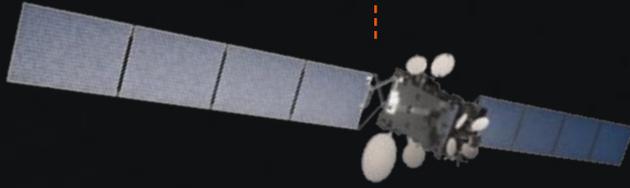
### 23.8.

Under a contract with DLR, OHB is overseeing many of the new communications technologies for the Heinrich Hertz satellite mission. Developed by various industrial companies and institutions, they will be tested on board the satellite under extreme space conditions. This in-orbit verification permits the technologies to be validated for future satellite missions.

### ASCENT OF A SATELLITE

The individual steps from the launch to the target orbit: Separation of the first stage. Jettisoning of the fairing. Ignition of the second stage. Separation of the payload from the second stage and flight of the satellite to its geostationary orbit.

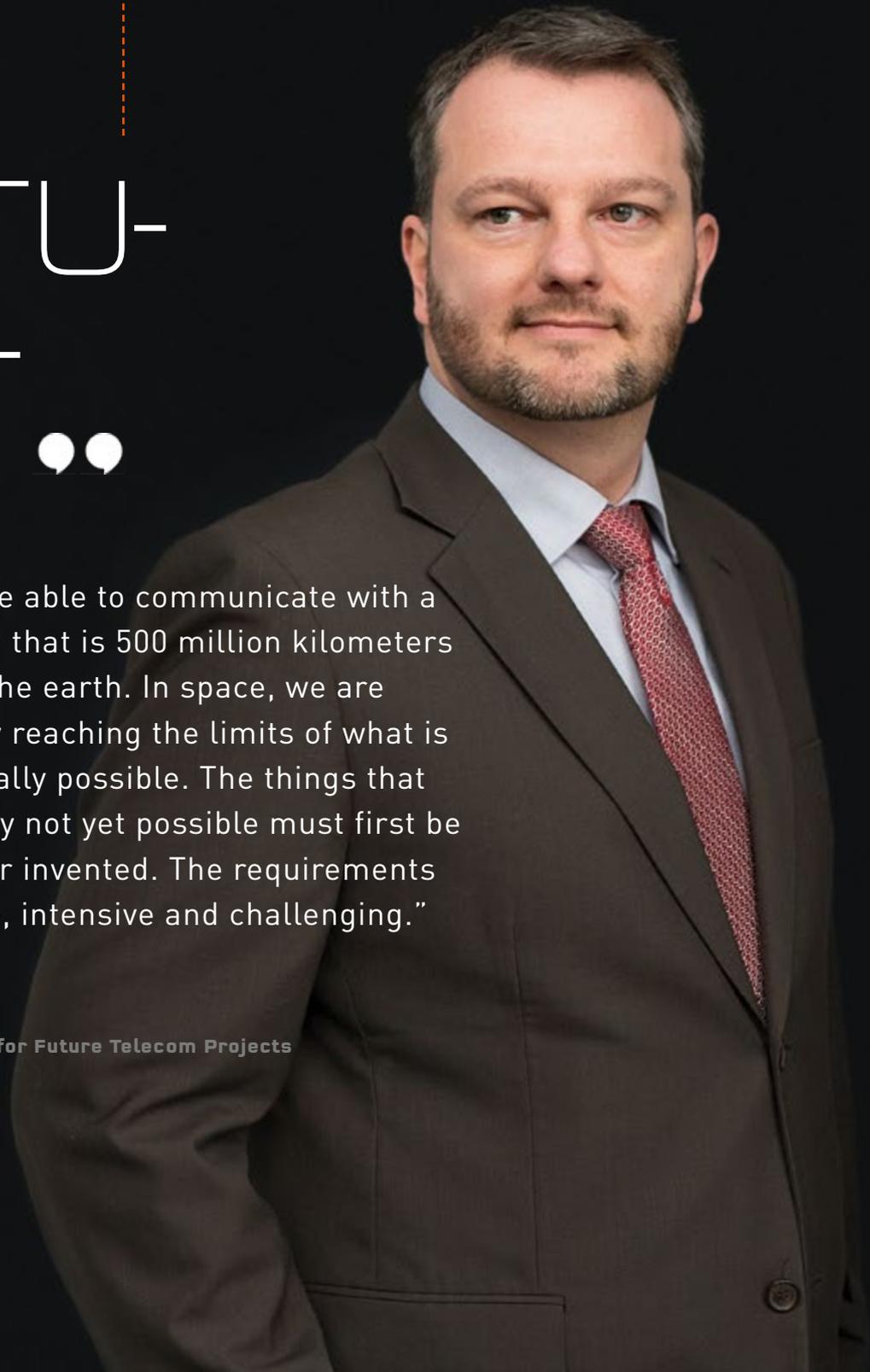


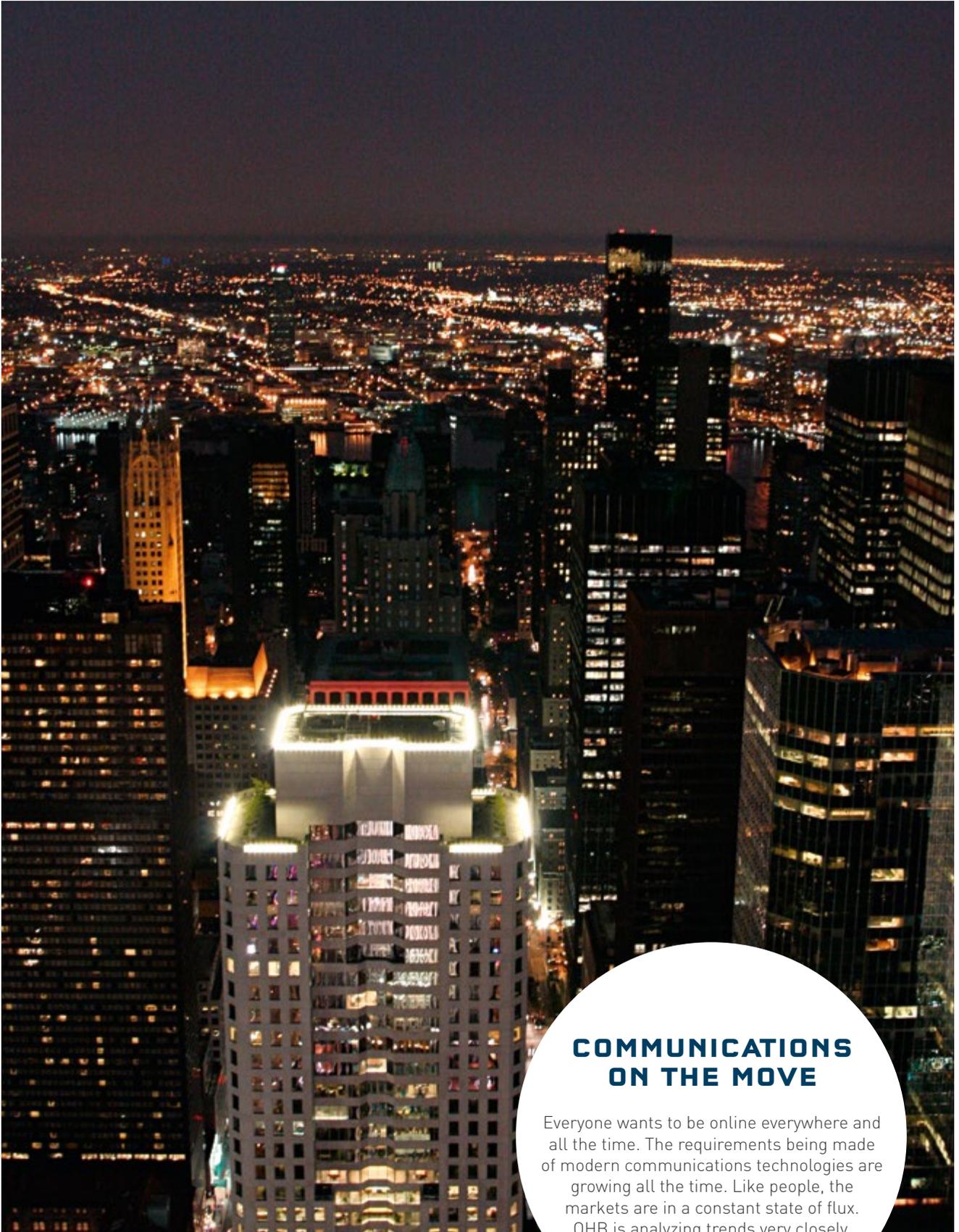


# FUTU- RIS- TIC “

Today we are able to communicate with a space probe that is 500 million kilometers away from the earth. In space, we are increasingly reaching the limits of what is technologically possible. The things that are currently not yet possible must first be developed or invented. The requirements are extreme, intensive and challenging.”

**CARSTEN BOROWY**  
head of the department for Future Telecom Projects





## COMMUNICATIONS ON THE MOVE

Everyone wants to be online everywhere and all the time. The requirements being made of modern communications technologies are growing all the time. Like people, the markets are in a constant state of flux. OHB is analyzing trends very closely.

# THE BIG PICTURE

**OHB System established** a new department known as “Future Telecom Projects” in mid-2016 to further expand its telecommunications activities. Carsten Borowy, who is in charge of this department, observes and analyzes market trends: “The key to gaining a foothold in the commercial market is to understand what the customer needs. This initially entails collecting information, talking to users and presenting and discussing proposals. The space agencies also provide us with useful information on how we can continue to grow in this area.”

At the same time, Borowy and his team also observe potential customers’ market of course. “It has become extremely dynamic. After originally earning all their money from straight TV transmission, content providers and satellite operators are now being forced to adapt. Classic broadcasting is being supplemented by the growing demand for streaming services in which each user can access the range on offer from anywhere in the world at any time. There has been an extreme change in user preferences. People are now more global, while the “Internet of Things”,



which networks all sorts of different objects, is requiring more and more capacity. These days, payloads require far greater functionality but must also meet the growing demands with respect to data and security and transmission for our digital society. The foundations for our SmallGEO activities were laid when we discovered a gap in the market segment for small geostationary satellites. Backed by the necessary experience, we are now working on ideas for future missions for German satellite communications systems, such as the SatCom2025 study that was commissioned in December,” says Borowy, whose duties also include Space 4.0 and the resultant changes in development and production cycles. “We are looking very closely at new production methods such as 3D printing and virtual reality for the integration processes so as to optimize the individual production steps. This is supplemented by modular product lines, access to commercial off-the-shelf (COTS) products and lean-manufacturing methods. We are increasingly relying on overarching standardization and industrialization. I find this apparent dichotomy between very conservative and very innovative goals to be highly interesting. Because ultimately we must be highly reliable even at the very edge of what is physically feasible,” Borowy adds.

“

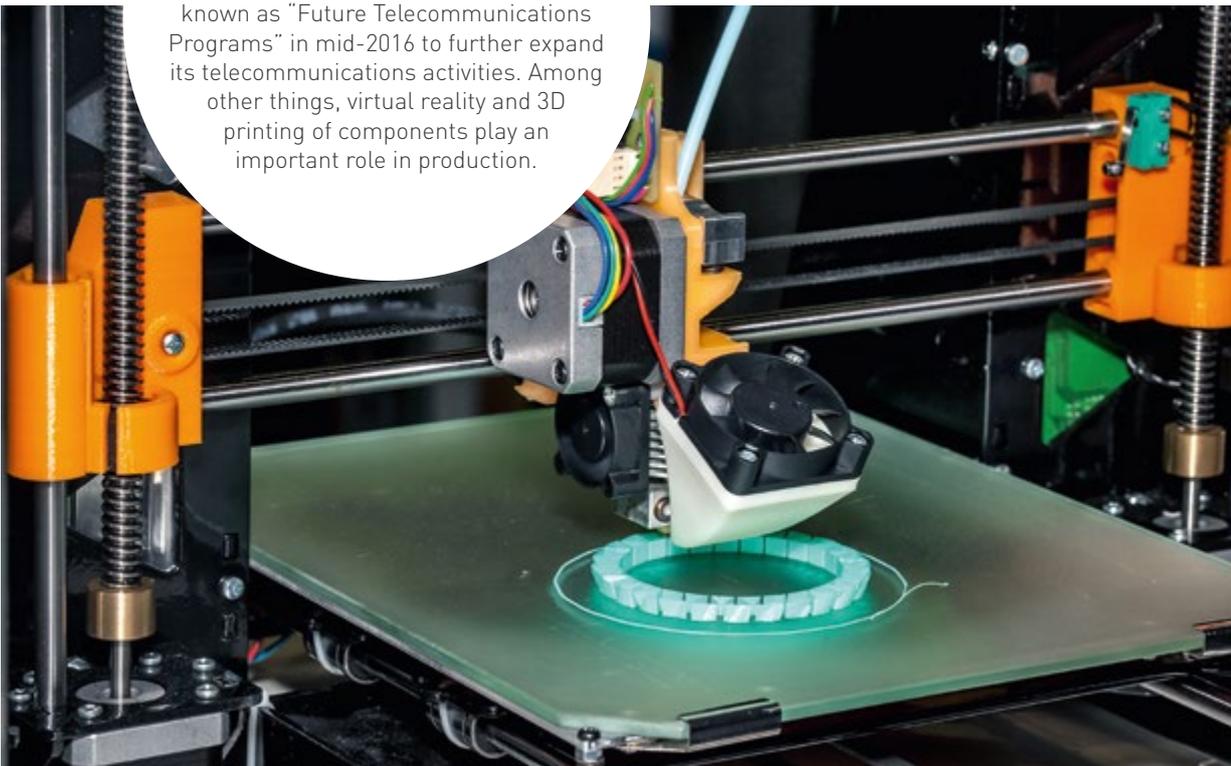
**IF ALL THE MEGA CONSTELLATIONS CURRENTLY BEING PLANNED WERE TO BE EXECUTED, WE WOULD HAVE 8,700 SATELLITES IN A LOW ORBIT IN ONE FELL SWOOP**

Carsten Borowy



**SMART IDEAS  
FOR THE FUTURE**

OHB System established a new department known as "Future Telecommunications Programs" in mid-2016 to further expand its telecommunications activities. Among other things, virtual reality and 3D printing of components play an important role in production.



A LOOK BACK AT THE YEAR

# 2016 AT A GLANCE

**RESEARCH SATELLITE EUCLID  
FITTED WITH OHB SWEDEN  
PROPULSION SYSTEMS**

**January 27** ESA and Thales Alenia Space (Italy) awarded OHB Sweden a contract worth around EUR 12 million to supply the chemical propulsion system as well as parts of the micro-propulsion system for the EUCLID science satellite. The chemical propulsion system chiefly executes the transfer corrections while the satellite is in orbit. The cold-gas-driven micro-propulsion systems are used for position control. From the end of 2020 onwards, EUCLID will be capturing the light of distant galaxies to measure the expansion of the universe. In this way, it will be possible to create far more precise models of the development of the universe and explore questions pertaining to the influence of dark matter and dark energy.

**OHB LOGISTIC SOLUTIONS INCORPORATED**

**February 11** With the establishment of OHB Logistic Solutions GmbH, the OHB Group is expanding its activities in the area of logistic products and services and positioning itself in the growing "Industry 4.0" market. Managing directors Jens Kuckertz and Saad Buresli are particularly concentrating on the commercialization of the OHB-developed Mobilbox for global real-time monitoring of sea-faring containers and related value-added services for optimizing global logistic processes. This is primarily targeted at forwarders, shipping companies and industrial customers.

# 1 QUARTER



**LOGISTIC  
SOLUTIONS**

New container tracking activities



**EUCLID**

Dark matter and dark energy account for roughly 95% of the entire density of the universe. And yet very little is known about their nature. The purpose of the EUCLID research mission is to provide some answers.

## A LOOK BACK AT THE YEAR



### NEW OHB SPACE CENTER OFFICIALLY OPENED

**April 18** The new OHB “Optics and Science” Space Center was officially opened in a ceremony attended by numerous luminaries from politics and business. With a good 360 employees, it is located at the Oberpfaffenhofen space technology estate in the direct vicinity of DLR. The heart of the new clean-room complex is formed by two adjacent ISO5 halls each with a floor area of 150 square meters and an ISO8 measuring 300 square meters. This makes it possible to integrate even large optical space systems. The first occupants are the EnMAP and MTG projects.

### SERVICE CONTRACT FOR THE CHILE OBSERVATORY INCREASED

**May 17** Chilean company MT Mecatronica SpA prevailed again over its international competitors, receiving a contract for the provision of maintenance services and engineering support for the European Southern Observatory ESO. Worth a total of EUR 3 million, the contract runs for three years and includes a two-year renewal option. In 2012, MT Mecatronica had previously managed to win the ESO tender process for a service contract for the world’s most modern optical observatory in Chile’s Atacama desert.



# 2

## QUARTER



### OPENING OF THE NEW SPACE CENTER

The new OHB Space Center in Oberpfaffenhofen is one of the most modern centers for optical systems and science missions in the space industry.

Horst Seehofer was one of the speakers at the opening ceremony held in April.

A LOOK BACK AT THE YEAR

# EXO- MARS SPECIAL

**NEW ERA IN EUROPEAN MARS EXPLORATION**

**March 14** The joint German-Russian ExoMars 2016 project lifted off on board a Proton launcher from the space center in Baikonur, Kazakhstan. After a journey of a good seven months, the orbiter and the landing module forming part of this stage of the mission entered an elliptical orbit around Mars. OHB System supplied the heart of the Trace Gas Orbiter comprising the structure and thermal and propulsion systems. The satellite is already transmitting impressive images of Mars together with initial measurement data. The Schiaparelli lander was lost due to a software error but was still able to deliver valuable data for the follow-up ExoMars 2020 mission during its descent.

**14**  
**MARCH**



After reaching its circular target orbit at an altitude of 400 kilometers at the end of 2017, the Trace Gas Orbiter will be searching for traces of methane in the Martian atmosphere and determining whether these gases are geological or perhaps even biological in origin. In addition, the research satellite will be acting as a data relay for the second stage of the ExoMars mission in 2020, which the ESA ministers green-lighted at the end of 2016. OHB System is to be the principal contractor for the carrier, which will be transporting a surface platform and a rover to Mars, as well as numerous instruments fitted to the rover. In October 2016, ESA also awarded Antwerp Space a contract for the lander radioscience (LaRa) instrument for the surface platform. LaRa is to deliver highly precise measurements of the alignment and rotations of Mars, thus contributing to a better understanding of its interior structure. In addition, the instrument can examine the effects of the distribution of masses, such as the movement or ice from the polar caps to the atmosphere and the impact on the rotation of Mars.

**EXOMARS**

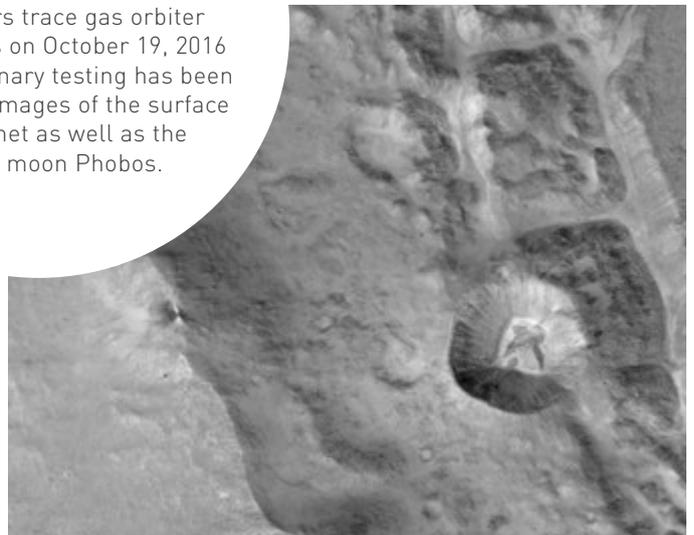
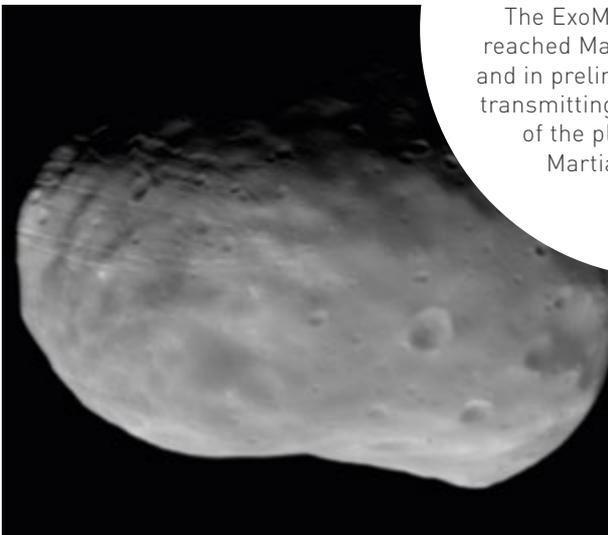
The ExoMars 2016 project lifted off on board a Proton M launcher from the space center in Baikonur, Kazakhstan, on March 14, 2016.





**SPOTLIGHT ON  
THE RED PLANET**

The ExoMars trace gas orbiter reached Mars on October 19, 2016 and in preliminary testing has been transmitting images of the surface of the planet as well as the Martian moon Phobos.



## A LOOK BACK AT THE YEAR



### SERVICE AGREEMENT AWARDED BY EUROPEAN MARITIME SAFETY AGENCY

**August 1** LuxSpace and its partner ORBCOMM signed a four-year framework contract for the satellite-based Automatic Identification System (AIS) data service with the European Maritime Safety Agency (EMSA). Headquartered in Lisbon, Portugal, EMSA is one of the largest users of AIS data and is responsible for maritime safety, pollution-by-ship monitoring and ship security for the European Union and its member states. The EMSA framework contract is funded for up to EUR 10.2 million for a fixed four-year service period.

### LUXSPACE

The satellite-based AIS system monitors the entire global maritime traffic.

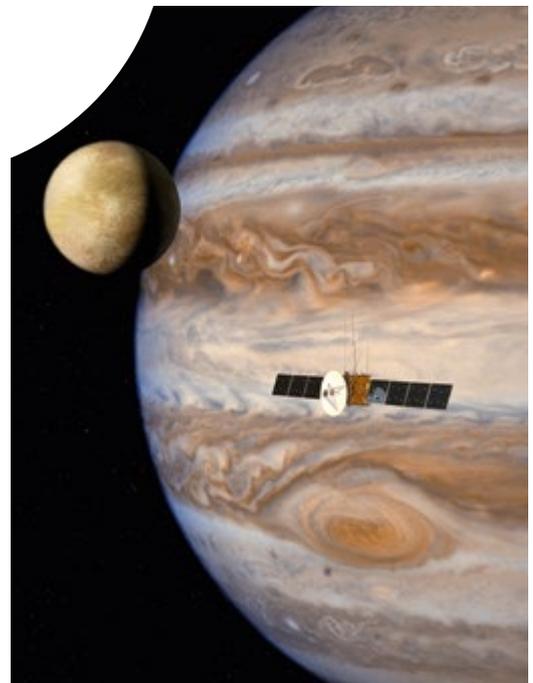


### ANTWERP SPACE INVOLVED IN THE JUICE JUPITER SPACE PROBE

**August 16** JUICE stands for JUperiter ICy moons Explorer and will be the first major ESA mission under its Cosmic Vision 2015–2025 program. The space probe is to be launched in 2022 and reach Jupiter in 2029 in order to observe the gaseous planetary giant and its three largest moons – Ganymede, Callisto and Europa – in detail. Principal contractor Airbus Defence & Space awarded Antwerp Space a contract worth around EUR 18 million for the development, integration and testing of the entire communications subsystem before it is installed on the JUICE space probe. Antwerp Space will be subcontracting the development and production of various units to different companies across Europe. The communications subsystem will be responsible for ensuring communications with the earth throughout the entire JUICE mission.

# 3

QUARTER



### JUICE

The JUICE space probe will be exploring the three Jupiter moons Ganymede, Callisto and Europa more closely from 2029.

## A LOOK BACK AT THE YEAR

### CONTRACT FOR ARIANE 6 LAUNCHING FACILITIES

**October 10** MT Aerospace and the French space agency CNES signed a contract for the construction of launch pads for the Ariane 6 carrier at the Kourou space center in French-Guiana. Worth EUR 23 million, the contract entails the planning, delivery and start-up of the mechanical systems for the launch pads for the future Ariane 6 carrier. The facilities are to be handed over to CNES and ESA in May 2018. With an industrial proportion of around 10 per cent, MT Aerospace is playing a key role in the development and industrialization of the ARIANE 6 carrier system and, as a risk share partner and cluster prime, is developing technical innovations for metal structures for enhancing the competitiveness of this future carrier.

### HIGH-TECH CLEAN-ROOM FACILITIES TAKEN INTO OPERATION AT ANTWERP SPACE

**October 26** Antwerp Space officially opened its new clean room in the presence of Belgian State Secretary for Science Policy Elke Sleurs and Mayor of Antwerp Bart De Wever. The company will be assembling components for important international space projects such as ExoMars, JUICE and ARGO in these ultra-modern facilities. With a floor area of 100 square meters and a height of 3 meters, the new clean room is designated category ISO 8. It will offer a

protected environment in which the level of dust particles, the temperature (around 22°) and the relative humidity are strictly managed, to avoid corrosion or electrical breakdowns for example.

### OHB INVOLVED IN THE ESA EARTH OBSERVATION MISSION FLEX

**November 7** OHB System is making a material contribution to the ESA earth observation mission FLUorescence Explorer (FLEX). The principal contractor Leonardo-Finmeccanica selected OHB as a core team partner for the development and assembly of important components of the satellite instrument. Under a contract worth EUR 30 million, OHB System is responsible for one of the two spectrometers, both camera systems and the optical assembly. The FLEX spectrometer will enable the photosynthesis activities of plants to be observed directly from space for the first time. The fluorescence effect caused by photosynthesis will be used to determine the health of plant life. Scheduled for launch in 2022, FLEX will be flying in tandem with Sentinel-3, another ESA earth observation satellite. In this way, it will be possible to integrate data from a further two instruments in order to heighten precision.

# 4 QUARTER



### OFFICIAL OPENING OF THE CLEAN ROOM

Roberto Aceti  
(managing director of Antwerp Space);  
Bart De Wever  
(Mayor of the city of Antwerp);  
Elke Sleurs  
(Belgian State Secretary for Science Policy);  
Oliver Salisch  
(managing director of Antwerp Space);  
behind them:  
Marco Fuchs  
(CEO of OHB SE)

A LOOK BACK AT THE YEAR

# GALILEO SPECIAL

**EUROPEAN NAVIGATION SYSTEM GALILEO  
GOING INTO OPERATION**

**November 17** Four of the Galileo FOC\* satellites developed and built by OHB system were simultaneously launched on board an Ariane 5 ES for the first time from the space center in Kourou, French-Guiana. Prior to this, the satellites had been launched in sets on two on board a Soyuz, such as in May 2016. Accordingly, 14 of the total of 22 FOC navigation satellites for which OHB is responsible as the industrial principal contractor are orbiting in perfect working order. In mid-December, ESA and the European Commission announced that the initial services for government authorities, companies and private individuals provided by the European satellite navigation system Galileo would now be commencing. Full system capability of the independent European navigation system is to be reached in 2020 when the satellite constellation and the ground infrastructure are fully operational.

**17  
NOVEMBER**



**NAVIGATION  
QUARTET**

Launch from space center in Kourou, French-Guiana:

Four satellites were simultaneously placed in orbit on board an Ariane 5 ES launcher in November 2016.



**THE FLEET IS GROWING**

14 of the total of 22 FOC navigation satellites to be supplied by OHB are already in orbit.



## THE GERMAN DAX INDEX RECOVERED FROM ITS VERY WEAK START TO THE YEAR IN THE COURSE OF 2016, POSTING A GAIN OF 12%

### STOCK MARKETS CLOSE 2016 ON A BRIGHT NOTE DESPITE MUTED START TO THE YEAR

Uncertainty over the outlook for the global economy led to the worst start to a new year for the German bluechip index DAX in 25 years, pushing it down to a low for the year of 8,752 points on February 11. The outcome of the Brexit vote in the United Kingdom also exerted pressure on equities later on in the year especially as the financial markets had not expected a vote in favor of leaving the European Union. By contrast, geopolitical events such as the attempted coup in Turkey and terrorist attacks on major European cities did not leave any traces on the stock markets. The European Central Bank's monetary policies triggered a positive counter move, which remained until the end of the year, receiving additional support in December with the extension of the bond-buying program announced by the European Central Bank at the beginning of December. As the European Central Bank also indicated that interest rates would remain low, the DAX made further substantial headway at the end of the year, presumably also buoyed by the outcome of the US presidential elections, which contrary to general expectations did not have any negative

effect on shares. The DAX gained 12% in the course of 2016, closing the year at 11,481 points. The TecDAX index, which tracks German technology stocks, closed the year at 1,811 points on December 30, 2016, achieving a gain of 1%.

### OH B STOCK

OH B stock did not decline as sharply as the benchmark DAX and TecDAX indexes at the beginning of the year. However, this also applied to the ensuing recovery that emerged in mid-February. As a result, OH B stock closed the year with a loss of 7%, moving in a range between the low for the year of EUR 17.02 and the high for the year of EUR 20.78. Average daily trading volumes dropped over the previous year to 4,752 shares (previous year: 9,600). **SEE CHART C 01**

### TREASURY STOCK

As of December 31, 2016, OH B SE's treasury stock comprised a total of 80,496 shares, equivalent to 0.46% **SEE CHART C 02** of its issued capital, i.e. unchanged in number since December 31, 2015.

### OH B STOCK DATA

ISIN	DE0005936124
Ticker	OH B
Trading segment	Prime Standard
Sector	Technology
Subsector	Communications Technology
Indizes	Prime All Share, Tec All Share, CDAX
Designated Sponsor	DZ Bank AG, HSBC Trinkaus & Burkhardt KGaA
Issued capital EUR	EUR 17,468,096
Share type	Bearer shares without par value

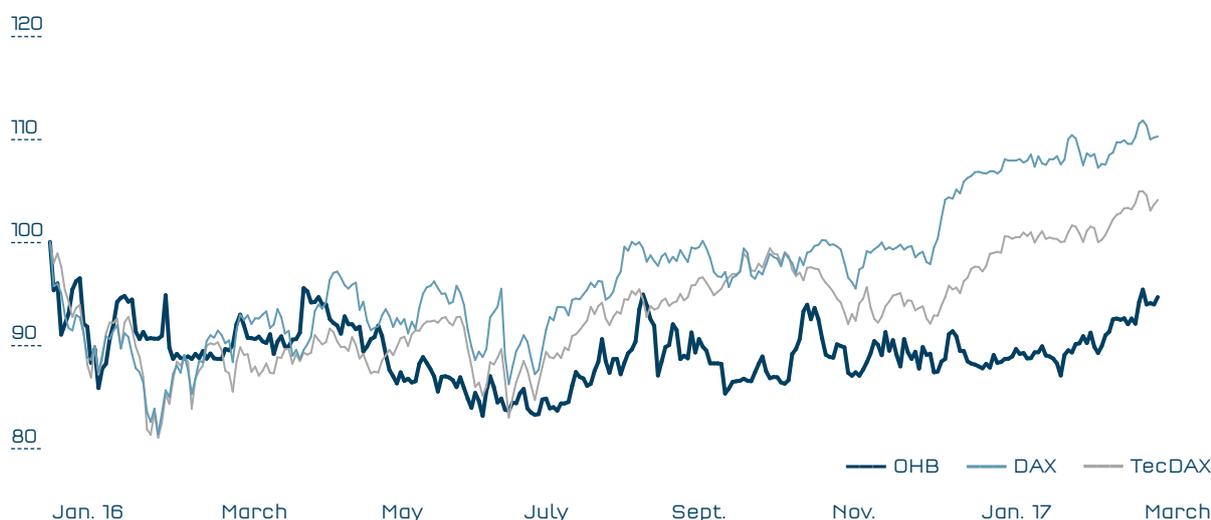
### IR-CONTACT

Martina Lilienthal  
Investor Relations  
Phone: +49 (0)421 2020-720  
Fax: +49 (0)421 2020-613  
Email: [ir@ohb.de](mailto:ir@ohb.de)

## C01

## PERFORMANCE OF OHB SHARE PRICE IN COMPARISON TO DAX AND TECDAX

FOR THE PERIOD FROM JANUARY 1, 2016 TO FEBRUARY 28, 2017 (INDEXED)



## OHB STOCK PARAMETERS IN EUR (XETRA)

in EUR	2016	2015	2014	2013
End-of-year price	18.54	20.97	19.70	17.55
High for the year	20.78	23.60	25.06	18.63
Low for the year	17.02	16.59	17.45	14.76
Market capitalization (end of year) in million	324	366	344	307
Average daily trading volumes (Xetra + floor)	4,752	9,600	13,771	13,322
Price / earnings ratio (P/E) (final trading day of the year)	14.59	17.33	13.31	15.67
Earnings per share (EPS)	1.27	1.21	1.48	1.12
Dividend per share	0.40*	0.40	0.37	0.37
<b>Dividend yield (end of year)</b>	<b>2.16%</b>	<b>1.91%</b>	<b>1.88%</b>	<b>2.11%</b>

\* Subject to approval by the shareholders

## ANALYST RATINGS

Date	Bank	Target price in EUR	Rating
March 2017	DZ Bank	25.00	Buy
February 2017	HSBC Trinkaus & Burkhardt	25.00	Buy
February 2017	Equinet Bank	20.00	Neutral
February 2017	Bankhaus Lampe	23.00	Buy
February 2017	Commerzbank	20.00	Hold

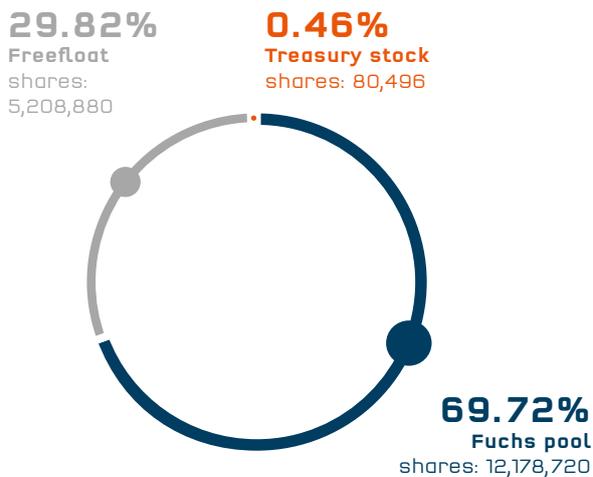
### INVESTOR RELATIONS ACTIVITIES

Traditionally held in February, the capital market day marked the beginning of the investor relations year again. By way of exception, the event was not held at the Company's head office in Bremen but at OHB System AG's newly built facility in Oberpfaffenhofen. On February 16, various members of the Management Board provided an overview of the current projects being conducted by OHB SE's subsidiaries and guidance for the main financials for 2016. The final results for the previous year were announced on the morning of March 17 at the annual press conference held in Bremen and during the analyst conference taking place on the afternoon of the same day in Frankfurt. After publication, the quarterly figures for the year under review were presented and discussed in telephone conferences on the same day. In the course of the year, the Management Board and the investor relations department attended roadshows and capital market conferences in Düsseldorf and Frankfurt am Main.

### DIVIDEND OF EUR 0.40 APPROVED BY THE SHAREHOLDERS

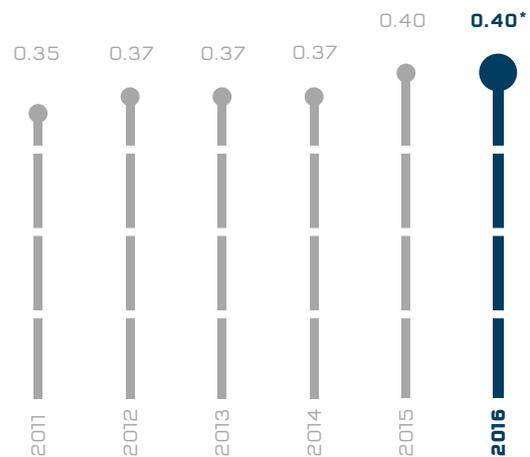
The annual general meeting was held on May 25, 2016 at the Company's offices in Bremen as in earlier years, approving a dividend of EUR 0.40 per share for 2015 (previous year: EUR 0.37). Accordingly, the total distribution amount for the 17,387,600 dividend-entitled shares came to EUR 7.0 million. The remaining unappropriated surplus of EUR 19.9 million as shown in the financial accounts prepared in accordance with German GAAP (HGB) was carried forward. A further item of the agenda was the election of the Supervisory Board. The previous members of the Supervisory Board, Christa Fuchs, Prof. Heinz Stoewer and Robert Wethmar, were re-elected for a further five years. The other items of the agenda, specifically the ratification of the actions of the Management Board and Supervisory Board and the election of the auditor for the annual and consolidated financial statements, were also passed with large majorities. In this connection, a new auditor was elected. The new statutory auditor is PricewaterhouseCoopers GmbH, Bremen. **SEE CHART C03**

### C02 SHAREHOLDER STRUCTURE ON DECEMBER 31, 2016



**IN %**  
Issued capital: 17,468,096 shares

### C03 DIVIDEND PERFORMANCE 2011-2016



**IN EUR**  
\* Subject to approval by the shareholders



1 Marco Fuchs opening the event 2 + 3 Talks in the breaks between the presentations 4 On the stage: Dr. Manuel Czech, Dr. Fritz Merkle, Kurt Melching 5 Dr. Rolf Janovsky during his presentation





# 1

## MANAGEMENT REPORT

FOR THE PERIOD  
FROM JANUARY 1, 2016  
UNTIL DECEMBER 31, 2016

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Corporate governance report

## I. BASIS OF THE GROUP

### A. GROUP BUSINESS MODEL

As an aerospace and space group, OHB SE combines activities from different areas of high technology. As the individual subsidiaries are spread geographically across different European countries, the Group has facilities in many major countries that are members of the European Space Agency ESA. This is a crucial requirement for successfully taking part in certain space projects. The individual companies are able to retain their individuality and corporate culture within the Group, while still being bound by the decisions made by the Group holding company. OHB SE itself does not engage in any operating business but supports the subsidiaries in their sales and marketing activities and thus assumes the role of an active holding company. The Executive Committee held one meeting in the year under review during which it deliberated on matters concerning Group strategy and its implementation by the operating units. The Executive Committee comprises members of the Management Board of OHB SE and the managing directors of individual subsidiaries.

OHB SE comprises two business units:

#### SPACE SYSTEMS

This business unit focuses on developing and executing space projects. In particular, it is responsible for developing and fabricating low-orbiting and geostationary small satellites for navigation, research, communications, earth and weather observation and reconnaissance including scientific payloads. Its human space flight activities chiefly entail projects for the assembly and outfitting of the International Space Station ISS. The exploration segment works on studies and models for exploring our solar system, primarily the moon, asteroids and Mars. Reconnaissance satellites and broadband wireless transmission of image data form core technologies for security and reconnaissance.

#### AEROSPACE + INDUSTRIAL PRODUCTS

This segment is primarily responsible for fabricating aviation and space products as well as performing other industrial activities. In this area, OHB has established itself as a significant supplier of aerospace structures for the aviation and space industry; among other things, it is the largest German supplier of components for the Ariane-5 program and an established producer of structural elements for satellites. In addition, OHB is an experienced provider of mechatronic systems for antennas and telescopes and is involved in major radio telescope projects. OHB telematics systems serve the logistics industry around the world by offering efficient transport management and consignment tracking facilities.

### B. GOALS AND STRATEGIES

The Group pursues the goal of increasing order intake and total revenues in the medium term. This involves preserving and broadening its employees' expertise and protecting jobs. The profitability margin (EBIT or EBITDA margin relative to total revenues) is being specifically increased in certain areas, while in other areas the good figure already achieved is to be at least maintained. These goals are to be reached by greater business development activities and further technological developments. Generally speaking, a balanced cash flow from operating activities at least is being targeted. No exceptional increase in capital requirements is expected to be required to achieve the medium-term goals.

The Group will continue to focus on the space industry. The growth referred to above is to be generated organically in this sector. Business with institutional customers still forms the basis of OHB SE's activities. In this connection, the Group is clearly oriented to the European market. With the SmallGEO series developed by the Space Systems business unit, the Group will additionally be able to offer satellite products to commercial customers. These activities will not be confined to the European market.

### C. MANAGEMENT PROCESS SYSTEM

The Group manages its financial position by reference to the following performance indicators: total revenues, earnings before interest and taxes (EBIT) and earnings before interest, taxes, depreciation and amortization (EBITDA). These parameters are defined in an annual budget and tracked during the year by means of forecasts and reports on actual figures together with deviation analyses on a top-down basis down to individual projects. Further management factors include productivity ratios, particularly employee productivity. Other important non-financial performance indicators are employee numbers in the individual companies as well as the fluctuation rate, for which a target of less than 5% has been defined. Employee satisfaction constitutes a further important parameter and is being steadily increased through extended career and personal development. Particular importance is attached to cordial relations and mutual employee support.

### D. RESEARCH AND DEVELOPMENT

In the year under review, OHB spent roughly EUR 44.6 million (previous year: EUR 23.9 million) on internally funded research and development (R+D). Part of the R+D activities (EUR 3.7 million; previous year: EUR 5.0 million) are being funded by various institutions such as the European Union, the German Federal Government, the German states and Italy. In accordance with European Union directives,

subsidies account for between 25% and 75% of the total costs depending on the proximity to completion of the development project.

Development work of EUR 29.4 million was capitalized in the year under review, up from EUR 16.6 million in the previous year. This increase is due to continued development work on the "SmallGEO" satellite platform, which is already being used as a basis for various satellite programs.

In the **Space Systems business unit**, one of the main focuses was again on basic space research.

In addition to new and enhanced technologies, the focus was on unprecedented types of mission designs on the basis of a newly engineered universal platform for low-orbit satellites, economically efficient launch packages for these satellites and human space flight as well as exploration projects. A further important aspect entailed technologies for enhancing and future-proofing the SmallGEO platform particularly in the light of commercial customers' requirements. The significant spending of the last few years on the development of this platform has already resulted in considerable order receipts and will thus safeguard capacity utilization and competitiveness in the medium to long term.

The Space Systems business unit continues to conduct internal studies and design work in the area of "new space" for constellations comprising a large number of low and medium-orbit satellites. In order to ensure the necessary segregation from day-to-day and agency work required for such matters, which primarily involve unconventional technical approaches and processes, coordination and management responsibility in this area was allocated to the OHB SE level. Innovative ideas for low-orbit satellite constellations for broadband Internet and multimedia communications are being developed in close consultation with potential investors. In this way, OHB is continuing to prepare for the paradigm change which is emerging in the areas of telecommunications and earth observation in particular.

Activities in the **Aerospace + Industrial Products** business unit concentrated on support for new launcher technologies, product developments and efficiency-boosting measures. The following projects in particular should be mentioned:

The CRONUS project was completed at the beginning of 2016 with the configuration of an upper-stage tank system for large launchers as part of the ESA Future Launcher Preparatory Program (FLPP). In connection with this, a further FLPP project – ISC 3000 – involved the development of large cylindrical components for tanks by means of flow-turning. This production process offers very considerable potential for cutting costs and enhancing performance.

The ESA ARTES (Advanced Research in Telecommunications Systems) L-XTA project deals with the development of new large high-pressure xenon tanks for new-generation satellites (NEOSAT and Electra). With capacities of 440 and 900 liters, the xenon tanks will form the core of a new product for future communications with electric propulsion systems. The preliminary design was presented and accepted in November 2016.

The DLR-funded MeHR project (German acronym for material processing for efficient production of launcher components) is working on the further development of production processes for launcher tanks made from aluminum. In operation for the past two years, the project is very successfully providing support for the Ariane 6 launch vehicle. It is scheduled for completion in autumn 2017.

In summer 2016, the MT technology strategy was finalized for the new ESA FLPP NEO program (2017–2019) in consultation with DLR. The corresponding resolutions were passed at the Ministerial Council in December 2016. This provided the basis for the following technologies: Development of a "next cryo tank system" as an option for the medium-term enhancement of the Ariane 6 upper stage as well as the development of construction technology for large cryo composite tanks as a basis for the development of future launchers (post Ariane 6). Moreover, a decision was made on a study for the development and operation of a future European minilauncher which is to be awarded to MT Aerospace AG. This ensures continuous development work to support MT Aerospace AG's main business targets.

In the aviation segment, the rear rotor drive shaft employing the new hybrid technology was successfully tested on a Marengo Swisshelicopter product. As a result, further order receipts were received for the rear rotor drive shaft in 2016. Under the KoLiBri project, work on the composite

The new  
satellite platform

# Small- GEO

is already being used  
as a basis for various  
satellite programs

engine shell was completed on schedule in conjunction with EAST-4D Carbon Technology GmbH. The aim is to become a supplier of components for Rolls Royce composite engine shells.

## II. BUSINESS REPORT

### A. UNDERLYING CONDITIONS

#### I. MACROECONOMIC ENVIRONMENT

Last year, German gross domestic product (GDP) expanded by 1.9%, thus exceeding the previous two years (1.7% in 2015, 1.6% in 2014). The German economy grew at the same rate as the European Union (EU-28) in 2016, which also recorded a 1.9% increase in GDP. German GDP growth was half a percentage point above the average of the past ten years (1.4%). Most economic sectors contributed to GDP growth, particularly construction, which expanded by almost 3%, while most of the service sectors also expanded by around 2%. On the utilization side, consumer spending accounted for the greatest proportion as in the previous year thanks to very high employment levels and rising wages and salaries. It was followed by public-sector spending, which rose by 4.2% due to the refugee crisis and related costs. The number of domestic employees rose again over the previous year, reaching a new high of almost 43.4 million for the ninth consecutive year. This positive trend in the labor market was accompanied by a rising inflation rate, which increased from an annual average of 0.3% in the previous year to 0.5% in 2016 in Germany.

#### II. SECTOR ENVIRONMENT

Measured in terms of direct annual sales, the space industry largely only holds a niche position compared with other industries in Europe and also the rest of the world but is indirectly of crucial importance for the economy as a whole. Navigation satellites, for example, allow IT systems to be synchronized globally, providing the basis for international financial transactions to be executed and documented reliably. The data collected by weather satellites ensures safe flying conditions and more frequent flights, improved efficiency in agriculture, the avoidance of poor harvests and more plannable logistics and holiday travel. Space travel makes an important contribution to improving environmental protection, allows the causes of and flows in migration to be observed and thus makes a decisive contribution to civil and military security. Space may be a small industry but one that is of crucial importance for a modern and sustainable economic system. The role played by space activities varies from region to region. However, they are recognized as being a key industry both politically and by society at large in Europe and North America in particular.

Given the long-term nature of the programs and projects, macroeconomic and political conditions in individual countries have only a limited direct impact on current programs and projects. Moreover, depending on the region in question, commercial, civil and military space programs are often linked with each other to very differing extents or are completely independent of each other. In Europe, the programs initiated by the European Space Agency (ESA) and the European Union (EU) remained stable thanks to their multi-year planning horizons. This was confirmed by ESA's Ministerial Council in December 2016.

After years of drastic cuts and the related termination of international partnerships, the situation in the United States has been stabilizing substantially since 2014. The US Space Administration's budget exceeded USD 18.5 billion in 2016. At this stage, it is not possible to foretell what course the new administration will take. However, over and above this, the US Department of Defense has a budget of USD 23.6 billion. The US government's total budget thus exceeds USD 44.5 billion. After two decades of uncertainty as to their future direction, space activities in the Russian Federation have received a new perspective again. That said, it is not possible to assess the ramifications for space programs of the current situation in the Russian economy following the measures taken by the West in response to the Ukraine conflict and the continued decline in oil prices. In particular, the United States has substantially scaled back joint activities with the Russian Federation but still remains dependent on Russia for the transportation of supplies and astronauts to the International Space Station ISS. It expects to regain the independence which it had held prior to the termination of the Shuttle program from 2017, when national commercial operators become available. Japan, China, India, South Korea, Turkey and Brazil are still pursuing ambitions of establishing their own national space flight programs and infrastructures. The establishment of a national space station and a long-term successful lunar landing initially with a rover and later with national astronauts form key elements of the Chinese space program. Held in December 2016 in Lucerne, ESA's Ministerial Council was of crucial importance for European space technology both economically and in terms of programs. Work on implementing the decisions made at the conference will commence in 2017 and particularly also include the development of the new European launch vehicle Ariane 6 and the continued operation of the International Space Station ISS until 2024. Programs worth EUR 10.3 billion, including a German share of EUR 1.9 billion, were confirmed. The German national space budget remained at EUR 273 million, thus confirming the German federal government's ongoing commitment to space.

Demand for Ariane 5 launch services remains steady. The Ariane 5 program owes its sustained technical success to the unique reliability of this launch vehicle, which is unrivaled anywhere in the world. The last launch for 2016 in December marked the 76<sup>th</sup> consecutive successful campaign. Order books point to a consistently high launch cadence for this vehicle over the coming years as well. It is currently intended for Ariane 5 to remain in operation until 2023. The maiden flight of the new-generation Ariane 6 is scheduled for 2020. With the commencement of the development of the new-generation Ariane 6 launcher, Europe is now addressing the global competition: US company Space-X is continuing to enjoy market success with the Falcon 9 despite technical problems. Meanwhile China and India are on the threshold of building launch vehicles for larger payloads and for successfully executing space missions. Together, they are generating pressure on launch vehicle prices which the new-generation Ariane 6 is addressing by pursuing the goal of lowering launch costs to a competitive level and ensuring adaptability for different orbits and payloads. In this way, it will be providing Europe with its own independent gateway to space.

## B. OHB SE'S BUSINESS PERFORMANCE IN 2016

The Company's business performance in the year under review and the resultant stabilization of its performance indicators largely lived up to the Management Board's positive expectations. In February 2016, the Company published full-year guidance for total revenues, EBITDA and EBIT.

At EUR 55 million and EUR 43 million respectively, the EBITDA and EBIT guidance (EUR 54 million and EUR 42 million respectively) was readily achieved. Total revenues **SEE CHART C04** in the period under review came to EUR 728 million, thus falling a small 3% short of expectations (EUR 750 million). This was due to delays in the recognition of revenues, something which is not unusual given the nature of our business model. Driven by high capacity utilization and project progress, margins widened in the period under review. Consolidated net profit after non-controlling interests rose from EUR 21.0 million to EUR 22.2 million and earnings per share **SEE CHART C05**

from EUR 1.21 to EUR 1.28 compared with the previous year. The high volume of orders on hand dropped from EUR 1,684 million in the previous year to EUR 1,560 million in the year under review due to the progress made in project execution.

## C. BUSINESS PERFORMANCE

The OHB Group's favorable business performance continued to stabilize in 2016. At EUR 728 million, total revenues were almost unchanged over the previous year (EUR 730 million). This was accompanied by a 3% decline in sales to around EUR 699 million, down from EUR 720 million the previous year. The transformation of the space industry from what was once a solely research or politically/ideologically driven segment into a user-oriented and economically significant market has formed the basis for OHB SE's continuous and sustained growth over the last one-and-a-half decades.

The areas in which it engages via its subsidiaries place it in an excellent position: After the growth of the last few years, the space flight market will continue to expand as new possibilities for utilizing new or existing technologies are yielding new requirements. The existing applications are based on satellite systems already in operation which have a limited life expectancy and must therefore be replaced with new systems offering potentially improved technology or efficiency.

### I. SPACE SYSTEMS BUSINESS UNIT

Business in the Space Systems business unit is chiefly characterized by long-term projects which are generally awarded by public-sector customers. The high order backlog of EUR 1,341 million (December 31, 2016) and the broad potential for generating new project business provide the basis for high forward planning visibility.

#### Earth observation and reconnaissance

Developed and built by OHB System and put into operation between 2006 and 2008, the SAR-Lupe system with its five radar satellites, ground segments and the combined German-French reconnaissance satellite system made up of SAR-Lupe (radar images) and Helios 2 (optical images) is still showing no signs of any degradation and is still operating with a high degree of stability and to the full

In the year  
under review, a further

# 6

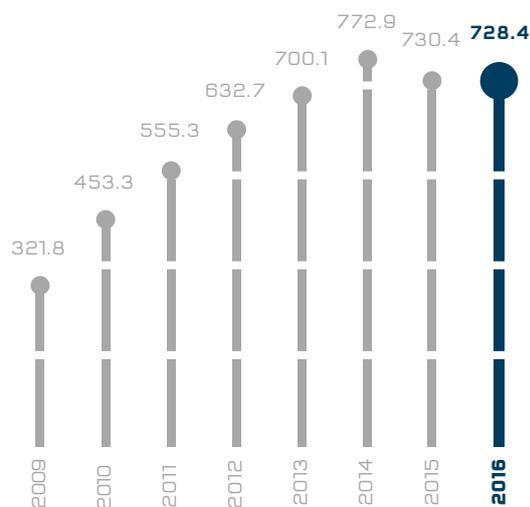
Galileo satellites  
were launched

satisfaction of the customer (Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw)) and the German armed forces. This ensures that the German armed forces will continue to have a highly modern, reliable and capable radar satellite reconnaissance system even after almost nine years pending the implementation of the follow-up system SARah, which is scheduled for 2019/2020. Work on the SAR-Lupe successor SARah with substantially improved performance is proceeding according to plan, with all project milestones passed on schedule. The design comprises three satellites, namely two satellites based on OHB System's reflector antenna technology and one satellite using Airbus phased-array technology. The necessary ground systems are being supplied by OHB System and will also control the SAR-Lupe satellites from the second half of 2017.

The national optical earth observation program EnMAP (Environmental Mapping and Analysis Program) for DLR is still making stable progress. The hyperspectral instrument is in the integration phase at the new clean-room facilities in Oberpfaffenhofen. Further work on the platform will be transferred from Bremen to Oberpfaffenhofen in 2017. EnMap is now scheduled for launch at the

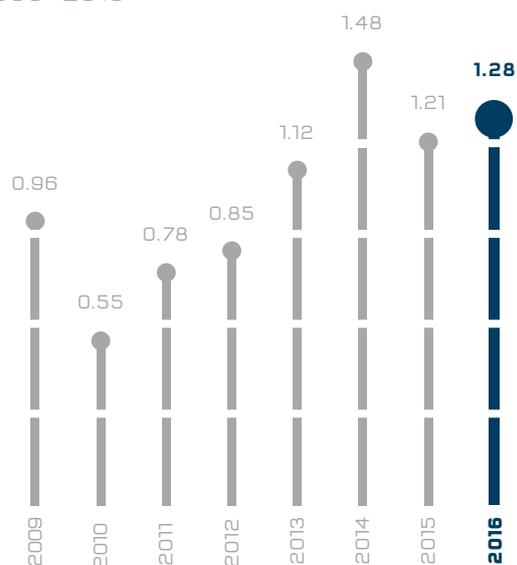
beginning of 2019. With its new type of hyperspectral sensors, this environmental satellite is primarily designed to characterize and monitor the condition of the earth. It is an innovative system which can be used for many new applications, e.g. security. Alongside this program, OHB Italia S.p.A (formerly CGS S.p.A.) is working on the PRISMA project, an Italian program similar to EnMAP. Work was delayed over a substantial period due to funding shortfalls on the part of the Italian space agency ASI. The contract signed by OHB System and Thales Alenia Space in 2012 for the development and construction of the third-generation European weather satellite MTG (Meteosat Third Generation) is being implemented. Consequently, realization of the MTG satellites is entering the final phase. Among other things, the central satellite structure has already been shipped to OHB System AG's clean rooms in Bremen, while preliminary mounts for the instruments are being prepared at the new clean rooms in Oberpfaffenhofen. At OHB Italia, development work on the microwave imager (MWI) for the METOP mission is well under way. The Micro Wave Imager instrument will provide Europe's national meteorological services as well as international users and science community with meteorological and climatic data. OHB Italia is responsible for designing and developing the MWI from

**C04**  
**CONSOLIDATED TOTAL REVENUES**  
2009–2016



IN EUR MILLION

**C05**  
**EARNINGS PER SHARE**  
2009–2016



IN EUR

Phase B2 through to final in-orbit verification of three flight models for delivery to mission principal contractor Airbus Defence & Space. With these activities, OHB is active in all areas of earth and weather observation and reconnaissance with products ranging from radar satellites to optical observation systems. In November 2016, OHB System AG was selected by principal contractor Leonardo S.p.a. as a core team partner for ESA's European earth exploration mission FLEX, which is to commence in 2022.

#### Communications

Integration and testing activities for satellite 36W-1 for customer Hispasat were completed, upon which the satellite lifted off from the European space center Kourou on board a Soyuz launcher on January 28, 2017. The shift from the transfer orbit to the final geostationary orbit was completed successfully. With its own propulsion system and five combustion phases, the satellite passed its first major test. This satellite marks the first time that the OHB-developed SmallGEO platform is being deployed directly in a satellite operator's commercial system. ESA has also selected the SmallGEO platform as a basis for the European Data Relay Satellite (EDRS-C) within the ARTES-7 program. Development work has been largely completed, with integration to be executed in 2017, after which the satellite will be shipped to a testing center. The enhancements to the SmallGEO model for use as a specialized data relay satellite in ultra-high-speed satellite-to-satellite communications are opening up an important new strategic segment for OHB System in both the civilian market and the future military market.

SmallGEO has been defined by DLR as the basis for the Heinrich Hertz national telecommunications mission. This mission will be used to test new types of satellite communications technology under real conditions to safeguard national system competence in geostationary communications satellites. Among other things, it is also to support the military communications of the German federal armed forces. In 2014, the German Federal Ministries of Defense and Economics finally agreed on the terms of the joint procurement of the satellite. The contract in response to the proposal for the development and construction of the satellite was awarded in February 2016. The contract award is now subject to approval by the German

parliamentary budget committee in the second quarter of 2017. However, OHB was already awarded the contract for managing the satellite technology for this mission from DLR in August 2016.

Commenced in 2012, the preliminary studies on "Electra", the "All Electric Spacecraft", culminated in the award of a contract for the definition phase in October 2013 by SES-Astra from Luxembourg. As these satellites do not require any chemical propellant, they will be substantially lighter. This will lower the launch costs on the one hand and permit substantially larger payloads on the other. The final decision by ESA on whether to go ahead with the joint activities with SES and OHB System as contractors was made at the end of 2015 and the contract signed on March 11, 2016.

#### Navigation

In the year under review, a further six satellites for the European satellite navigation system Galileo lifted off from the Kourou space center, two on board a Soyuz launcher and four on board an Ariane-5 launcher. No problems arose during the launch and activation of the full operational capability (FOC) satellites. Consequently, all 14 satellites from the first lot are now in orbit. The next four satellites from Lot 2 have now been tested and are expected to be launched on board an Ariane-5 in December 2017.

Some of the FOC satellites as well as those of a competitor under the program preceding Galileo are exhibiting irregularities in the clock operations. According to an ESA press release of January 2017, this concerns five of the 18 satellites in orbit. Although ESA's investigations are still ongoing, it is already clear that measures are to be taken to stabilize the satellites that have not yet been launched. This will not have any influence on the Galileo initial services. ESA and the European Commission announced on December 15, 2016 that these services had been successfully initiated.

In summer 2016, OHB System AG submitted a bid for Galileo FOC Lot 3, which is expected to be composed of eight satellites and four optional satellites. The contract should be awarded by ESA and the European Commission in the first four months of 2017. A study on the follow-up

generation for the current Galileo\* satellites has largely been completed. The purpose of this study is to ensure that after the expiry of its planned twelve-year service life the Galileo\* system will be equipped with new satellites on the basis of an as yet undeveloped technology aimed at preserving its leading position.

#### **Space exploration**

The central unit for the trace gas orbiter (TGO) developed and built under the ESA ExoMars 2016 program was completed in 2013 and shipped to the prime contractor Thales Alenia Space in Cannes, France, in February 2014. The TGO embarked on its journey to Mars in March 2016. Unfortunately, the Sciaparelli landing capsule that was simultaneously transported to Mars was lost during its descent to the planet's surface. However, the trace gas orbiter including the unit supplied by OHB is working perfectly. Fortunately, the landing capsule was able to collect enough measurements to ensure that the second part of the EXOMARS twin mission can still be executed.

Work on the carrier and a central system of the payload fitted to the Mars Rover for the ExoMars 2020 mission is proceeding according to schedule. In connection with this mission, Antwerp Space entered into a contract with ESA in October for the delivery of the LaRa instrument, which uses sophisticated communications technologies to transmit data from Mars to the earth. Final authorization of the ExoMars 2020 mission was confirmed by the Ministerial Council in December 2016. Antwerp Space is also involved in the Jupiter JUICE mission, for which it is supplying the communications subsystem. The company signed a corresponding contract with the principal contractor Airbus Defence & Space in August. The space telescope Euclid is to explore dark energy and dark matter. In January 2016, ESA and Thales Alenia Space appointed OHB Sweden as the supplier of the chemical propulsion system as well as the fluidic part of the micro-propulsion system for this research satellite.

#### **Space research and robotics**

OHB was again involved in several studies in connection with ESA's next European scientific research missions in 2016. In this way, it is also building up a position for itself in this classic segment of space technology. It is particularly

focusing on the mid-sized PLATO mission. In 2016, intensive work was conducted on the two PLATO studies which had commenced in 2014; one study on the overall mission was awarded by ESA to OHB System Bremen and another one by DLR on the payload instrument package. The purpose of the PLATO mission is to search for exoplanets, i.e. planets that orbit around other stars, and to determine the extent to which they are comparable to the earth. OHB Sweden is continuing to work intensively on subsystems for the ESA Solar Orbiter research satellite. January 2016 saw the 53rd flight of a TEXUS rocket from the Esrange launch Kiruna in North Sweden. OHB System has been participating in this national DLR program, which conducts research in weightless conditions, since 1976.

#### **Human spaceflight**

OHB System continued to support work on board the ISS International Space Station in 2016. This included the management of experiments as well as maintenance and repair work for the equipment developed and supplied by OHB System. OHB System has performed several internal studies analyzing possible scenarios for transporting supplies to the ISS after the expiry of the ATV program and exploring potential alternatives in microgravitation research following the decommissioning of the ISS in 2024 or later. This has yielded a very attractive concept involving the use of the DreamChaser® currently being developed by Sierra Nevada Corporation (SNC) in the United States. SNC and OHB have signed a corresponding partnership agreement and are continuing to work on a joint program for the utilization and potential commercial marketing of this gateway to space.

#### **Space situational awareness**

In the year under review, OHB System continued its work on the "Asteroid Impact Mission" study for ESA. With this study, ESA is working with NASA on the groundwork for a mission which may become necessary at some time in the future to shield the earth from the impact of an asteroid. To date, no decision has been made on the funding for this program. In a contract awarded by ASI and ESA, Italian subsidiary OHB Italia developed and patented the core technology for a new and innovative telescope for detecting space debris in low and geostationary orbits. Known as the "Fly Eye", the telescope combines a very large field of

view with very high resolution. ESA is currently discussing the possibility of assembling a global optical network comprising up to 27 telescopes to monitor space. A decision on the next steps was also made in December.

#### Ground stations

OHB System's SAR-Lupe operations are scheduled to expire in 2017 but will be integrated in the same year in the SARah ground stations, where they will continue to operate simultaneously for SARah and SAR-Lupe.

## II. AEROSPACE + INDUSTRIAL PRODUCTS BUSINESS UNIT

Business in the Aerospace + Industrial Products business unit is chiefly characterized by long-term projects. The order backlog of EUR 218 million (December 31, 2016) ensures forward planning visibility. In 2016, seven Ariane 5 launchers lifted off and an ARTA combustion trial was successfully completed. The scheduled shipment of six flight sets by MT Aerospace AG also kept capacity utilization stable in 2016. In addition, work on the development of a more powerful "ECA+" upper stage was commenced.

In the course of 2016, MT Aerospace AG submitted proposals for the final Ariane 5 lot comprising 18 ship sets. In addition to the ship sets, the proposal also covers the necessary maintenance and service work as well as obsolescence matters. The necessary budgets were approved by the member states at ESA's Ministerial Council in 2016. The company received advance clearance from principal contractor Airbus Safran Launchers for the long-lead items at the end of 2016. The contract is expected to be signed in the first half of 2017. Development of the next-generation Ariane 6, which is scheduled to replace the Ariane 5 ECA in 2020, is progressing well. MT Aerospace AG holds around 50% of the German portion of a total of 23% in the development and production of the Ariane 6 and also has system responsibility for the metallic structure components and tanks. In addition, it will be supplying 50% of the composite booster shells for the solid-matter engines and around 40% of the central stage structure for the Vulcain engines.

At the beginning of the year, a contract was signed with the Airbus Safran Launchers joint venture for the development of the Ariane 6 launcher (Step 1) with a budget of EUR 54 million on the basis of the resolution passed by the Ministerial Council in December 2014. The contract covers

the components of the upper and central stage tanks and the metallic structures. The agreement was to be signed in October with a preliminary design review but this had to be postponed until 2017 due to numerous modifications. Negotiations were commenced in December with Airbus Safran Launchers on the basis of the December 2016 resolution of the Ministerial Council for Step 2 encompassing the entire development of the carrier structure. Agreement is expected to be reached in the first quarter of 2017.

Work on the new production facility in Augsburg is proceeding according to plan. In the future, it will be used to produce the domes and bulkheads for the main and upper stage tanks for Ariane 6. The building is scheduled for completion in September 2017 so that the friction-stir welding equipment can be installed in October. Critical milestones were achieved by the ESA research project on fiber-optimized reinforced booster casing (FORC) which demonstrates the production feasibility of the composite booster shell for Ariane 6 using infusion technology. The first pressure container was successfully completed at DLR and the infusion of the pressure container and the booster aprons executed. Examinations confirm the good condition of the test bodies. The final FORC burst test is now to be performed at DLR Stuttgart in May 2017, with the project scheduled for completion in the second quarter of 2017. The test results provide the necessary input for the development of the P120C for Ariane 6, which was commenced at the same time. A common understanding was signed on November 3 between Germany, Italy, France and ESA on the construction of a second production line in Augsburg, Germany, assigning the tasks at hand to the Italian company AVIO and MT Aerospace. Looking forward, 50% of the booster cases including the cylindrical insulation and 1,005 of the metallic components will be assembled at MT Aerospace's Augsburg facility. In December 2016, the two companies signed a joint contract with ESA worth EUR 20 million for the development of the technology for the Ariane 6 booster P120C up until 2018. A request for proposals was issued by ESA shortly before the end of the year and is to be responded to in the first half of 2017.

At the same time, a DLR-funded project was commenced in April 2016 for the purpose of configuring and building three solid-fuel booster casings for testing in the Brazilian VLM launcher. MT Aerospace was awarded a contract on October 7 for the management of the mechanics lot worth

over EUR 23 million in connection with the future Ariane 6 ELA4 ground facilities. The project is being handled in conjunction with Group subsidiary MT Mechatronics and steel engineering partner Donges SteelTec (launching table and supply tower) over a total period of somewhat more than three years. MT Mechatronics is handling the mobile booster pallets. Work on the project officially commenced on October 10–11, 2016 in Mainz. The facilities are to be handed over to CNES and ESA in May 2018.

In the aviation segment, volume production of the fresh and waste water tanks for the Airbus A320/330 continued according to plan in terms of schedule, budget and quality. In addition, it was possible to start up the tank production of the wide-body Airbus A350 by the end of the year despite a number of delays that had occurred during the year, ensuring that deliveries will be completed on schedule. The cost-optimization programs for the A350 water tanks had already resulted in a substantial improvement in the cost situation at the end of the year. Up to 50% of the production time optimization measures will have been implemented by the second quarter of 2017.

With respect to telescopes and antennas, four of the seven VLBI telescopes under construction were successfully handed over to customers in 2016. The Norwegian twin telescopes and the two Swedish VGOS antennas were delivered and will be officially put into operation in a large ceremony attended by royalty in spring 2017. The remaining antenna for Instituto Geográfico Nacional in Spain has now been shipped to Gran Canaria and will undergo final assembly there in 2017. A VLBI antenna for South Africa is currently under construction by a Chinese partner and will be shipped to its final destination after the completion of factory acceptance testing in the first quarter of 2017. The components for the VLBI Shanghai antenna were shipped to China last year, with assembly scheduled to commence in spring 2017. The VLBI series was continued in 2016 with the award of a contract for a telescope for the Finnish Geographic Research Institute. This marks MT Mechatronics' eleventh contract for the VLBI/VGOS telescope, making it the global market leader in the 13-meter segment. In connection with the upcoming Square Kilometer Array (SKA), the world's largest radio telescope project, MT Mechatronics gained a strong position after signing a partnership agreement with Bonn-based Max Planck Institute of Radio Astronomy for the delivery of a prototype antenna.

The SKA prototype will now be assembled in South Africa in autumn 2017. After a one-year testing phase, a total of more than 2,000 antennas of this type will be installed in the Karoo semi-desert in South Africa. This telescope array will be by far the most sensitive instrument for astronomy in this frequency anywhere in the world. In the ongoing LEO antenna ground station projects and various telescope contracts (China, the United States and South Africa), a number of design reviews were executed at the end of the year. Group companies MT Mecatronica (Italy) and MT Mechatronics jointly secured a five-month renewal of the base contract for the SRT telescope at the middle of the year.

The Chilean subsidiary MT Mecatronica also gained major new orders in 2016. In addition to various service and assembly contracts in the energy sector, the Observatories and Telescopes unit was awarded the extended Paranel service and maintenance contract for periods of two and three years and a total volume of EUR 4 million. The initial six-month phase was completed to the customer's full satisfaction. With an average score of 97%, MT Mecatronica SpA meets the performance criteria defined in the contract in all areas.

In the telematics segment, the final shipment of navigation devices to Volvo had originally been planned for summer 2016. However, the strong demand in the market caused the average delivery numbers to be substantially exceeded again over the last few years, as a result of which OHB Teledata delivered around 20,000 units to Volvo in 2016. Contrary to original plans, Volvo placed a firm order for a further 9,200 devices for 2017 that are to be shipped by the beginning of 2018.

#### D. RESULTS OF OPERATIONS

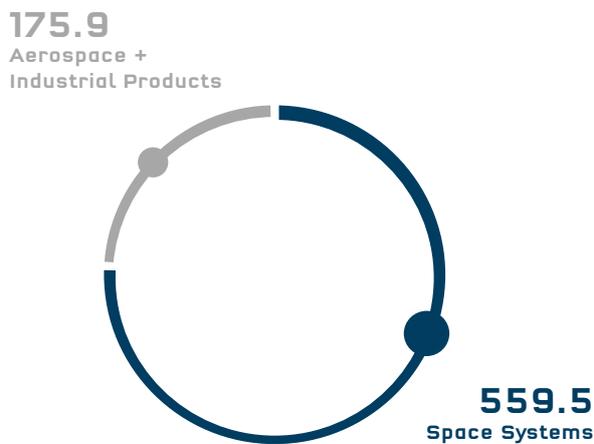
At EUR 728.4 million in 2016, the OHB Group's total revenues stabilized over the previous year, dropping by only EUR 2.0 million or 0.3%. Consolidated sales came to EUR 699.2 million (previous year: EUR 719.7 million). Non-consolidated total revenues **SEE CHART C 06** in the Space Systems business unit reached EUR 559.5 million in 2016 (previous year: EUR 553.1 million). Non-consolidated sales fell slightly to EUR 524.6 million (previous year: EUR 532.7 million). At EUR 175.9 million in 2016, non-consolidated total revenues in the Aerospace + Industrial Products business unit were down EUR 10.8 million on the

previous year. Non-consolidated sales came to EUR 196.6 million (previous year: EUR 181.7 million). This is also reflected in the lower cost of materials, which were particularly influenced by reduced sub-contracting. All in all, the increase of 242 in employee numbers to 2,298 left traces on total revenues and in personnel expenses, which rose by 7.0%. The 14.9% increase in other operating expenses is chiefly due to the greater use of leased employees in the launcher programs.

With a value **SEE CHART C07** of EUR 1,560 million as of the reporting date (previous year: EUR 1,684 million), the OHB Group's order backlog was down on the previous year. Of this, the Space Systems business unit accounted for EUR 1,341.2 million (previous year: EUR 1,465.8 million) and the Aerospace + Industrial Products business unit for EUR 218.4 million as of the reporting date (previous year: EUR 218.4 million).

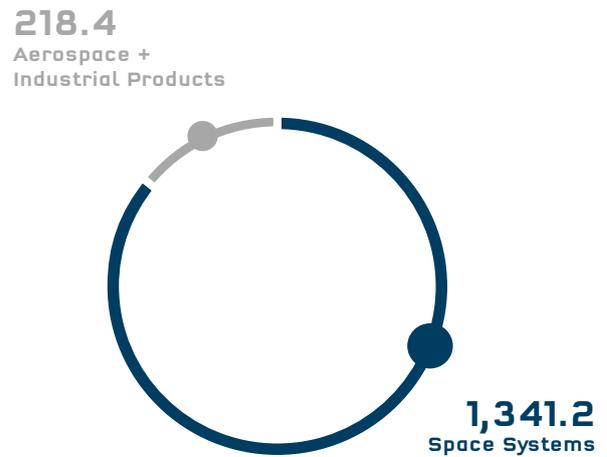
In the period under review, the OHB Group generated EBITDA **SEE CHART C08** of EUR 55.1 million (previous year: EUR 52.1 million) and EBIT **SEE CHART C09** of EUR 42.7 million (previous year: EUR 40.2 million). Net profit after tax and non-controlling interests stood at around EUR 22.2 million in the year under review (previous year: EUR 21.0 million), while earnings per share equaled EUR 1.28 in 2016, up from EUR 1.21 in 2015. EBIT before consolidation in the Space Systems **SEE CHART C10** business unit rose from EUR 24.0 million in the previous year to EUR 25.5 million. EBIT in the Aerospace + Industrial Products business unit climbed from EUR 16.0 million to EUR 17.2 million due to greater production efficiency. The OHB Group recorded net finance expense of EUR 4.7 million in 2016 (previous year: net expense of EUR 3.5 million). This includes other finance expense of EUR 7.5 million (previous year: EUR 5.7 million) chiefly comprising interest expense of EUR 2.2 million (previous year: EUR 2.1 million) on pension provisions and interest of EUR 3.4 million (previous year:

**C06**  
**TOTAL REVENUES** BY BUSINESS UNITS  
BEFORE CONSOLIDATION AND HOLDING



IN EUR MILLION

**C07**  
**ORDER BACKLOG** BY BUSINESS UNITS  
AS OF 12/31/2016



IN EUR MILLION  
Total order backlog: 1,559.7

EUR 2.9 million) on financial liabilities. The parent-company financial statements prepared according to German GAAP (HGB) for OHB SE carry an unappropriated surplus of EUR 14.5 million for 2016. The Management Board and Supervisory Board will be asking the shareholders to approve a dividend of EUR 0.40 per share for 2016 at this year's annual general meeting

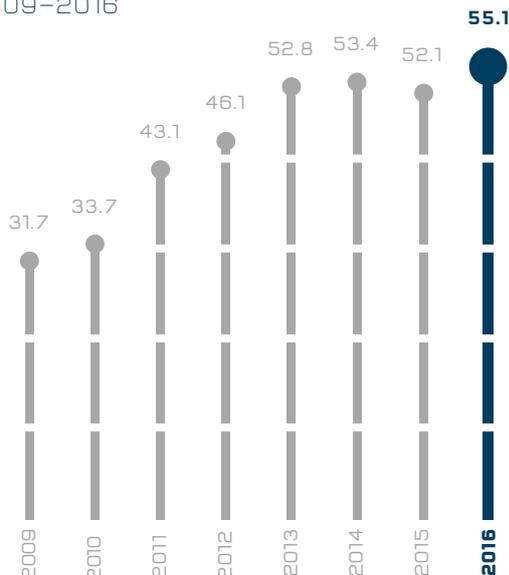
### E. FINANCIAL CONDITION AND NET ASSETS

In the year under review, the OHB Group's total assets **SEE CHART C11** widened from EUR 638.7 million to EUR 682.9 million. Equity rose by EUR 14.6 million over the previous year, standing at EUR 183.6 million as of December 31, 2016 (previous year: EUR 168.8 million). This translated into an equity ratio of 26.88%, marking a slight increase over the previous year (26.45%). Group capital spending totaled EUR 50.2 million in 2016 (previous year: EUR 24.6 million). This increase is due to the higher

capitalized expenses in connection with the SmallGEO platform which was completed in the year under review. Inventories dropped from EUR 54.1 million to EUR 50.2 million. Prepayments received climbed to EUR 139.8 million as of the reporting date (previous year: EUR 61.1 million). Cash and cash equivalents including securities were valued at EUR 57.0 million as of December 31, 2016, compared with EUR 60.4 million in the previous year. A detailed analysis of the cash flow can be found in the cash flow statement in the consolidated financial statements. Cash flow from operating activities improved substantially over the previous year and, at EUR 72.7 million, is distinctly in positive territory.

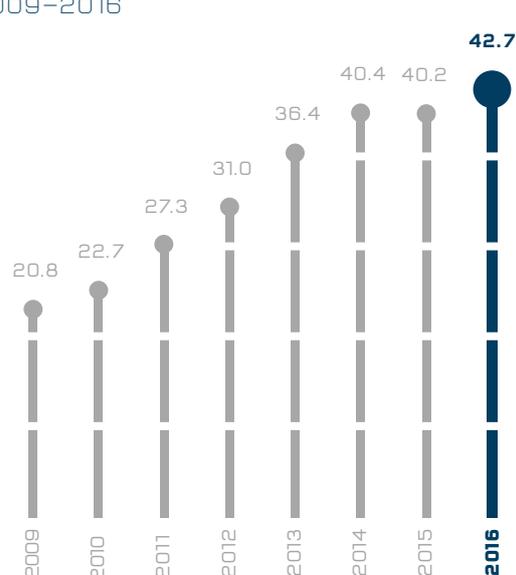
The pension provisions of EUR 100.4 million at the end of 2016 continue to constitute the largest liability item. Current financial liabilities dropped from EUR 139.5 million to EUR 93.1 million as of the reporting date. These liabilities continue to arise from drawdowns on part of a credit

**C08**  
**EBITDA**  
2009–2016



IN EUR MILLION

**C09**  
**EBIT**  
2009–2016



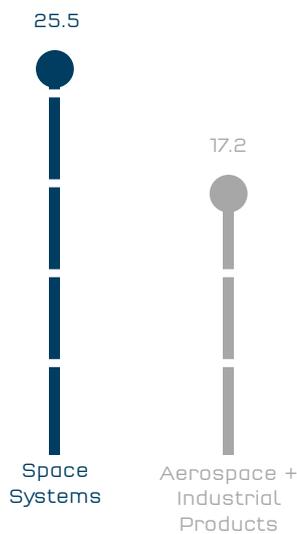
IN EUR MILLION

facility obtained in December 2013. This facility was modified in May 2016 and renewed until 2021. At the same time, the original amount was lowered from EUR 250 million to EUR 225 million, thus ensuring that any financial requirements can still be covered inexpensively. The loan facility is related to the timing differences between the services completed under projects measured using the percentage-of-completion method and the corresponding payment schedules for these projects. In addition, a framework loan contract was signed with the European investment Bank, Luxembourg, in December 2016 to finance the Electra project at OHB System AG. At EUR 318.8 million, trade receivables were virtually unchanged over the previous year (EUR 326.4 million). Trade payables stood at EUR 67.3 million on the reporting date (previous year: EUR 100.9 million). The Management Board generally considers OHB SE's net assets and financial condition to be solid.

**F. EMPLOYEES**

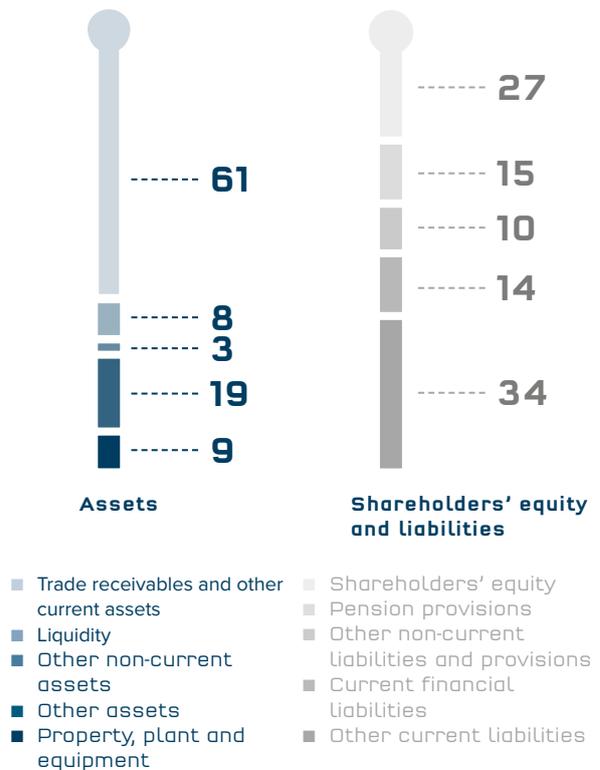
With the addition of 242 new employees in 2016, OHB SE's workforce rose appreciably over the previous year **SEE CHART C12**. The increase was spread evenly over both business units and reflects the high capacity utilization arising from the current programs as well as preparations for new ones, particularly Ariane 6. All told, 2,298 employees were based at companies in Germany, in other European countries (Italy, Sweden, Belgium, Luxembourg, France) and in Chile and French Guiana as of the reporting date. **SEE CHART C13**

**C10**  
**EBIT BY BUSINESS UNITS BEFORE CONSOLIDATION AND HOLDING**



**IN EUR MILLION**

**C11**  
**ASSET STRUCTURE/TOTAL ASSETS**  
12/31/2016: EUR 683 MILLION



**IN A PERCENTAGE OF TOTAL ASSETS**

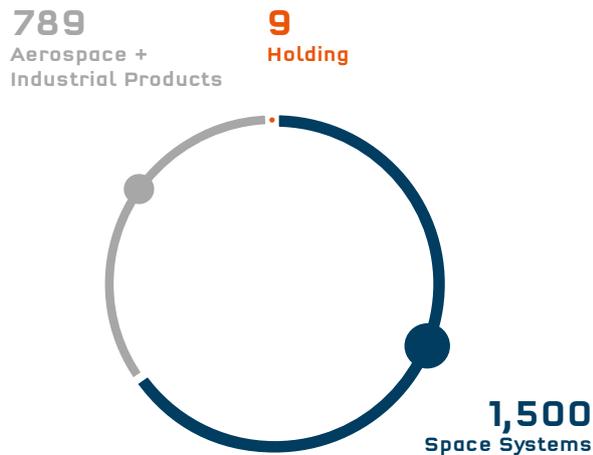
The still very tight labor market for engineers means that it frequently takes time for vacancies to be filled. However, with its good position in key European satellite and launch system programs, OHB is able to attract suitably qualified candidates from other European countries. This explains the continued high proportion of foreign nationals of an average of over 20%. The dialog with the employee representatives from all domestic and non-domestic units and subsidiaries established for the first time after the Company's conversion into a Societas Europaea in 2015 was stabilized as planned with two meetings held in Bremen in the spring and in Kourou in the autumn of 2016. It achieved the desired effect in the form of greater transparency with respect to joint business challenges and the possibilities for a uniform Group-wide human resources policy. The findings gained from the regular meetings of the Group employee representative council with European involvement underscores the changes that have been implemented in co-determination practices.

### III. SIGNIFICANT EVENTS OCCURRING AFTER THE END OF THE PERIOD UNDER REVIEW

#### H36W-1 SATELLITE SUCCESSFULLY LAUNCHED FOR CUSTOMER HISPASAT

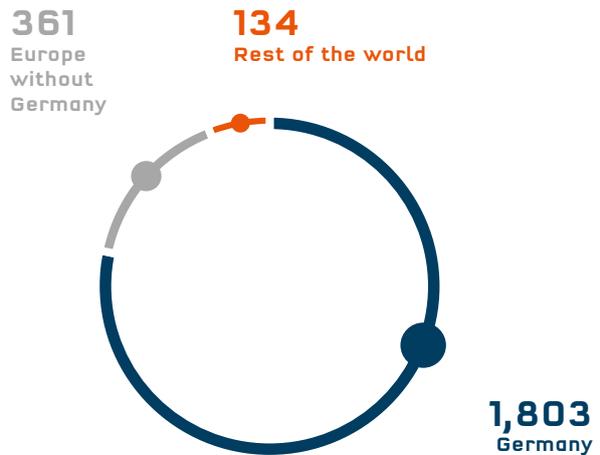
The H36W-1 telecommunications satellite, which OHB System AG engineered and assembled for Spanish satellite operator Hispasat, was successfully placed in a geostationary orbit on January 28, 2017. A Russian Soyuz carrier had lifted off on schedule at 2.03 hours CET from the European launch pad in Kourou, French-Guiana. Roughly half an hour later, the carrier released the satellite with a weight of a 3.2 tons into its geostationary transfer orbit. The successful launch of the first satellite from the Small-GEO range marks a milestone in OHB's history. SmallGEO is the first telecommunications satellite to be developed, integrated and tested in Germany in more than 20 years.

**C12**  
**NUMBER OF EMPLOYEES BY BUSINESS UNITS** AS OF DEC. 31, 2016



Total personnel: 2,298

**C13**  
**NUMBER OF EMPLOYEES BY REGIONS** AS OF DEC. 31, 2016



Total personnel: 2,298

## IV. OUTLOOK, RISK AND OPPORTUNITY REPORT

### A. OUTLOOK

#### I. SPACE SYSTEMS BUSINESS UNIT

In 2017 and beyond, the Space Systems business unit will be concentrating on the continuation of its successful work on the Galileo\*, EDRS-C, Electra, Meteosat Third Generation (MTG), EnMAP and SARah projects as well as the Heinrich Hertz telecommunications satellite, the contract for which is expected to be awarded in the second quarter of 2017. Following the launch of the mission in 2016, ESA is resolutely continuing the ExoMars program, with OHB System expecting to receive the contract for its contribution to the 2020 mission in the first half of 2017 following the decision made by the Ministerial Council in 2016 to continue the program with an increased budget.

A decision by the EU and ESA on the award of the third lot of Galileo satellites is expected for the first four months of 2017.

A series of requests for proposals for elements of the ESA earth observation and science mission as well as contracts for further studies should be forthcoming in 2017. Depending on the program, OHB plans to submit proposals either as a prime or subcontractor. With respect to national Italian programs, OHB Italia plans to systematically broaden its role as second provider in Italy for satellite missions, both for science and remote sensing. Budgetary decisions in the EU, on the part of ESA and in the national space programs in Germany and Italy as well as the other countries in which OHB companies are located point to largely stable underlying conditions and a sufficiently firm basis for future planning. With its current and planned projects and programs, OHB SE's Space Systems business unit is ideally positioned to maintain the level which it has achieved on a sustained basis and to continue growing successfully.

#### II. AEROSPACE + INDUSTRIAL PRODUCTS BUSINESS UNIT

In the launch vehicle segment, the existing order backlog will ensure continued production and delivery of components for the Ariane 5 in 2017 and 2018. The cost-optimization program that has been implemented here will be continued. The development of launch vehicle components will again be dominated by the ramp-up of the Ariane 6 development program. Acceptance testing and qualification of the production facilities already designed for the Ariane 6 will be commencing in 2017. The development program for the US Space Launch System will be enlarged with additional involvement in the development of the new upper stage; preliminary talks have already been held with Boeing and a development proposal submitted.

With respect to satellite tanks, the Iridium and Eurostar platform programs are expected to come to an end. On the other hand, it is planned to make a decisive step forward with the development contract for the Electra/Neosat xenon tank in efforts to expand the tank range to include large fully electric platforms. The technology programs will be focusing on the development of composite technology for the Ariane 6 booster and composite tanks for future upper stages as well as further development of the processes and technologies for metallic structural components. The ESA FLPP program provides for a sustained German budget contribution.

In the aviation segment, the program for achieving cost efficiency and enhancing competitiveness will be implemented for the A320 and A330 water tanks. This measure is particularly necessary due to the market-wide request for proposals for this business. In addition to the necessary measures for stabilizing the A400M and TAURUS retrofit, a contract for series production of the hybrid struts is expected together with negotiations on the production of engine shells for the IRIS-T SL project, which will generate sales of over EUR 10 million.

MT Mechatronics GmbH's large order backlog is expected to generate good sales in 2017. Various major telescope and antenna contracts will be awarded in 2017. MT Mechatronics is very favorably positioned with certain projects and has been shortlisted for various contracts. Stable business in antennas and ground stations for satellite communications is increasingly growing and should be boosted under the lead management of the OHB Space Systems business unit. In ground station business, further follow-up contracts for the ELA4 launch pad in Kourou are expected. Contrary to original plans in the telematics segment, under which a final delivery was to be made in summer 2016, Volvo placed a firm order for a further 9,200 devices for 2017 that are to be shipped by the beginning of 2018. Other than this, no further orders are expected. The container tracking units which had been developed and built were successfully tested by potential customers in the year under review and shipments executed. The related ESA IAP project was successfully completed in March 2016. A new OHB Teledata subsidiary known as OHB Logistic Solutions GmbH was incorporated to meet new customer requirements. The new container tracking device developed by the company is intended for the mass market and has already been successfully tested with customers. Production roll-out commenced in February 2017.

**III. OUTLOOK**

The Management Board expects consolidated total revenues in the OHB Group of EUR 800 million in 2017. EBITDA should come to EUR 60 million and EBIT to EUR 44 million in 2017. It should be expressly noted in connection with forward-looking statements that actual events may differ materially from expectations of future performance.

**B. RISK AND OPPORTUNITY REPORT**

**I. RISK AND OPPORTUNITY MANAGEMENT SYSTEM**

OHB SE's Management Board permanently monitors the Group's operating, market and financial risks and is integrated in all main business and capex decision-making processes in order to ensure the Group's sustained business success.

The opportunities and risk management system used by the OHB Group is primarily supported by the Quality Management and Finance/Controlling departments. Assisted

by the central departments, the Management Board observes and analyzes trends in the sector, market and economy as a whole on an ongoing basis.

The basis for opportunities and risk management is formed by a detailed monthly report for overseeing orders and costs. Reporting also covers all business development, research and development activities and allows potential opportunities and risks to be identified at an early stage.

The subsidiaries submit standardized monthly or quarterly reports to OHB SE covering all processes, opportunities and risks of relevance. The individual business units deploy different software systems for generating reports, e.g. SAP or business intelligence solutions. We consider the following types of risk to be relevant for OHB SE's business activities:

**II. INDIVIDUAL RISKS**

**Sector risks, risks in underlying conditions**

The Space Systems business unit primarily works for public-sector customers. Order intake is exposed to risks arising from the budgets of public-sector customers (chiefly the EU, the European Space Agency ESA, national ministries such as the German Federal Ministries of Economics, Defense and Transportation as well as the national space agencies). This market has been consolidating over the past few years. However, this situation remains favorable for OHB SE in view of its special standing as a German systems provider for space technology. Consequently, further significant growth is only possible to a limited extent in the institutional market and can primarily be found in the commercial and export markets. This segment has been closely observed and analyzed for a number of years and preliminary activities in this direction are being prepared. The focus is on projects in the areas of telecommunications satellites and radar satellites for earth observation. In the Aerospace + Industrial Products business unit, the greatest market risk is in mechatronic systems for antennas and telescopes due to the heavy dependency on the global market for scientific radio and optical telescopes, which is subject to strong fluctuation, as the award of such contracts is materially determined by the provision of the necessary funding by the national governments involved.

The Management Board  
 expects EBIT of EUR

**44**

million in 2017

**Strategic risks**

In the Space Systems business unit, risks relate to the scheduled completion of the currently ongoing programs. A further main factor is the successful completion of development projects within the stipulated periods and in line with the contractual prices. Advance outlays have been made for the development of strategically important product segments, the costs of which must be recouped from the development of business in the corresponding applications. Looking ahead, a balanced book-to-bill-ratio is required to maintain the current high order backlog. The Aerospace + Industrial Products business unit is heavily exposed to the fortunes of the Ariane program.

**Sourcing risks**

The OHB Group constantly optimizes its supply chain by monitoring the buy-side market continually, auditing local development and production activities and increasingly taking measures to safeguard the local availability of supplies. As a result, it has been possible to further reduce turnaround times for typical space technology series. In addition, efforts are being stepped up to identify alternative procurement sources on a global basis, particularly in Asia.

The Space Systems business unit is exposed to only sporadic supply-side risks in the sourcing of subsystems. These entail scheduling and development risks. As a rule, there is sufficient advance notice of these risks, meaning that shortfalls occur only rarely as inventories can be duly increased or sourced from dual vendors.

In the Aerospace + Industrial Products business unit, the cost of some raw materials remained predominantly steady in the course of 2016. The agreed delivery periods were very largely observed by the suppliers.

**Project risks**

The risk management system used for bid-costing and ongoing project management involves regular escalated reporting to the project managers, the directors, the Management Board of OHB SE and the management of the operating companies. All projects as of a specific size are subject to regular review by the Management Board and form part of a continuous monitoring process covering technical performance, schedule compliance and budget checking. Given the systems underlying our business model, there are inherent risks in the observance of schedules as well as development risks liable to cause considerable project delays and costs.

**IT risks**

The Group's business processes rely on information services and systems in all areas. The focus is on maintaining fault-free operations that ensure the confidentiality, availability and integrity of business data on the internal network. A further key aspect of the IT security strategy is to control access to data and to monitor data traffic both inside and outside the enterprise. The individual security precautions are interlinked to avoid any vulnerabilities in data security. These technical measures are supplemented by regular information events aimed at educating staff on the IT security rules to be observed.

In 2016, the video monitoring system at OHB's premises in Bremen were modernized to prevent any unauthorized access and supplemented with an automatic entry detection module. Encrypted data transfers between the various facilities across virtual private networks have been improved and expanded to ensure compliance with the more stringent IT security requirements. The planned addition of network control via a next-generation firewall permits a dedicated analysis of incoming and outgoing data packages in separate virtualized data rooms.

In addition, a further intrusion detection system is to be integrated to monitor internal data transfer between the OHB network segments.

As a result of the ongoing modernization and expansion of the IT infrastructure in line with requirements as well as the measures implemented in accordance with BSI-IT basic protection, the Company is addressing the steadily rising threats posed by cybercrime to ensure the integrity of operating processes within the Company and the protected sharing of data with business partners.

**Financial risks**

Most goods and services procured are invoiced in euro. Foreign-currency transactions in the dollar region may result in translation gains or losses. In the aerospace segment, dollar-denominated orders and receivables are

hedged. The securities entail long-term investments with acceptable risks. Working capital requirements can be reduced substantially by means of progress billings. The credit facility agreement signed in December 2013 with a syndicate of seven banks to avert liquidity risks was renewed until 2021 in May 2016. With respect to pension provisions, we do not expect to see any further significant change in interest rates in the future due to the ECB's recent monetary policy decisions. Market interest rates have dropped significantly over the past few years.

#### **Personnel risks**

The proportion of employees coming from a country other than Germany rose from 14% in the previous year to 17% in 2016. Fluctuation in this group is typically larger. In the know-how-heavy space industry this always leads to a loss of critical knowledge or reduced return on investment in view of the long learning curves (generally an average of two years). At the same time, the Company is increasingly feeling the effects of the shortage of qualified engineers as a core resource in the global labor market. This is resulting in recruitment periods far in excess of the normal level. To address this situation, OHB is increasingly placing store by internal qualification programs for core skills. This is easing the pressure caused by the aforementioned shortfalls while also lowering fluctuation in holders of skills of critical importance.

#### **Management assessment of the risk situation**

Throughout 2016, the OHB Group's exposure was for the most part confined to the risks described. In the light of current market trends in the areas of the greatest relevance for the Company and the outlook for its business, order backlog and financial situation, the Management Board considers future risks to the Group to be manageable. No risks to the Group's going-concern status are currently discernible.

### **III. MATERIAL OPPORTUNITIES**

The space market offers interesting opportunities for growth in view of the constant addition of new technical areas of relevance.

Systematic observation of all relevant requests for proposals on a European and also a national level within the EU allows the OHB Group to take part in virtually all major bidding processes in Europe. With its European-wide presence and strong national companies specializing in selected technologies and applications in the space industry, OHB additionally has the opportunity of bidding for space contracts which are awarded to individual nations in accordance with the geographic return principle within ESA alongside EU-wide bids. In the individual countries, the Group's national companies are additionally able to bid for contracts and projects awarded by the national space agencies. The high degree of specialization of the individual companies within the OHB Group generally means that when it bids for a major ESA project it receives the status of lead-manager or subcontractor of the lead-manager. OHB's specific space expertise is based on the long-standing experience of the responsible persons within the Group as well as basic research and development performed in this area allowing promising future areas and developments in space flight to be identified and responses to them adopted.

However, in addition to public-sector contracts and development projects, the sharp worldwide rise in the commercialization of space is the main growth driver. Telecommunications, navigation, cartography and the increasing exploration of the earth by means of space technology are of key importance in this connection. OHB also sees good opportunities for entering the nascent "new space economy" market. For this purpose, the Group will also be applying a considerable volume of its own funds in close consultation with its customers. As with business risks, project management may also generate opportunities from systematic claim management based on the project review process.

## V. INTERNAL CONTROL AND RISK MANAGEMENT

The control and risk management system forms an integral part of the corporate, planning, accounting and control processes and constitutes a material component of the management system. The Product Quality and Purchasing departments particularly monitor suppliers so that operating and technical risks can be assessed more reliably and suitable precautions taken. Monthly and quarterly reporting constitutes an integral part of OHB SE's risk management operations and has been widened to include all of the Group's companies. Group-wide controlling instruments supported by business intelligence software are used for reporting purposes. This primarily entails comparisons of the actual/required figures and deviation analyses. Budgeting, regular forecasts and ongoing reporting discussions supplement standardized reporting in the two business units.

OHB secures the process for preparing the consolidated financial statements in several different ways. In addition to an accounting manual which all subsidiaries must observe, this entails analyses of the quarterly and monthly reports and inquiries on any matters and developments at the level of the individual subsidiaries as well as for the Group as a whole. In addition, the consolidation process as well as the process for preparing the management report and the notes to the consolidated financial statements are reviewed by the finance department and the Management Board.

Appropriate precautions are taken in the accounting process at the level of the subsidiaries to ensure full implementation of the double-sign-off principle. Access restrictions to the IT system ensure a high degree of data security. These and other measures are subject to regular review by Group Internal Auditing. In addition, the accounting system complies with the requirements of public-sector contract awarding rules. Customer payment practices are monitored on an ongoing basis to minimize financial risks. In addition to a multi-level reminder system, controlling methods include regular reports to the Management Board. The OHB Group's customer base comprises a large proportion of public-sector customers both directly and indirectly. For this reason, the risk of payment defaults is very small. Over the past few years, there have been virtually no payment defaults, meaning that adjustments to or the prolongation of individual receivables have not been necessary. Payments on account received comprise part payments remitted upon the completion of specific project milestones. In this way, it is possible to minimize liquidity risks and working capital requirements.

## VI. COMPENSATION REPORT

The compensation paid to the members of the Management Board comprises fixed and variable components. The service contracts currently in force with the members of the Management Board (contract for Marco Fuchs expiring on June 30, 2018; contract for Ulrich Schulz expiring on June 30, 2017, contract for Dr. Fritz Merkle expiring on June 30, 2018, contract for Klaus Hofmann expiring on October 31, 2018) provide for variable compensation to be determined on the basis of a direct share in profit (percentage of EBT) in the case of Marco Fuchs and Ulrich Schulz. With respect to Dr. Fritz Merkle and Klaus Hofmann, the variable compensation is based on a combination of agreed personal targets and the Company's business performance. There is currently no provision for any share-based compensation components or compensation components with a long-term incentive. In the event of the death of a Management Board member, his surviving dependents are entitled to receive continued payment of that member's fixed compensation for a further period of six months. The members of the Management Board Marco Fuchs, Dr. Fritz Merkle, Ulrich Schulz and Klaus Hofmann were entitled to the use of a company car in 2016. The compensation paid to the members of the Management Board breaks down as follows: The total fixed compensation plus benefits such as an advance towards health and pension insurance as well as private use of a company car paid in 2016 came to EUR 1,106 million (previous year: EUR 0.858 million), while the variable component equaled EUR 0.950 million (previous year: EUR 0.719 million).

Marco Fuchs received a sum of EUR 0.347 million (previous year: EUR 0.347 million) as fixed compensation plus all benefits such as advances towards health and pension insurance. Variable compensation equaled EUR 0.570 million (previous year: EUR 0.508 million). Ulrich Schulz received a sum of EUR 0.223 million (previous year: EUR 0.217 million) as fixed compensation including all benefits such as advances towards health and pension insurance. Variable compensation equaled EUR 0.190 million (previous year: EUR 0.169 million). Dr. Fritz Merkle received a sum of EUR 0.248 million as fixed compensation including all benefits such as advances towards health and pension insurance. In addition, he received variable compensation of EUR 60 thousand (previous year: EUR 42 thousand). Klaus Hofmann received a sum of EUR 0.288 million (previous year: EUR 47 thousand from November 2015) as fixed compensation including all benefits such as advances towards health and pension insurance. In addition, he received variable remuneration of EUR 0.130 million.

Christa Fuchs received surviving-dependents benefits of EUR 22 thousand from OHB System AG for the Management Board member Prof. Manfred Fuchs, who had passed away in 2014. In her capacity as chairwoman of the Supervisory Board, Mrs. Christa Fuchs received a sum of EUR 30 thousand in 2016 for 2015 (previous year: EUR 30 thousand), while Mr. Robert Wethmar received EUR 20 thousand (previous year: EUR 20 thousand) and Prof. Heinz Stoewer EUR 20 thousand (previous year: EUR 20 thousand). Variable compensation components were dispensed with for the members of the Supervisory Board. Under a contract with the law firm Taylor Wessing, of which Robert Wethmar is a partner, fees of a total of EUR 0.305 million were paid in consideration of the advisory services for Group companies.

## **VII. DISCLOSURES IN ACCORDANCE WITH SECTION 315 (4) OF THE GERMAN COMMERCIAL CODE**

### **A. BREAKDOWN OF SUBSCRIBED CAPITAL (NO. 1)**

Share capital stood at EUR 17,468,096.00 on the reporting date and was divided into 17,468,096 no-par-value bearer shares.

### **B. RESTRICTIONS TO VOTING RIGHTS OR THE TRANSFER OF SHARES (NO. 2)**

Prof. Dott. Ing. h.c. Manfred Fuchs, Christa Fuchs and Marco Fuchs, who are also shareholders of VOLPAIA Beteiligungs-GmbH, and VOLPAIA Beteiligungsgesellschaft mbH in their capacity as shareholders of OHB Teledata AG (as the Company was then known), entered into a pooling contract on December 20, 2001 providing for the coordinated exercise of voting rights with respect to present and future share holdings.

On February 4, 2009, the parties signed an addendum to this pooling contract imposing on them restrictions with respect to the sale of the shares held in the pooling contract. On July 10, 2009, the parties signed a revised version of the pooling contract. Romana Fuchs Mayrhofer joined this pool in January 2010. A total of 69.72% of the Company's issued capital is held in this pooling contract. There are no changes in the total number of pooled voting rights as a result of Prof. Manfred Fuchs' death in April 2014.

### **I. SHARES EXCEEDING 10% OF THE VOTING CAPITAL (NO. 3)**

As of the reporting date, Marco Fuchs held 34.62% of OHB SE's subscribed capital (6,046,610 shares), including the share of 16.38% (2,861,814 shares) previously held by Prof. Manfred Fuchs. VOLPAIA Beteiligungs GmbH held a further 21.35% of the Company's shares. Together with the shares held by Christa Fuchs (8.03%, 1,401,940 shares, including 1,250 shares previously held by Prof. Manfred Fuchs) and Romana Fuchs Mayrhofer (5.72%, 1,000,000 shares), 69.72% (12,178,720) of the Company's shares are subject to a pooling contract providing for the coordinated exercise of voting rights as of the balance sheet date. Romana Fuchs Mayrhofer holds an additional 378,626 shares in OHB SE (2.17%) outside the scope of the pooling contract.

### **II. STATUTORY STIPULATIONS AND PROVISIONS CONTAINED IN THE COMPANY'S BYLAWS WITH RESPECT TO THE APPOINTMENT AND DISMISSAL OF MEMBERS OF THE MANAGEMENT BOARD AND AMENDMENTS TO THE BYLAWS (NO. 6)**

With respect to the appointment and dismissal of members of the Management Board, reference is made to the statutory provisions contained in Sections 84 and 85 of the German Stock Corporation Act. Under Article 8 (2), the Supervisory Board is empowered to appoint a member of the Management Board as Chairman and further members of the Management Board as Deputy Chairman. The procedure for amending the bylaws is governed by Sections 133, 179 of the German Stock Corporation Act. Article 21 of OHB SE's bylaws also authorizes the Supervisory Board to make amendments to the bylaws affecting only their wording.

**POWERS OF THE MANAGEMENT BOARD TO ISSUE OR BUY BACK SHARES (NO. 7)**

At the annual general meeting held on May 21, 2015, the shareholders passed a resolution authorizing the Management Board to buy back up to 10% of the Company's share capital in existence as of the date of the resolution on or before May 20, 2020. Authorization was granted to use the Company's shares for all purposes permitted by law including but not limited to:

- the placement of the Company's shares in foreign stock exchanges,
- the acquisition of all or parts of other entities or shares therein,
- offering and transferring shares to the employees of the Company or other related entities in accordance with Sections 15 et seq. of the German Stock Corporation Act.
- redeeming treasury stock without any need for a resolution of the shareholders.

The Company held 80,496 shares as treasury stock as of the balance sheet date. This is equivalent to around 0.46% of the share capital. At the annual general meeting held on May 21, 2015, the shareholders authorized the Management Board to increase with the Supervisory Board's approval the Company's share capital by up to EUR 8,734,048.00 on a cash or non-cash basis by issuing new shares once or several times on or before May 20, 2020. The new shares may also be issued to the Company's employees. In addition, the Company's Management Board was authorized –subject to the Supervisory Board's approval – to exclude the shareholders' subscription rights

- for fractional amounts;
- for part of the authorized capital up to a maximum of EUR 1,746,809.00 provided that the new shares are issued in return for cash capital contributions at a price not materially less than the stock-market price;
- for a part of the authorized capital up to a maximum of EUR 8,734,048.00 provided the new shares
- are issued as consideration for the acquisition of all or part of other companies or entities or other assets and such acquisition is in the interests of the Company; or are issued as consideration for cash capital contributions to have the Company's stock listed in a foreign market in which it has previously not been admitted to trading.

The Management Board is additionally authorized subject to the Supervisory Board's approval to determine the extent and nature of the option rights and the other conditions of issue. Please refer to the corresponding parts of the notes on the consolidated financial statements for further information.

## VIII. CORPORATE GOVERNANCE DECLARATION

The corporate governance declaration was officially published on OHB SE's website on March 20, 2017.

The internet address is:

[www.ohb.de](http://www.ohb.de) > Investor Relations > Corporate Governance > Corporate governance declaration

## CORPORATE GOVERNANCE REPORT

In June 2002, a commission installed by the German Federal Government published recommendations known jointly as the "German Corporate Governance Code" setting out standards of conduct and behavior for companies. Corporate governance includes the entire management and supervision system and seeks to make the rules applicable in Germany more transparent to national and international investors in the interests of strengthening confidence in the management of German companies. The Supervisory Board and the Management Board of OHB SE are committed to the principles embodied in the Code as a means of ensuring value-oriented corporate governance and supervision and welcome the adoption of these principles in Germany.

### MANAGEMENT BOARD AND SUPERVISORY BOARD SHAREHOLDINGS

As of the reporting date, Christa Fuchs, chairwoman of the Supervisory Board, held 1,401,940 shares (including 1,250 shares previously held by Prof. Manfred Fuchs) and Prof. Heinz Stoewer, a member of the Supervisory Board, 1,000 shares. Marco Fuchs, Chief Executive Officer, held 6,046,610 shares (including 2,861,814 shares previously held by Prof. Manfred Fuchs). The other members of the Management Board Dr. Fritz Merkle and Ulrich Schulz held 1,000 and 54 shares, respectively. On December 31, 2016, VOLPAIA Beteiligungs-GmbH held 3,730,170 shares. Christa Fuchs held 20% and Marco Fuchs 60% (including the share of 35% previously held by Prof. Manfred Fuchs) of this entity's capital as of the reporting date.

### DIRECTORS' DEALINGS

In the year under review, members of the Company's Management Board and Supervisory Board as well as related legal entities did not report any securities transactions.

### OBJECTIVES REGARDING THE COMPOSITION OF THE SUPERVISORY BOARD

OHB SE seeks to implement the principle of diversity in the composition of the Supervisory Board and has formulated the following objectives in this connection. The members of the Supervisory Board as a whole (i.e. in its entirety and not necessarily each individual member of the Supervisory Board) should meet the following requirements:

- knowledge of the aviation/aerospace industry, particularly space technology
- several years of practical experience in industry and public organizations/agencies
- extensive knowledge gained over many years in finance, accounting, bookkeeping and administration.

In addition, the principle of diversity is implemented by ensuring an appropriate degree of female representation on the Supervisory Board. As well as this, a combination of members from technical and commercial backgrounds is sought. The number of independent members as defined in Article 5.4.2 of the Corporate Governance Code is to equal at least one.

### STATUS OF IMPLEMENTATION

A high degree of diversity in terms of gender, expertise and international experience has been achieved with the appointment of Mrs. Christa Fuchs, the founder of OHB System and commercial managing director with many years of experience, to the position of chairwoman of the Supervisory Board, Professor Heinz Stoewer as an internationally renowned space technology expert and former leading manager of ESA and managing director of the German Space Agency and Robert Wethmar as a partner in an internationally active law firm.

#### DECLARATION OF CONFORMITY BY OHB SE PURSUANT TO ARTICLE 161 OF THE GERMAN JOINT-STOCK COMPANIES ACT CONCERNING THE GERMAN CORPORATE GOVERNANCE CODE

OHB SE welcomes the German Corporate Governance Code and its legally binding nature. The Management Board and the Supervisory Board of OHB SE declare that the Company already conforms with the recommendations of the Corporate Governance Code Commission appointed by the German Federal Government and will continue to do so in the future. This declaration of conformity refers to the new version of the Corporate Governance Code dated May 5, 2015. OHB SE deviates from the principles of the German Corporate Governance Code in only a small number of points:

#### INFORMATION CONCERNING THE COMPENSATION FOR THE MANAGEMENT BOARD (4.2.5)

The OHB SE annually reports the compensation paid to the members of the Management Board within the compensation report as part of the group management report. In our opinion, further disclosures, as recommended to state under point 4.2.5, are not beneficial in the sense of reporting oriented by relevance.

#### AGE LIMITS FOR THE MANAGEMENT BOARD (5.1.2)

OHB will not be setting a maximum age for the members of the Management Board as this would limit the availability of suitable Management Board members for appointment by the Supervisory Board.

#### FORMATION OF SUPERVISORY BOARD COMMITTEES (5.3)

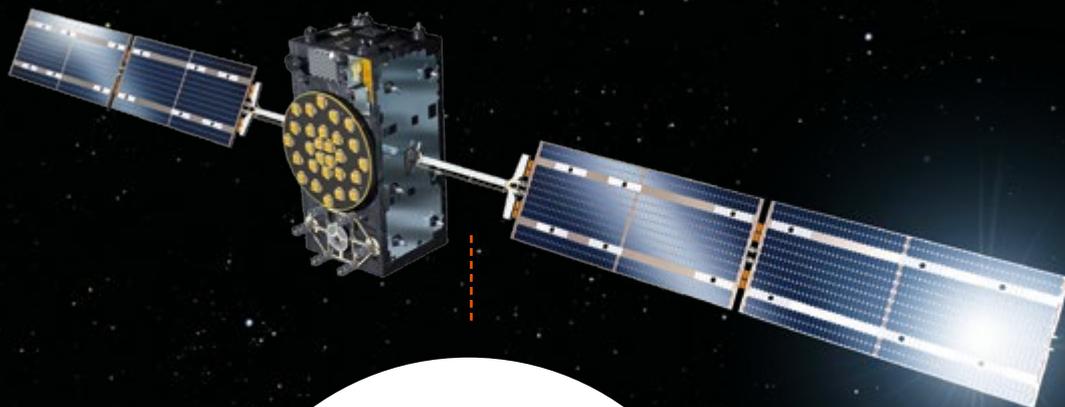
OHB SE has not formed any committees on account of the small number of members on its Supervisory Board (three).

#### AGE LIMITS FOR THE THE SUPERVISORY BOARD/REGULAR LIMIT OF LENGTH OF MEMBERSHIP (5.4.1.)

The Corporate Governance Code recommends defining maximum ages for the members of the Supervisory Board as well as a regular limit of length of membership. The Supervisory Board is elected by the shareholders of OHB SE; accordingly, such specified time limits are not desirable parameters for selection purposes.

Management Board and Supervisory Board of OHB SE

Bremen, December 14, 2016



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## CONSOLIDATED FINANCIAL STATEMENTS

FOR THE PERIOD FROM JANUARY 1, 2016  
UNTIL DECEMBER 31, 2016

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## I. CONSOLIDATED INCOME STATEMENT

in EUR 000	Note	2016	2015
Sales	(1)	699,184	719,706
Changes in inventories of finished goods and work in progress	(2)	-10,948	-14,570
Other own work capitalized		30,019	16,820
Other operating income	(3)	10,131	8,412
<b>Total revenues</b>		<b>728,386</b>	<b>730,368</b>
Cost of materials	(4)	438,426	462,353
Staff costs	(5)	180,211	168,320
Amortization of intangible assets and property, plant and equipment		12,381	11,921
Other operating expenses		54,668	47,560
<b>Earnings before interest and taxes (EBIT)</b>		<b>42,700</b>	<b>40,214</b>
Other interest and similar income	(6)	2,245	1,690
Other financial expenses	(6)	7,478	5,677
Currency translation gains/losses		-19	702
Share of profit of associates	(7), (13)	558	0
Result from investments		3	-231
<b>Net finance income/expenses</b>		<b>-4,691</b>	<b>-3,516</b>
<b>Net profit/loss from ordinary activity</b>		<b>38,009</b>	<b>36,698</b>
Income taxes	(8)	12,434	11,313
<b>Consolidated net profit for the year</b>		<b>25,575</b>	<b>25,385</b>
Share of OHB SE shareholders in net profit for the year		22,212	20,975
Minority interests	(9)	3,363	4,410
Number of shares		17,387,600	17,387,600
Earnings per share (basic, EUR)	(10)	1.28	1.21
Earnings per share (diluted, EUR)	(10)	1.28	1.21

## II. CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

in EUR 000	Note	<b>2016</b>	2015
<b>CONSOLIDATED NET PROFIT FOR THE YEAR</b>		<b>25,575</b>	<b>25,385</b>
Remeasurement of defined benefit pension plans	(23), (26)	-5,523	1,623
<b>Items that will not be reclassified to profit and loss</b>		<b>-5,523</b>	<b>1,623</b>
Foreign currency translation differences	(23)	-125	99
Net gains/losses from the measurement of financial assets recorded under equity	(14), (23)	2,656	2,743
Cash flow hedges	(23)	-35	-2
<b>Items which may be subsequently reclassified to profit and loss</b>		<b>2,496</b>	<b>2,840</b>
<b>Other comprehensive income after tax</b>		<b>-3,027</b>	<b>4,462</b>
<b>Comprehensive income</b>		<b>22,548</b>	<b>29,847</b>
Of which attributable to			
Equity holders of OHB SE		20,251	25,130
Non-controlling interests		2,297	4,717

### III. CONSOLIDATED BALANCE SHEET

in EUR 000	Note	<b>31/12/2016</b>	31/12/2015
<b>ASSETS</b>			
Goodwill	(11)	7,488	7,687
Other intangible assets	(11)	89,967	61,057
Property, plant and equipment	(12)	60,640	54,188
Shares carried at equity	(13)	558	0
Other financial assets	(14)	30,979	26,335
Other non-current receivables and assets	(15)	2,491	2,338
Securities	(18)	632	1,702
Deferred income taxes	(8)	18,615	12,468
<b>Non-current assets</b>		<b>211,370</b>	<b>165,775</b>
Inventories	(16)	50,215	54,051
Trade receivables	(15)	318,761	326,446
Other tax receivables		328	3,312
Other financial and non-financial assets	(17)	45,288	28,791
Securities	(18)	385	401
Cash and cash equivalents	(19)	56,567	59,949
<b>Current assets</b>		<b>471,544</b>	<b>472,950</b>
<b>Total assets</b>		<b>682,914</b>	<b>638,725</b>

in EUR 000	Note	31/12/2016	31/12/2015
<b>EQUITY AND LIABILITIES</b>			
Subscribed capital	(20)	17,468	17,468
Additional paid-in capital	(21)	14,923	14,923
Retained earnings	(22)	521	521
Unrealized gains and losses recognized under equity	(23)	-4,682	-2,721
Own shares	(24)	-781	-781
Consolidated net profit		141,199	125,942
<b>Shareholders' equity excluding minority interests</b>		<b>168,648</b>	<b>155,352</b>
Minority interests	(25)	14,942	13,399
<b>Equity</b>		<b>183,590</b>	<b>168,751</b>
Provisions for retirement benefits and similar obligations	(26)	100,437	93,575
Other non-current provisions	(27)	1,432	2,091
Non-current financial liabilities	(28)	349	934
Non-current advance payments received	(29)	37,398	5,747
Deferred income tax liabilities	(8)	31,775	23,166
<b>Non-current liabilities</b>		<b>171,391</b>	<b>125,513</b>
Current provisions	(27)	28,160	25,400
Current financial liabilities	(30)	93,108	139,517
Trade payables		67,308	100,896
Current advance payments received on orders	(31)	102,389	55,368
Income tax liabilities		7,981	6,006
Other financial and non-financial liabilities	(32)	28,987	17,274
<b>Current liabilities</b>		<b>327,933</b>	<b>344,461</b>
<b>Total equity and liabilities</b>		<b>682,914</b>	<b>638,725</b>

## IV. CONSOLIDATED CASH FLOW STATEMENT

in EUR 000	Note	2016	2015
Operating EBIT		42,700	40,214
Income tax paid		-2,669	-5,018
Other non-cash expenses (+) / income (-)		-88	0
Amortisation and depreciation	(11), (12)	12,381	11,921
Changes in pension provisions	(26)	-3,273	-3,424
Profit (-)/loss (+) from the disposal of assets		72	-81
<b>Gross cash flow</b>		<b>49,123</b>	<b>43,612</b>
Increase (-)/decrease (+) in own work capitalized		-29,367	-16,626
Increase (-) /decrease (+) in inventories	(16)	3,836	22,303
Increase (-) /decrease (+) in receivables and other assets including prepaid expenses		-9,763	3,647
Increase (+)/decrease (-) in liabilities and current provisions		-19,775	21,063
Increase (+) /decrease (-) in advance payments received		78,672	-70,408
<b>Cashflow from operating activities</b>		<b>72,726</b>	<b>3,591</b>
Payments for investments in intangible assets and property, plant and equipment	(11), (12)	-18,381	-8,029
Payments received from the disposal of assets		31	170
Interest and other financial income		1,310	1,560
<b>Net cash generated from/used in investing activities</b>		<b>-17,040</b>	<b>-6,299</b>
Dividends distributed		-6,955	-6,433
Payment made for the settlement of financial liabilities		-49,160	-4,530
Payments received from raising borrowings	(30)	2,167	26,184
Dividend distributed to non-controlling interests		-754	-65
Interest and other financial expenses	(6)	-4,288	-3,717
<b>Net cash generated from/used in financing activities</b>		<b>-58,990</b>	<b>11,439</b>
Cash changes to cash and cash equivalents		-3,304	8,731
Exchange rate-induced change in cash and cash equivalents		-78	740
Cash and cash equivalents at the beginning of the period		59,949	50,478
<b>Cash and cash equivalents at the end of the period</b>	<b>(19)</b>	<b>56,567</b>	<b>59,949</b>

## V. CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

in EUR 000	Sub- scribed capital	Share premium	Retained earnings	Unreal- ized gains and loss- es rec- ognized under equity	Consol- idated profit	Treasury stock	Equity excluding minority interests	Non-con- trolling interests	Total equity
Note	(20)	(21)	(22)	(23)		(24)		(25)	
<b>Balance on January 1, 2015</b>	<b>17,468</b>	<b>14,923</b>	<b>521</b>	<b>-6,876</b>	<b>111,400</b>	<b>-781</b>	<b>136,655</b>	<b>8,747</b>	<b>145,402</b>
Dividend payment (EUR 0.37 per share)	0	0	0	0	-6,433	0	-6,433	0	-6,433
Consolidated comprehensive income	0	0	0	4,155	20,975	0	25,130	4,717	29,847
Other changes	0	0	0	0	0	0	0	-65	-65
<b>Balance on December 31, 2015</b>	<b>17,468</b>	<b>14,923</b>	<b>521</b>	<b>-2,721</b>	<b>125,942</b>	<b>-781</b>	<b>155,352</b>	<b>13,399</b>	<b>168,751</b>
Dividend payment (EUR 0.40 per share)	0	0	0	0	-6,955	0	-6,955	0	-6,955
Consolidated comprehensive income	0	0	0	-1,961	22,212	0	20,251	2,297	22,548
Other changes	0	0	0	0	0	0	0	-754	-754
<b>Balance on December 31, 2016</b>	<b>17,468</b>	<b>14,923</b>	<b>521</b>	<b>-4,682</b>	<b>141,199</b>	<b>-781</b>	<b>168,648</b>	<b>14,942</b>	<b>183,590</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

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### VI. NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

#### GENERAL INFORMATION

The Company has its head office at Karl-Ferdinand-Braun-Str. 8 in 28359 Bremen, Germany. It is entered in the commercial register of the Local Court of Bremen under the number HRB 30268. OHB SE exercises the function of an active holding company which manages the subsidiaries within the OHB Group. At the same time, it is the ultimate parent company. The Group is primarily engaged in the production and distribution of products and projects as well as the provision of high-technology services particularly in the areas of space and aeronautic technology, telematics and satellite services. OHB SE comprises two business units: Space Systems and Aerospace + Industrial Products.

The Space Systems business unit focuses on developing and executing space projects. In particular, it is responsible for developing and fabricating low-orbiting and geostationary small satellites for navigation, research, communications, earth and weather observation and reconnaissance including scientific payloads. Its human space flight activities chiefly entail projects for the assembly and outfitting of the International Space Station ISS. The exploration segment works on studies and models for exploring our solar system, primarily the moon, asteroids and Mars. Reconnaissance satellites and broadband wireless transmission of image data form core technologies for security and reconnaissance.

The Aerospace + Industrial Products business unit is primarily responsible for fabricating aviation and space products as well as other industrial activities. In this area, OHB has established itself as a significant supplier of aerospace structures for the aviation and space industry; among other things, it is the largest German supplier of components for the Ariane-5 program and an established producer of structural elements for satellites. In addition, OHB is an experienced vendor of mechatronic systems for antennas and telescopes and is involved in major radio telescope projects. OHB telematics systems serve the logistics industry around the world by offering efficient transport management and consignment tracking facilities.

### **ACCOUNTING PRINCIPLES AND METHODS**

In accordance with Regulation (EC) 1606/2002 issued by the European Parliament and the Council on July 19, 2002, OHB SE is required to prepare consolidated financial statements in accordance with international accounting standards (IFRS/IAS). The consolidated financial statements have been compiled in accordance with the International Financial Reporting Standards (IFRS/IAS) applicable in the EU in the light of the interpretations of the International Financial Reporting Interpretations Committee (IFRIC/SIC) as well as the supplementary provisions contained in Section 315a of the German Commercial Code. The consolidated financial statements have been prepared in accordance with the going-concern principle.

The Group manages its capital with the aim of ensuring that all Group members are able to operate in accordance with the going-concern principle and with the aim of maximizing income from its investments by optimizing its equity and debt capital. Managed capital comprises solely the equity of EUR 184 million (previous year: EUR 169 million) shown on the face of the consolidated financial statements. The overall strategy pursued by the Group was unchanged over 2015. In addition to the consolidated balance sheet, consolidated income statement and the consolidated statement of comprehensive income, the consolidated annual financial statements include a consolidated cash flow statement and a statement of changes in consolidated equity. The notes contain the declaration required by Section 285 No. 16 of the German Commercial Code confirming that the disclosures stipulated by Section 161 of the German Stock Corporation Act have been duly made. The income statement has been compiled using the total-cost method. The reporting currency is the euro. Unless otherwise stated, all amounts are reported in millions of euros (EUR million). It should be noted that the use of rounded figures and percentages may result in differences due to commercial rounding.

### **CONSOLIDATION METHODS**

The purchase method of accounting is used to account for the acquisition of subsidiaries by the Group. All material subsidiaries under the legal or constructive control of OHB SE have been consolidated.

Any remaining positive difference between the cost of acquiring the shareholdings and the net assets calculated at their fair values is recognized as goodwill under IAS 3.32. The full goodwill method is applied. Sales, expenses, income as well as receivables and liabilities between consolidated companies are netted and any inter-Group profits eliminated. The carrying amounts of companies consolidated using the equity method are adjusted to allow for the proportionate profit/loss attributable to such companies.

### **ACQUISITIONS**

No acquisitions were executed during this period.

### **COMPANIES CONSOLIDATED**

OHB SE's consolidated financial statements include OHB SE, eight domestic and five non-domestic subsidiaries and a further equity-accounted domestic associate. The table entitled "Consolidation perimeter" sets out the subsidiaries and associates together with the relative size of the share held. Compared with the year-ago period, there was no change in the number of companies consolidated.

OHB SE's interim consolidated financial statements include the following companies:

#### Companies consolidated

Name of company	Share held (%)	Consolidation
OHB System AG, Bremen, Germany	100.0	Fully consolidated
ORBCOMM Deutschland Satellitenkommunikation AG, Bremen (Germany) <sup>1</sup>	100.0	Fully consolidated
OHB Italia S.p.A., Milan (Italy)	100.0	Fully consolidated
OHB Sweden AB, Stockholm (Sweden)	100.0	Fully consolidated
Antwerp Space N.V., Antwerp, (Belgium)	100.0	Fully consolidated
LUXSPACE Sàrl, Betzdorf (Luxembourg)	100.0	Fully consolidated
MT Aerospace Holding GmbH, Bremen (Germany)	70.0	Fully consolidated
MT Aerospace AG, Augsburg (Germany) <sup>2</sup>	100.0	Fully consolidated
MT Aerospace Grundstücks GmbH & Co. KG, Augsburg (Germany) <sup>3</sup>	100.0	Fully consolidated
MT Mechatronics GmbH, Mainz (Germany) <sup>3</sup>	100.0	Fully consolidated
MT Aerospace Guyane S.A.S., Kourou (French Guiana) <sup>3</sup>	100.0	Fully consolidated
Aerotech Peissenberg GmbH & Co. KG, Peissenberg (Germany) <sup>2</sup>	43.3	At-Equity
OHB Teledata GmbH, Bremen (Germany)	100.0	Fully consolidated
megatel Informations- und Kommunikationssysteme GmbH, Bremen (Germany)	74.9	Fully consolidated

1 held by OHB System AG

2 held by MT Aerospace Holding GmbH

3 held by MT Aerospace AG

In accordance with the principle of materiality pursuant to the IFRS/IAS framework, the companies stated in the table, which are fundamentally subject to compulsory consolidation (OHB share of greater than 20%), are not consolidated. These companies' cumulative current sales and EBIT are not considered to make any material contributions to consolidated earnings. Subsidiaries with discontinued or minimal business activities which are of only minor importance for obtaining a true and fair view of the OHB Group's net assets, financial condition and results of operations as well as its cash flow are not consolidated. The share holdings shown in the tables entitled "Consolidation perimeter" and "Further investments and financial assets" correspond to the voting rights held.

In addition, shares were held in other companies:

**Further investments and financial assets**

Name of company	Percent- age share (%)	Size of share EUR 000	Equity EUR 000	Net prof- it/loss for the year EUR 000	Year of most recent financial state- ments
OHB France S.A.S, Paris (France) *	100.0	37	11	1	2015
OHB Marine Technologies GmbH, Bremen (Germany)*	100.0	25	601	-1	2015
OHB Venture Capital GmbH, Weßling (Germany) *	55.0	1,910	n/a	n/a	n/a
OHB Logistic Solutions GmbH, Bremen (Germany)	100.0	25	20	-2	2015
KT Verwaltungsgesellschaft mbH, Bremen (Germany)*	100.0	103	1,022	0	2016
MT Dezentrale Energiesysteme GmbH, Augsburg (Germany)*	100.0	10	34	15	2016
MT Mecatronica s.r.l., Cagliari (Italy)*	100.0	27	0	305	2015
MT Management Service GmbH, Augsburg (Germany)*	100.0	35	-119	-154	2015
M2M Europe Network and Solutions Ges. mbH, Bregenz (Austria)	100.0	26	10	-2	2015
MT Mecatrónica SpA, Santiago de Chile (Chile) *	99.9	530	338	5	2016
COSMOS Space Systems AG, Bremen (Germany) *	66.6	40	77	2	2015
COSMOS International Satellitenstart GmbH, Bremen (Germany) *	49.9	13	221	8	2015
RST Radar Systemtechnik GmbH, Salem (Germany)*	24.0	190	1,210	103	2015
Antares S.c.a.r.l., San Giorgio Del Sannio (Italy) *	24.0	58	190	43	2014
beos GmbH, Bremen (Germany)	12.0	60	417	18	2013
Arianespace Participation, Evry (France)	8.3	8,328	n/a	n/a	n/a
ATB GmbH, Bremen (Germany)	5.0	26	587	29	2015
ORBCOMM Inc., Rochelle Park NJ (USA)	3.1	17,495	267,495	-22,042	2016
Orbcomm Europe LLC, Delaware (USA)	50.0	4	n/a	n/a	n/a
Nexus Space LLC, Centennial CO (USA) *	45.0	n/a	n/a	n/a	n/a

\* not consolidated in the year under review for materiality reasons

**CURRENCY TRANSLATION**

Most outgoing invoices are denominated in euro. Incoming and outgoing invoices denominated in a foreign currency are converted and recognized on the reporting date. Any hedges in existence are translated at the hedge rate. Foreign-currency bank balances were translated at the end-of-year exchange rate. The annual financial statements of the independent non-domestic subsidiary OHB Sweden AB were prepared in its domestic currency (SEK) and translated using the functional currency principle in accordance with IAS 21. The foreign-currency difference arising from translation of the equity capital is recorded in "currency translation differences" within other comprehensive income.

## SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### Newly issued standards and interpretations

The International Accounting Standards Board (IASB) and IFRIC have revised the following standards and interpretations which are subject to compulsory application from 2016:

- Defined benefit plans: employee contributions (amendments to IAS 19)
- Annual IFRS improvements cycle 2010 – 2012
- Bearer plants (amendments to IAS 16 and IAS 41)
- Accounting for acquisitions of interests in joint operations (amendments to IFRS 11)
- Clarification of acceptable methods of depreciation and amortization (amendments to IAS 16 and IAS 38)
- Annual IFRS improvements cycle 2012 – 2014
- Disclosure initiative (amendments to IAS 1)
- Equity method in single-entity financial statements (amendments to IAS 27)

The amendments to IAS 1 highlight the concept of materiality more clearly to avoid application problems in practice. The purpose of the clarifications is to eliminate immaterial information from the IFRS financial statements and simultaneously to improve the communication of relevant information. To this end, it is stated that the concept of materiality is to be applied to all parts of the IFRS financial statements and expressly also the notes. The purpose of this is to prevent the inclusion in the notes of irrelevant information from other parts of the financial statements. In line with this, it is stated that immaterial information should not be presented separately even if it is expressly required by an IFRS. Moreover, the comprehensibility of the information in the financial statements should not be restricted by combining relevant and irrelevant information or by aggregating key items with a different characteristic or function.

In view of the disclosure initiative, the cumulative other comprehensive income of associates must be reported separately in the consolidated statement of comprehensive income and rolled over in the consolidated statement of changes in equity. This did not apply in the year under review. Generally speaking, OHB is taking the amendment as an opportunity to streamline the information disclosed in the consolidated financial statements that affect core parts of the report familiar to users of the consolidated financial statements.

### Newly issued standards and interpretations that have not yet been applied.

The IASB has issued standards, interpretations and revisions to existing standards which are not yet compulsory and do not become so until future reporting periods and which OHB SE has not adopted on a voluntary early basis.

IFRSs endorsed by the EU	To be applied from (EU)
IFRS 9 Financial Instruments	Compulsory as of annual periods beginning on or after January 1, 2018
IFRS 15 Revenue from Contracts with Customers	Compulsory as of annual periods beginning on or after January 1, 2018

The IASB published IFRS 9, Financial Instruments in July 2014. IFRS 9 introduces uniform guidance on the classification and measurement of financial assets. This is based on the characteristics of the cash flow and the business model used to control them.

In addition, it provides for a new impairment model based on expected credit losses. IFRS 9 also contains new guidance on the application of hedge accounting to report an entity's risk management activities more accurately particularly in connection with the management of non-financial risks. The new standard must be applied for the first time in accounting periods commencing on or after January 1, 2018; earlier adoption is permissible. OHB will be applying IFRS 9 for the first time from

January 1, 2018 and is currently analyzing the effects which this may have on its consolidated financial statements.

The IAS published IFRS 15 Revenue from Contracts with Customers in May 2014. Under the new standard, revenues are recognized when the promised goods and services are transferred to the customer at the amount equaling the consideration that the entity expects to receive for these goods and services. Revenues are recognized when control over the goods or services passes to the customer. IFRS 15 also includes guidance on any excess performance or performance obligations on the contractual level. These are assets and liabilities under contracts with customers depending on the ratio of the entity's performance and payment by the customer.

IFRS 15 replaces IAS 11, Construction Contracts, and IAS 18, Revenue as well as the related interpretations. The new standard must be applied for the first time to accounting periods commencing on or after January 1, 2018; earlier adoption is permissible.

The Company will be applying the standard retroactively from January 1, 2018, meaning that the comparison period will be reported in accordance with IFRS 15.

At this stage, only very limited changes are expected in the total amount of revenue recognized from customer contracts. Moreover, the point in time at which revenue is recognized for certain types of contracts may change. In particular, revenue may be recognized at an earlier stage in the case of variable remuneration components, the transaction price is broken down into distinct performance obligations or licenses are transferred to customers.

On the basis of the analyses performed, it is assumed that the large majority of construction contracts currently recognized using the percentage-of-completion method will satisfy the requirements for over-time recognition of revenue. In addition, the Company expects changes in the balance sheet (e.g. the separate recognition of contract assets and liabilities) and additional quantitative and qualitative disclosures in the notes. This is not expected to have any material impact on the Group's consolidated financial statements.

The IAS published IFRS 16 Leases in January 2016. IFRS 16 abolishes the distinction between operating and finance leases on the part of the lessee. Instead, IFRS 16 introduces a uniform lessee accounting model under which the lessee is required to recognize assets (for the right of use) and the lease liabilities in the case of leases with a duration of more than twelve months. This means that in the future leases that had previously not been accounted for must be placed on the balance sheet in a manner comparable to finance leases under the current system. IFRS 16 must be applied for the first time in accounting periods commencing on or after January 1, 2019; earlier adoption is permissible provided that IFRS 15 has already been adopted. The Company is currently analyzing the effects of IFRS 16 on its consolidated financial statements and will be applying it for the first time from January 1, 2019.

IFRSs not yet endorsed by the EU	To be applied from
IFRS 16 Leases	January 1, 2019
Amendments to IAS 12	January 1, 2017/January 1, 2018
Amendments to IAS 7	January 1, 2018
Amendments to IFRS 2	January 1, 2018
Amendments to IFRS 4	January 1, 2018
Annual Improvements to IFRS Standards 2014-2016 Cycle	January 1, 2017/January 1, 2018
IFRIC Interpretation 22	January 1, 2018
Amendments to IAS 40	January 1, 2018
Clarifications IFRS 15	January 1, 2018

### CHANGES IN ACCOUNTING POLICIES

There have been no changes in the recognition or measurement principles compared with the previous year.

### RECOGNITION OF REVENUES

Revenues and other operating income from series production are recognized on the date on which the services or goods are provided or risk passes to the customer. With respect to long-term contract construction, the percentage-of-completion method provided for in IAS 11 is applied, subject to reasonable discounts on the basis of a true and fair view to allow for unexpected future risks to the extent that it is possible to calculate the partial profit with adequate precision on the basis of the percentage of completion. For this purpose, the percentage of completion is determined on the basis of the contract costs which have arisen as of the reporting date relative to the expected total contract costs. Revenues from contracts are calculated by multiplying the percentage of completion with the contractually agreed proceeds including any subsequently agreed additions. Long-term projects in progress on the reporting date (remaining durations of between one and seven years) are recognized as revenue on the basis of production costs plus refundable administrative overhead costs provided that a partial profit can be estimated with a reasonable degree of reliability. Partial profits are recognized in other projects using generally accepted principles.

### OWN WORK CAPITALIZED

Development expenditure is recognized as an asset pursuant to IAS 38.57 if a newly developed product or process can be clearly delineated, is technically feasible and is intended either for the Company's own use or for sale. A further condition is that it must be sufficiently likely for the development expenditure to be recouped from future cash flows. Such expenditure is recognized on the basis of the production costs incurred, primarily development hours multiplied by the applicable hourly rate. In the year under review, research and development costs of EUR 11.552 million (previous year: EUR 2.281 million) were recorded as expense as the criteria provided for in IAS 38.57 were not satisfied. Of the total development expenses of EUR 44.595 million (EUR 23.945 million), an amount of EUR 29.340 million (previous year: EUR 16.625 million) was capitalized and EUR 3.703 million (previous year: EUR 5.000 million) gained in the form of grants. The income from development grants is recognized upon the occurrence of the related costs. Income from grants is reported gross, i.e. it is not netted with expenses. At the moment, there is no evidence indicating that the conditions imposed by the providers of grants cannot be satisfied.

#### **NET FINANCE INCOME/EXPENSES**

Net financial income/expense includes the share of profits of associates accounted for at equity as well as other investments including profit from the sale of financial assets, adjustments to the value of financial assets, other interest expenditure on liabilities, dividends, interest income on receivables and currency gains and losses. Interest income is recorded in the income statement in accordance with the effective interest method. Dividends are reported in the income statement upon a resolution to distribute a dividend being passed. Interest expense on retirement benefit provisions are also reported as other interest expenditure.

#### **INTANGIBLE ASSETS**

As of each reporting date, OHB reviews the carrying amounts of its intangible assets to identify any evidence of impairment. In this case, the recoverable amount of the asset in question is calculated to determine the amount of any impairment. The recoverable amount is defined as the fair value less possible costs of sale or the value in use, whichever is the greater. Intangible assets acquired from third parties primarily comprise software programs and licenses. These are written down on a straight-line basis over a period of between one and 15 years. Internally generated assets are written down on a straight-line basis over the expected useful life of four to eight years. For the purpose of identifying any impairment, goodwill must be allocated to each cash-generating unit within the Group expected to derive any benefit from the synergistic effects of the business combination. Cash-generating units to which part of the goodwill is allocated are subject to annual impairment testing. If there is any evidence of impairment of a cash-generating unit, it is tested more frequently for impairment. If the recoverable amount of a cash-generating unit is less than its carrying amount, the impairment loss is initially assigned to the carrying amount of all goodwill allocated to the unit and then on a proportionate basis to the other assets on the basis of the carrying amount of each asset within the unit. The use of growth rates is of only subordinate importance as planning is primarily influenced by specific projects.

#### **PROPERTY, PLANT AND EQUIPMENT**

As of each reporting date, OHB reviews the carrying amounts of its property, plant and equipment to identify any evidence of impairment. In this case, the recoverable amount of the asset in question is calculated to determine the amount of any impairment. The recoverable amount is defined as the fair value less possible costs of sale or the value in use, whichever is the greater. Assets classed as property, plant and equipment are carried at historical cost less scheduled straight-line depreciation over their expected useful lives. Subsequent expenditure on assets which does not increase their value or materially extend their useful lives is expensed. Material additions and improvements are recognized as assets. Disposals are reflected in historical acquisition costs as well as accumulative depreciation. Profit and loss from the disposal of assets are recorded within operating income/expenses. The following depreciation periods are applied to property, plant and equipment: between ten and 33 years for buildings, five to ten years for machinery and technical equipment and three to ten years for other equipment as well as operating and business equipment.

#### **ASSOCIATES**

Shares in associates are reported at cost net including the share in their profit/loss for the year. In an impairment test, the carrying amount of the associate is compared with the recoverable amount and, if it is lower than the carrying amount, an impairment equaling the difference recognized. The impairment is reversed through profit and loss if the reasons for such impairment no longer apply.

**OTHER FINANCIAL ASSETS**

Other financial assets are recognized on the date of addition at their fair value on the settlement date less transaction costs. If they are classified as available for sale, they are also measured at their fair value in subsequent periods. The resultant gains or losses are initially recognized within other comprehensive income until the financial asset is derecognized, upon which the cumulative gains or losses are recycled to profit and loss. Other financial assets are classified as available for sale and mostly constitute the shares in ORBCOMM Inc.

**INVENTORIES**

Inventories are recognized at historical cost or the lower net recoverable value prevailing on the reporting date. Production costs comprise the individual costs of material and production, overhead costs of material and production as well as depreciation and amortization expense in connection the production equipment. They also include overhead administration costs. Part of the inventories were measured using the moving average method.

**RECEIVABLES**

Trade receivables, other financial assets and cash and cash equivalents are initially recognized at their fair value less transaction costs on the settlement date. They are subsequently measured at amortized cost using the effective interest method. They are classified as loans and receivables. If in individual cases there are justified doubts as to whether receivables can be retrieved, they are written down or recorded at the lower recoverable value.

**CONSTRUCTION CONTRACTS**

In the case of consolidated companies with construction contracts as defined in IAS 11 on their books, the percentage-of-completion method is applied allowing for reasonable discounts on the basis of a true and fair view to take account of unexpected future risks as far as it is possible to calculate the partial profit with adequate precision on the basis of the percentage of completion. Construction projects in progress on the reporting date (remaining durations of between one and seven years) are recognized as assets on the basis of production costs plus prorated refundable administrative overhead costs provided that a profit can be estimated with a reasonable degree of reliability (= proceeds believed to be certain). Projects for which partial profits have been recognized are reported under revenues pursuant to IAS 11.22. The corresponding contract costs are recognized as cost of materials/ services in the reporting year in question. Receivables and other assets due for settlement in more than one year are classified as non-current.

**SECURITIES/FINANCIAL INSTRUMENTS**

The fair values are determined on the basis of the market prices as of the reporting date. Non-current securities are measured in accordance with IAS 39 and IFRS 7 (Reclassification of Financial Assets). Any changes in the value of hedging relationships are reported within comprehensive income prior to settlement and in equity from unrealized gains/losses.

**DEFERRED INCOME TAXES**

Pursuant to IAS 12, temporary differences between the carrying amount of assets or liabilities on the balance sheet and their tax base in accordance with IFRS/IAS give rise to deferred income taxes. The OHB Group applies a uniform domestic tax rate of 32% for calculating deferred income taxes. Domestic income taxes in 2016 were calculated in detail using different tax rates. Deferred tax assets are recognized pursuant to IAS 12.

Deferred tax assets are recognized to the extent that it is probable that taxable profit will be available against which the deductible temporary difference can be utilized. This also applies to deferred income tax assets on unused tax losses. If the deferred income tax assets are unlikely to be realized, they are impaired by the appropriate amount.

Deferred income tax assets and liabilities are only offset if they relate to income taxes levied by the same taxation authority and the actual income tax assets can be offset against the actual income tax liabilities.

#### **EQUITY**

IAS 32 (Financial Instruments: Disclosure and Presentation) stipulates that equity must not include any contractual obligation to deliver cash or any other financial asset to another entity. OHB SE defines equity as subscribed capital, the share premium, unrealized gains and losses recognized within equity, retained earnings and accrued profit brought forward as well as treasury stock.

#### **PROVISIONS FOR RETIREMENT BENEFITS AND SIMILAR OBLIGATIONS**

Obligations under defined-benefit plans are calculated using the projected unit credit method in accordance with IAS 19 (Employee Benefits). The expected benefits are deferred over the entire period of service of the employees.

#### **OTHER PROVISIONS**

Other provisions have been reliably assessed for transactions resulting in an outflow of enterprise resources to settle present obligations in accordance with IAS 37. Estimates are primarily based on detailed calculations. Provisions for which a cash outflow is not expected before 12 months are classified as non-current and recognized at the present value of the future cash outflows.

#### **FINANCIAL LIABILITIES**

Liabilities comprise financial liabilities, trade payables and other liabilities and are classified as financial liabilities at amortized cost ("FLAC"). Financial liabilities are recognized at amortized cost using the effective interest method. They are initially recognized at their fair value including transaction costs.

#### **LEASES**

A lease is an agreement whereby the lessor conveys to the lessee the right to use an asset for an agreed period of time in return for a payment or series of payments. A distinction is made between operating leases and finance leases.

The assets used under operating leases are not recognized.

Lease payments are recorded through profit and loss on an accrual basis.

A finance lease is a lease that transfers substantially all the risks and rewards incidental to ownership of an asset. The Company did not have any finance leases in the year under review.

**ESTIMATES**

Proper and full preparation of the consolidated financial statements requires to some degree the use of estimates and assumptions, which affect the assets and liabilities reported, the disclosure of contingent liabilities and receivables on the balance sheet and the income and expenses recognized. The actual amounts may vary from these estimates and assumptions in individual cases. Any adjustments are taken to the income statement upon further knowledge becoming available.

Internally funded development expenses are assessed on the basis of estimated future cash flows. The value of goodwill is determined in an annual impairment test. This test involves estimates of future cash inflows. Future changes in the general economic environment and the conditions within the sector or the Company may result in a reduction in net cash inflows and, hence, impair the value of the goodwill. Technical progress, deterioration in the market situation or damage may necessitate non-scheduled depreciation of property, plant and equipment. A sensitivity analysis can be found in the disclosures on impairment testing (Note 11).

The percentage-of-completion method is applied to long-term construction contracts provided that the applicable conditions are satisfied. For this purpose, the costs incurred are divided by the total costs to calculate the percentage of completion. Direct changes may arise from changed estimates with respect to hours or costs or as a result of contract addenda.

Retirement benefit provisions are calculated on the basis of a number of premises and assumed trends, the application of biometric probabilities as well as generally accepted approximation methods to determine pension obligations. Actual payment obligations arising over time may vary from these (see Note 26 on retirement benefits for possible changes). Tax provisions and impairment testing of deferred tax assets are also based on estimates.

In determining the value of deferred tax assets, uncertainty may arise with respect to the interpretation of complex tax legislation as well as the amount and timing of future taxable income. Other provisions are recognized in the light of available knowledge and using the customary scope for discretion. In view of the current conditions in the economy and the financial markets, it is not possible at this stage to make any reliable assumptions on the range of possible adjustments which may need to be made to the estimates in 2017.

## VII. NOTES ON THE CONSOLIDATED INCOME STATEMENT

### (1) SALES

Revenues from construction contracts as defined in IAS 11 came to EUR 574.687 million in the year under review (previous year: EUR 598.308 million). The related contract costs stood at EUR 539.818 million (previous year: EUR 563.764 million). The resultant earnings before interest and taxes (EBIT) for the year under review equaled EUR 34.869 million (previous year: EUR 34.544 million).

Sales break down by product group and service as follows:

in EUR 000	<b>2016</b>	2015
Space technology	658,418	680,403
Aviation	18,337	15,103
Antennas	11,999	14,417
Process control technology	6,040	4,059
Telematics	4,390	5,724
<b>Total</b>	<b>699,184</b>	<b>719,706</b>

Additional disclosures on POC measurement (IAS 11)

2016 in EUR 000	Net assets	Net liabilities	Total
Expenses + profit	1,845,431	1,015,943	<b>2,861,374</b>
Prepayments received	1,615,728	1,152,016	<b>2,767,744</b>
<b>Amount shown on balance sheet</b>	<b>229,703</b>	<b>-136,073</b>	<b>93,630</b>

2015 in EUR 000	Net assets	Net liabilities	Total
Expenses + profit	1,734,589	607,172	<b>2,341,761</b>
Prepayments received	1,468,383	641,687	<b>2,110,070</b>
<b>Amount shown on balance sheet</b>	<b>266,206</b>	<b>-34,515</b>	<b>231,691</b>

### (2) REDUCTION IN INVENTORIES OF FINISHED GOODS AND WORK IN PROGRESS

The decrease in inventories of finished goods and work in progress primarily relates to the decline of EUR 10.857 million (previous year: EUR -13.130 million) in the Aerospace + Industrial Products business unit. All told, inventories dropped by EUR 10.948 million (previous year: EUR -14.570 million).

### (3) OTHER OPERATING INCOME

The other operating income of EUR 10.131 million (previous year: EUR 8.412 million) primarily comprises income from grants of EUR 3.703 million (previous year: EUR 5.039 million).

**(4) COST OF MATERIALS**

in EUR 000	2016	2015*
Cost of raw materials and supplies and goods purchased	76,072	100,487
Cost of services purchased	362,354	361,866
<b>Total</b>	<b>438,426</b>	<b>462,353</b>

\* adjusted due to reclassification of external services received

**(5) STAFF COSTS**

in EUR 000	2016	2015
Wages and salaries	150,579	139,716
Social security charges and expenditure on old age pensions and support	29,632	28,604
<b>Total</b>	<b>180,211</b>	<b>168,320</b>

Retirement benefits came to EUR 4.286 million (previous year: EUR 4.890 million). In 2016, the Group paid contributions of EUR 9.401 million (previous year: EUR 8.690 million) to the German statutory pension scheme. These are classified as a defined contribution plan.

**(6) NET FINANCE INCOME/EXPENSE**

in EUR 000	2016	2015
<b>FINANCE INCOME</b>		
Other interest income from loans and receivables	1,313	1,299
Other financial income	932	391
	<b>2,245</b>	<b>1,690</b>
<b>FINANCIAL EXPENSES</b>		
Interest expense from liabilities at amortised cost	3,447	2,887
Interest expenses on retirement benefit provisions	2,162	2,081
Other borrowing costs	1,869	709
	<b>7,478</b>	<b>5,677</b>

**(7) SHARE OF PROFIT OF ASSOCIATES**

The proportionate share in the profit or loss of Aerotech Peissenberg GmbH & Co. KG stands at EUR 0.558 million in 2016 (previous year: EUR 0).

**(8) INCOME TAXES**

**Reconciliation of tax expense**

in EUR 000	<b>2016</b>	2015
Expected taxes at a tax rate of 32.00% (previous year: 32.00%)	12,291	11,743
Reductions to tax expenses as a result of partially tax-exempt income	-382	-19
Tax losses utilized	-383	-769
Non-deductible operating expenses	936	567
Other tax effects	21	-53
Off-period tax expense	158	-47
Differences in foreign tax rates	-207	-109
<b>Total</b>	<b>12,434</b>	<b>11,313</b>

**Deferred income taxes**

The deferred income tax assets primarily arise from the difference in provisions for retirement benefit commitments in accordance with tax laws on the one hand and IFRS on the other. In the year under review, deferred income tax expense of EUR 4.805 million (previous year: EUR 5.541 million) was recognized in profit and loss.

in EUR 000	<b>2016</b>		2015	
	Actual taxes	Deferred income taxes	Actual taxes	Deferred income taxes
Domestic	7,314	4,893	5,475	5,448
Non-domestic	315	-88	297	93
	<b>7,629</b>	<b>4,805</b>	<b>5,772</b>	<b>5,541</b>

No deferred income tax assets were recognized on the unused tax losses of EUR 2.761 million (previous year: EUR 2.279 million). The unused tax losses do not expire.

The change in deferred income taxes recognized through equity stands at EUR 2.342 million (previous year: EUR -0.505 million).

**Analysis of deferred income taxes and assets**

in EUR 000	<b>2016</b>		2015		<b>2016</b>	2015
	Deferred income tax assets	Deferred income tax liabilities	Deferred income tax assets	Deferred income tax liabilities	Cash change	Cash change
Intangible assets and property, plant and equipment	7	22,883	23	16,018	-6,883	-2,919
Financial assets	116	439	371	381	-270	-11
Current assets	0	14,671	1	14,628	-60	-1,392
Provisions	15,110	49	12,319	38	412	-548
Liabilities	508	0	327	0	181	-76
Unused tax losses and tax credits	9,483	342	7,603	277	1,815	-597
Netting	-6,609	-6,609	-8,176	-8,176	0	0
<b>Total</b>	<b>18,615</b>	<b>31,775</b>	<b>12,468</b>	<b>23,166</b>	<b>-4,805</b>	<b>-5,543</b>
Thereof non-current	18,615	17,104	12,467	8,538	-4,744	-4,151

**(9) NON-CONTROLLING INTERESTS**

Non-controlling interests are valued at EUR 3.363 million (previous year: EUR 4.410 million) and chiefly relate to MT Aerospace Holding GmbH. The MT Holding subgroup, in which OHB SE holds a 70% share, generated total revenues of EUR 161.947 million (previous year: EUR 169.481 million), EBIT of EUR 15.970 million (previous year: EUR 15.513 million) and EBITDA of EUR 20.066 million (previous year: EUR 18.880 million).

**(10) EARNINGS PER SHARE UNDER IFRS/IAS**

Basic earnings per share are calculated by dividing the post-tax earnings attributable to the shares in question by the total number of shares with dividend entitlement. This indicator may be diluted by so-called potential shares – particularly options and subscription rights.

There were no comparable rights as of the reporting date. Accordingly, there is no difference between basic and diluted earnings per share. The Company's share capital stands at EUR 17,468,096.00. As in the previous year, the calculations were based on 17,387,600 shares as the Company held an annual average of 80,496 treasury shares. In the absence of any change in the number of outstanding shares, this equals the weighted average of the outstanding shares. The consolidated net profit of EUR 22.212 million (previous year: EUR 20.975 million) net of non-controlling interests was used for calculation purposes.

Earnings per share for 2016 came to EUR 1.28 (previous year: EUR 1.21).

**VIII. NOTES ON THE CONSOLIDATED BALANCE SHEET****(11) GOODWILL AND OTHER INTANGIBLE ASSETS****Goodwill**

in EUR 000	<b>2016</b>	2015
<b>GOODWILL FROM CONSOLIDATION OF</b>		
OHB System Munich	5,003	5,003
OHB Italia S.p.A.	801	801
OHB System Bremen	681	681
megatel GmbH	646	646
ORBCOMM Deutschland AG	357	556
<b>Total</b>	<b>7,488</b>	<b>7,687</b>

**Statement of changes in intangible assets - historical cost**

in EUR 000	Goodwill	Conces- sions and industrial property rights	Intangible assets acquired	Internally generated intangible assets	Total
<b>Balance on January 1, 2015</b>	<b>8,957</b>	<b>2,057</b>	<b>11,967</b>	<b>86,855</b>	<b>109,836</b>
Additions	0	10	1,061	16,626	17,697
Disposals	0	0	187	66	253
<b>Balance on December 31, 2015/ January 1, 2016</b>	<b>8,957</b>	<b>2,067</b>	<b>12,841</b>	<b>103,415</b>	<b>127,280</b>
Additions	0	2	4,637	29,367	34,006
Disposals	0	0	179	14,302	14,481
<b>Balance on December 31, 2016</b>	<b>8,957</b>	<b>2,069</b>	<b>17,299</b>	<b>118,480</b>	<b>146,805</b>

**Statement of changes in intangible assets - cumulative amortization**

in EUR 000	Goodwill	Conces- sions and industrial property rights	Intangible assets acquired	Internally generated intangible assets	Total
<b>Balance on January 1, 2015</b>	<b>1,270</b>	<b>1,989</b>	<b>9,950</b>	<b>40,662</b>	<b>53,871</b>
Additions	0	13	930	3,970	4,913
Disposals	0	0	187	61	248
<b>Balance on December 31, 2015/ January 1, 2016</b>	<b>1,270</b>	<b>2,002</b>	<b>10,693</b>	<b>44,571</b>	<b>58,536</b>
Additions	199	3	1,717	3,366	5,285
Disposals	0	0	178	14,293	14,471
<b>Balance on December 31, 2016</b>	<b>1,469</b>	<b>2,005</b>	<b>12,232</b>	<b>33,644</b>	<b>49,350</b>
Net carrying amount on December 31, 2016	7,488	64	5,067	84,836	97,455
Net carrying amount on December 31, 2015	7,687	65	2,148	58,844	68,744

Goodwill was tested for impairment at the level of the cash generating units as designated in the above table. Goodwill underwent impairment testing as of December 31, 2016. In addition, stable business performance in the light of the expected inflation effects on earnings and expenses was assumed during the forecast period. This indicated an impairment of EUR 0.199 million of the goodwill of Orbcomm Deutschland AG. The recoverable amount was calculated on the basis of the value in use, which in turn was determined by using a discounted cash flow method. This was based on the forecasts covering a period of five years approved by management for the companies concerned. In the case of OHB Italia S.p.A, a growth rate of 3% based on historical data and applying a risk discount was assumed for the period after the forecast horizon. The application of a growth rate was dispensed with for all the other cash generating units for materiality reasons. A pre-tax weighted average cost of capital (WACC) of 7.89% (previous year: 9.02%) was applied to domestic goodwill and of 11.70% (previous year: 12.82%) to non-domestic goodwill. Other intangible assets primarily comprise capitalized development expense for a range of geostationary communications satellites (carrying amount: EUR 46.412 million,

previous year: EUR 30.984 million), which will be completed on schedule in 2017, as well as purchased software. An increase of 1 percentage point in the WACC would not result in an impairment.

## (12) PROPERTY, PLANT AND EQUIPMENT)

### Statement of changes in property, plant and equipment - historical cost

in EUR 000	Operating and business equipment	Land and buildings	Total
<b>Balance on January 1, 2015</b>	<b>97,933</b>	<b>46,603</b>	<b>144,536</b>
Additions	6,913	5	6,918
Disposals	3,954	2	3,956
Reclassified	-31	31	0
<b>Balance on December 31, 2015/ January 1, 2016</b>	<b>100,861</b>	<b>46,637</b>	<b>147,498</b>
Additions	11,726	1,960	13,686
Disposals	2,233	2	2,257
Reclassified	-22	22	0
<b>Balance on December 31, 2016</b>	<b>110,332</b>	<b>48,617</b>	<b>158,927</b>

### Statement of changes in property, plant and equipment - cumulative depreciation

in EUR 000	Operating and business equipment	Land and buildings	Total
<b>Balance on January 1, 2015</b>	<b>66,831</b>	<b>23,435</b>	<b>90,266</b>
Additions	5,819	1,189	7,008
Disposals	3,962	2	3,964
<b>Balance on December 31, 2015/ January 1, 2016</b>	<b>68,688</b>	<b>24,622</b>	<b>93,310</b>
Currency translation changes	66	0	66
Additions	6,099	997	7,096
Disposals	2,162	1	2,163
<b>Balance on Dec. 31, 2016</b>	<b>72,691</b>	<b>25,618</b>	<b>98,309</b>
Net carrying amount on December 31, 2016	37,641	22,999	60,640
Net carrying amount on December 31, 2015	32,173	22,015	54,188

Additions in the year under review primarily entailed technical/electronic laboratory equipment, technical equipment and machinery, hardware, operating and business equipment and minor-value assets. With the exception of the land charges referred to in "Other financial obligations", there are unrestricted ownership rights to the remaining assets classed as property, plant and equipment.

**(13) SHARES IN ASSOCIATES**

This item comprises the share in the equity of associated company Aerotech Peissenberg GmbH & Co. KG, Peissenberg. The majority shareholder exercises a controlling influence on this entity's business model. ATP recorded total revenues of EUR 130.397 million (previous year: EUR 119.967 million), EBIT of EUR 4.924 million (previous year: EUR 4.354 million) and EBITDA of EUR 9.005 million (previous year: EUR 7.882 million) in 2016. It had non-current assets of EUR 28.903 million (previous year: EUR 28.598 million) and current assets of EUR 43.180 million (previous year: EUR 37.997 million) as of December 31, 2016. Non-current and current liabilities stood at EUR 70.794 million (previous year: EUR 66.425 million). The Company had positive equity of EUR 0.558 million as of the reporting date (previous year: EUR 0 million).

**(14) OTHER FINANCIAL ASSETS**

The increase is primarily due to the fair value recognized within equity of EUR 2.699 million (previous year: EUR 2.788 million) in connection with the remeasurement of the shares held in ORBCOMM Inc. It was remeasured on the basis of the stock market price of ORBCOMM Inc. as of December 31, 2016 and the USD/EUR exchange rate as of the same date.

**(15) RECEIVABLES AND OTHER ASSETS (CURRENT AND NON-CURRENT)**

Receivables of EUR 229.704 million (previous year: EUR 266.206 million) relate to construction contracts recognized using the percentage-of-completion method. Receivables and other assets mainly comprise current and non-current loans; there are no material interest or default risks. Receivables were predominantly denominated in euros as of the reporting date. The maximum default risk equals the carrying amount of the receivables reported on the face of the balance sheet.

in EUR 000	<b>31/12/2016</b>		31/12/2015	
	Current	Non-current	Current	Non-current
Trade receivables	89,327		60,475	
POC receivables	229,704		266,206	
Other financial receivables		535		413
Deposits		1,956		1,925
	<b>319,031</b>	<b>2,491</b>	<b>326,681</b>	<b>2,338</b>
less impairments	-270	0	-235	0
	<b>318,761</b>	<b>2,491</b>	<b>326,446</b>	<b>2,338</b>
		<b>2016</b>		<b>2015</b>
Impairments January 1		235		1,563
Added		270		0
derecognition of receivables		-235		-1,328
Reversed		0		0
<b>Amount on December 31</b>		<b>270</b>		<b>235</b>

Reasonable adjustments are made to allow for discernible risks.

The following provides an analysis of financial receivables and other financial assets. Trade receivables are not overdue up to 30 days. No impairments were recognized for trade receivables between 31 and 180 days as historical data and customer credit ratings suggest that there is only a low risk of default.

in EUR 000	up to 30 days	31-60 days	61-90 days	91-180 days	More than 180 days
Trade receivables	76,451	3,640	605	205	8,426

#### (16) INVENTORIES

Inventories dropped over the previous year to EUR 50.215 million (previous year: EUR 54.051 million). Prepayments received are not netted with inventories.

in EUR 000	2016	2015
Raw materials and supplies	18,316	17,726
Unfinished goods and services	22,430	33,829
Finished goods and merchandise	788	1,028
Advance payments made	8,681	1,468
<b>Total</b>	<b>50,215</b>	<b>54,051</b>

Prepayments made were allocated to inventories due to their close relationship.

The main impairments of inventories came to EUR 3.776 million at the end of the year (previous year: EUR 2.956 million) Impairments of EUR 0.820 million are reported as expense.

#### (17) CURRENT FINANCIAL AND NON-FINANCIAL OTHER ASSETS

in EUR 000	31/12/2016	31/12/2015
<b>NON-FINANCIAL ASSETS</b>		
Taxes	3,437	1,323
Deferrals	3,410	2,248
Others	3,869	2,664
<b>FINANCIAL ASSETS</b>		
Loans to associates	27,175	16,000
Other financial assets	7,397	6,556
<b>Total</b>	<b>45,288</b>	<b>28,791</b>

#### (18) SECURITIES

As of the reporting date, the securities portfolio was valued at EUR 1.017 million (previous year: EUR 2.103 million). This breaks down as follows: financial assets at fair value through profit or loss EUR 0.385 million (previous year: EUR 0.401 million) and loans and receivables EUR 0.632 million (previous year: EUR 1.702 million). The maximum default risk equals the carrying amount reported on the face of the balance sheet.

**(19) CASH AND CASH EQUIVALENTS**

Cash and cash equivalents were valued at EUR 56.567 million on the reporting date (previous year: EUR 59.949 million) and primarily comprise cash in hand and cash at banks. The cash at banks is due within three months and is exposed to only a minimal risk of any change in value. Cash and cash equivalents are the same as the cash and cash equivalents included in the cash flow statement.

**(20) SUBSCRIBED CAPITAL**

Since September 30, 2009, the Company's issued capital has equaled EUR 17,468,096.00 and is divided into 17,468,096 no-par-value ordinary bearer shares equivalent to a notional share of EUR 1.00 each in the Company's issued capital. Of these shares, an unchanged number of 5,208,880 shares compared with the previous year is free float. There is one vote for each share held.

**(a) Contingent capital**

At their annual general meeting held on January 23, 2001, the Company's shareholders increased the Company's share capital by approving the issue of a total of EUR 516,404.00 in the form of up to 516,404 bearer shares on a contingent basis. The contingent capital increase is to be used for granting options to entitled persons under a staff compensation system and is available for an indefinite period. No such staff compensation systems are currently in operation. The contingent capital increase may only be implemented if the holders of such options exercise these. The new shares are dividend-entitled for the first time in the year in the course of which they are issued. The Management Board is authorized subject to the Supervisory Board's approval to determine the specific conditions for such contingent capital increase. In the event that options are granted to members of the Company's Management Board, the Supervisory Board is authorized to determine the specific conditions for such contingent capital increase.

**(b) Authorized capital**

At their annual general meeting held on May 21, 2015, the shareholders passed a resolution authorizing the Company's Management Board – with the Supervisory Board's approval – to raise the share capital once or repeatedly by a total of up to EUR 8,734,048.00 on a cash or non-cash basis on or before May 20, 2020 (authorized capital 2015). The new shares may also be issued to the Company's employees. The Company's Management Board was authorized – subject to the Supervisory Board's approval – to exclude the shareholders' subscription rights in the following cases:

- (1) for fractional amounts;
- (2) for part of the authorized capital 2015 up to a maximum of EUR 1,746,809.00 provided that the new shares are issued in return for cash capital contributions at a price not materially less than the stock-market price (Section 186 (3) Sentence 4 of the German Stock Corporation Act);
- (3) for a part of authorized capital 2015 up to a maximum of EUR 8,734,048.00 provided the new shares
  - are issued as consideration for the acquisition of all or part of other companies or entities or other assets and such acquisition is in the interests of the Company; or
  - are issued as consideration for cash capital contributions to have the Company's stock listed in a foreign market in which it has previously not been admitted to trading.
  - The Management Board is additionally authorized subject to the Supervisory Board's approval to determine the extent and nature of the option rights and the other conditions of issue.

**(c) Authorization to acquire and sell treasury stock**

At the annual general meeting held on May 21, 2015, the shareholders authorized the Company to buy back treasury stock of up to a total of 10% of the Company's share capital on or before May 20, 2020. Upon this authorization taking effect, the authorization granted on May 19, 2010 for the acquisition and utilization of treasury stock was revoked.

a) The Company is authorized to buy back a total of up to 10% of its own share capital in the amount existing as of the date on which the resolution was passed. At no time may the shares acquired by the Company together with other treasury stock already acquired or still held by it or attributable to it in accordance with Sections 71d, 71e of the German Stock Corporation Act exceed more than ten percent (10%) of its share capital. The authorization may be exercised by the Company in full or in part, once or repeatedly or for different purposes and may also be exercised by dependent companies or companies in which OHB SE holds a majority stake for their account or for third-party account.

b) The acquisition of shares must comply with the equal treatment principle (Section 53a of the Stock Corporation Act) and is executed at the Management Board's discretion either via the stock market (1) or in a public offering addressed to all shareholders (2). In the second case, the provisions of the Securities Acquisition and Transfer Act must be observed where applicable.

(1) If the Company buys back its own shares via the stock market, the purchase price paid per share (net of transaction costs) may not be any more than 10% above or below the average closing price of the stock in XETRA trading (or an equivalent replacement system) on the Frankfurt stock exchange on the last three trading days prior to acquisition of the shares.

(2) If the Company buys back its own shares in a public offering addressed to all shareholders, the purchase price paid per share (net of transaction costs) may not be any more than 10% above or below the average closing price of the stock in XETRA trading (or an equivalent replacement system) on the Frankfurt stock exchange on the fifth, fourth and third trading days prior to the publication of the offer. If such a public offering is oversubscribed, the shares must be bought back on a quota system. Provision may be made for the preferred acceptance of a lower volume of up to 100 shares offered per shareholder and rounding in accordance with commercial provisions.

c) The Management Board is authorized to utilize the treasury stock acquired through the exercise of the authorization mentioned above for all purposes permitted by law, including but not limited to the following:

(1) Acting with the approval of the Supervisory Board it may use the treasury stock to have the Company's stock traded on foreign stock exchanges to which it has hitherto not been admitted.

(2) Subject to the approval of the Supervisory Board, it may offer or transfer the treasury stock to third parties for the purpose of acquiring companies, parts of companies or equity interests including but not limited to additions to existing equity interests.

(3) It may offer the treasury stock to the employees of the Company or other entities related to it in accordance with the definition in Sections 15 et seq. of the German Stock Corporation Act as employee shares.

(4) Acting with the approval of the Supervisory Board, it may redeem the treasury stock without any need for a resolution of the shareholders approving such redemption or related activities.

d) The Management Board is authorized – subject to the approval of the Supervisory Board and without any obligation for a further resolution to be passed by the shareholders – to sell the treasury stock acquired in accordance with the above authorization or in any other manner either publicly or in the form of an offer to the shareholders provided that the sale is for cash and the price offered is not materially less than the price at which equivalent stock issued by the Company is trading on the stock market on the date of the sale. For the purposes of the above rule, the stock market price is defined as the arithmetic mean of the price fixed for the Company's stock in the closing auctions in XETRA trading (or an equivalent replacement system) on the Frankfurt/Main stock exchange on the last five trading days before the date of the sale. This authorization is limited to a total of 10% of the Company's share capital. The maximum of 10% is reduced by the prorated share in the share capital accounted for by shares which are issued during the term of this authorization as part of an equity issue in which pre-emptive shareholder rights are excluded in accordance with Section 186 (3) Sentence 4 of the German Stock Corporation Act. The volume covered by the authorization is also reduced by an amount equaling the prorated share in the share capital accounted for by conversion and/or option rights under bonds issued on or after the date on which this authorization takes effect in connection with which pre-emptive shareholder rights are excluded in accordance with Section 186 (3) Sentence 4 of the German Stock Corporation Act.

e) The aforementioned authorizations may be utilized once or repeatedly, in part or in full, individually or jointly.

f) The shareholders' pre-emptive subscription rights with respect to the Company's treasury stock are excluded in cases in which it is used in accordance with the authorizations described in c) (1) – (3) and d) above.

#### **(21) SHARE PREMIUM**

The share premium primarily comprises the cash proceeds from the stock-market flotation.

#### **(22) RETAINED EARNINGS**

Retained earnings includes the negative goodwill arising from the consolidation of newly acquired companies up until 2002.

#### **(23) UNREALIZED GAINS AND LOSSES RECOGNIZED UNDER EQUITY**

This equity item primarily relates to actuarial losses from the measurement of retirement benefit obligations and the fair-value measurement of the shares held in ORBCOMM Inc. on the basis of the stock price on the reporting date net of the carrying amounts. In the period under review, cash flow hedges of USD 1.382 million (EUR 1.253 million) were due and were recycled from components of other comprehensive income. It also includes the foreign currency translation differences arising in connection with independent subsidiaries.

**Changes in equity not recognized in profit and loss**

in EUR 000	2016			2015		
	Before tax	Tax effect	Net	Before tax	Tax effect	Net
Currency translation difference	-125	0	-125	99	0	99
Net gains/losses from the measurement of financial assets recorded under equity	2,699	-43	2,656	2,788	-45	2,743
Cash flow hedges	-51	16	-35	-3	1	-2
Actuarial gains/losses	-7,892	2,369	-5,523	2,084	-461	1,623
<b>Total</b>	<b>-5,369</b>	<b>2,342</b>	<b>-3,027</b>	<b>4,968</b>	<b>-505</b>	<b>4,463</b>

**(24) TREASURY STOCK**

On September 13, 2011, the Management Board of OHB SE decided to implement a stock buyback program and to acquire up to 250,000 of the Company's shares in accordance with a resolution passed by the shareholders at the annual general meeting on May 19, 2010. This authorization expired on May 18, 2015. The purpose of the treasury stock was to place the Company's shares in foreign stock markets, to pay for the acquisition of other companies, parts of companies or shares in such companies and to issue shares to the Company's employees. The Company had been buying back shares on the stock market floor since September 14, 2011. Since the beginning of the buyback program, a total of 13,542 shares had been acquired at an average price of EUR 11.0145. No shares were bought back in the year under review. As of December 31, 2016, OHB SE's treasury stock comprised a total of 80,496 shares, equivalent to 0.46% of its issued capital.

**(25) MINORITY INTERESTS**

The non-controlling interests are valued at EUR 14.942 million (previous year: EUR 13.399 million) and primarily relate to the co-shareholders in the MT Aerospace subgroup. The non-controlling interests received dividends of EUR 0.754 million in the year under review (previous year: EUR 0.065 million). As of the reporting date, MT Holding, in which OHB SE holds a 70% interest, had non-current assets of EUR 63.213 million (previous year: EUR 51.655 million), current assets of EUR 154.476 million (previous year: EUR 145.602 million), equity of EUR 30.380 million (previous year: EUR 25.575 million), non-current debt capital of EUR 141.272 million (previous year: EUR 106.732 million) and current debt capital of EUR 46.036 million (previous year EUR 64.950 million).

**(26) PROVISIONS FOR RETIREMENT BENEFITS AND SIMILAR OBLIGATIONS**

Retirement benefit obligations break down as follows:

in EUR 000	2016	2015
Retirement benefits	94,620	90,646
Similar obligations	5,817	2,929
<b>Retirement benefit obligations</b>	<b>100,437</b>	<b>93,575</b>

OHB Group has made arrangements for post-retirement benefits for entitled employees in both business units. The amount of the future benefits is generally based on the length of service, amount of remuneration and position held within the Company. The direct and indirect obligations encompass those under existing pensions and entitlement to future pensions and retirement benefits. Reinsurance has been taken out to cover retirement benefit obligations. Not all of these reinsurance policies satisfy the conditions for classification as plan assets. The latter are reported within other non-current assets. The reinsurance policies which satisfy the conditions for classification as plan assets are

netted with the retirement benefit obligations. In addition there are plan assets of EUR 2.355 million (previous year: EUR 2.045 million) in the form of fixed-income securities. There were no extraordinary expenses or income as a result of the termination of any plans or on account of the curtailment or transfer of benefits in the year under review. The calculation of post-retirement benefit obligations takes account of market interest rates as well as trends in wages and salaries, pensions and fluctuations on the basis of the following actuarial assumptions:

- Discount rate: 1.80% (previous year: 2.30%)
- Wage/salary trend: 2.75% (previous year: 2.75%)
- Wage drift: 0.00% (previous year: 0.00%)
- Pension drift: 1.25% (previous year: 1.25%)

In some cases, differing assumptions were made for small volumes in foreign subsidiaries. These parameters are also applied in the following year to the calculation of the cost of the entitlement acquired. The total cost of defined benefit commitments breaks down as follows:

in EUR 000	<b>2016</b>	2015*
Current service cost	1,201	1,549
Interest expense	2,247	2,151
Expect income (-) from plan assets	-179	-150
<b>Total</b>	<b>3,269</b>	<b>3,550</b>

\*Adjusted to allow for pension-like obligations

The present values of the defined benefit obligations changed as follows:

in EUR 000	<b>2016</b>	2015*
Present value of the defined benefit obligations on January 1	100,053	103,279
Changes in consolidated companies	0	-34
Present value of the entitlement acquired in the year	1,201	1,549
Interest expenditure on entitlement already acquired	2,247	2,151
Payments from provisions	-4,286	-4,890
Actuarial gains (-)/losses (+)	7,871	-2,002
<b>Present value of the defined benefit obligations on December 31</b>	<b>107,086</b>	<b>100,053</b>

\* Adjusted to allow for pension-like obligations

The plan assets break down as follows:

in EUR 000	2016	2015*
Value of plan assets on January 1	6,478	6,936
Payments received	124	126
Payments made	-111	-811
Expected income	179	150
Actuarial gains (-)/losses (+)	-21	77
<b>Value of plan assets on December 31</b>	<b>6,649</b>	<b>6,478</b>

\* Adjusted to allow for pension-like obligations

Of the remeasurements, EUR 0.273 million is due to changes in demographic assumptions, EUR 6.644 million to changes in financial assumptions, EUR 0.954 million to changes as a result of historical data and EUR 0.021 million to the remeasurement of returns on plan assets.

The plan assets (EUR 5.295 million, previous year: EUR 5.276 million) chiefly comprise savings plans with insurance companies that are classified by the Belgian Financial Services and Markets Authority as Class 21 and Class 23 insurance policies. A further amount of EUR 2.355 million (previous year: EUR 2.045 million) of these plan assets comprises fixed-income securities.

Actual income from plan assets came to EUR 0.105 million (previous year: EUR 0.182 million). The present value is reconciled with the defined benefit [defined benefit liability (+)/defined benefit asset (-)] as follows:

in EUR 000	2016	2015*
Actual present value of the defined benefit obligation	107,086	100,053
Fair value of plan assets	-6,649	-6,478
<b>Retirement benefit obligations recorded on the balance sheet</b>	<b>100,437</b>	<b>93,575</b>

\* Adjusted to allow for pension-like obligations

The retirement benefit obligation breaks down into a defined benefit liability and defined benefit asset as follows:

in EUR 000	2016	2015*
Defined Benefit Asset	0	0
Defined Benefit Liability	100,437	93,575

\* Adjusted to allow for pension-like obligations

The following cash outflows are expected in the following periods:

Year(s)	in EUR 000
2017	4,836
2018	5,313
2019	4,775
2020	4,857
2021	5,135
2022-2026	25,354

The present value of the defined benefit obligations of EUR 0.426 million (previous year: EUR 0.423 million) was calculated in accordance with the entry age normal method. The fractional values are computed using actuarial principles on the basis of the 2005 G biometric tables compiled by Prof. Dr. Klaus Heubeck and an interest rate of 3.89%. With respect to these provisions, it is assumed that the application of the projected unit credit method provided for in IAS 19 does not result in any major differences in this item. If the discount rate were 0.25% lower, the present value of the retirement benefit obligations would increase by EUR 3.635 million. If the discount rate were 0.25% higher, the present value of the retirement benefit obligations would decrease by EUR 3.444 million. If the rate by which retirement benefits rise were 0.25% higher, the present value of the retirement benefit obligations would increase by EUR 2.955 million. If the rate by which retirement benefits rise were 0.25% lower, the present value of the retirement benefit obligations would decrease by EUR 2.840 million.

#### **(27) OTHER PROVISIONS (CURRENT AND NON-CURRENT)**

Non-current personnel-related provisions primarily comprise provisions for phased retirement scheme obligations in the Aerospace + Industrial Products business unit. Other personnel-related provisions primarily relate to obligations towards employees of EUR 15.069 million (previous year: EUR 13.286 million). An outflow in the personnel-related provisions is expected for 2017.

#### **Statement of changes in provisions\***

in EUR 000	01/01/2016	Additions	Utilized	Reversed	Other changes	31/12/2016	Of which non-current
Pending losses and risks	2,708	3,384	1,154	207	0	4,731	115
Remaining work on fully invoiced projects	7,649	3,054	2,907	1,514	-241	6,041	0
Other provisions	3,848	3,606	2,296	849	0	4,309	866
Personnel-related provisions	13,286	13,581	12,049	162	-146	14,510	451
	<b>27,491</b>	<b>23,625</b>	<b>18,406</b>	<b>2,732</b>	<b>-387</b>	<b>29,591</b>	<b>1,432</b>

\* See Note 32 for details of changed presentation

#### **(28) NON-CURRENT FINANCIAL LIABILITIES**

This item entails non-current liabilities towards banks owed by the Italian subsidiary OHB Italia S.p.A. in an amount of EUR 0.349 million (previous year: EUR 0.934 million). These liabilities are due for settlement in more than twelve months after the reporting date.

#### **(29) NON-CURRENT PREPAYMENTS RECEIVED**

This entails prepayments made by customers for contracts under construction which are due for completion in more than twelve months. They are measured at their nominal amounts.

**(30) CURRENT FINANCIAL LIABILITIES**

This entails current liabilities towards banks held by OHB SE (EUR 33 million, previous year: EUR 33 million), OHB System AG (EUR 52.009 million, previous year: EUR 100.023 million), OHB Sweden AG (EUR 0.002 million, previous year: EUR 0.564 million) and OHB Italia S.p.A. (EUR 8.097 million, previous year: EUR 5.930 million). The syndicated loan provides for two covenants (interest cover and leverage), which were observed in the year under review.

**(31) CURRENT PREPAYMENTS RECEIVED ON ORDERS**

This item comprises prepayments made by customers for contracts under construction due for completion in less than twelve months.

**(32) CURRENT FINANCIAL AND NON-FINANCIAL OTHER LIABILITIES**

These primarily entail personnel-related obligations. In addition, this item is composed of obligations of EUR 9.096 million (previous year: EUR 0.991 million) under outstanding invoices that were reported under other provisions in the previous year.

This reclassification is considered to be appropriate and will be retained in the future.

in EUR 000	31/12/2016	31/12/2015
<b>NON-FINANCIAL LIABILITIES</b>		
Value added tax	7,693	2,676
Social security and payroll tax liabilities	3,946	3,368
Others	14,169	4,015
<b>FINANCIAL LIABILITIES</b>		
Hedged derivatives	250	335
Other financial liabilities	2,929	6,880
<b>Total</b>	<b>28,987</b>	<b>17,274</b>

**(33) ADDITIONAL DISCLOSURES ON FINANCIAL INSTRUMENTS**

Originated financial assets primarily comprise other financial assets, trade receivables, securities available for sale and held to maturity and cash and cash equivalents. The available-for-sale and held-for-trading financial assets are reported at their fair value and equity investments that are not measured at fair value and the other financial assets are reported at amortized cost. Originated financial liabilities primarily comprise liabilities measured at amortized cost.

Holdings of originated financial instruments are reported on the face of the balance sheet and measured at their maximum default risk. Adjustments are made for all discernible risks of default in financial assets. Financial instruments for which market prices are available are classified as available-for-sale financial assets; this category comprises solely such assets.

Current financial liabilities chiefly comprise amounts drawn on a credit facility, utilization of which is subject to compliance with two financial covenants at the level of the OHB Group. The historical cost of loans and receivables mostly equals their fair value (nominal amount less any impairment). The fair value of financial liabilities at amortized cost is derived from their discounted settlement amounts. Otherwise, fair values are determined by reference to listed prices.

Other financial liabilities include a loan of EUR 1.199 million (previous year: EUR 1.055 million) received from the support fund which is subject to interest of 5%. As the loan can be terminated at any time, the carrying amount is close to its fair value. The loan must be repaid in a single sum upon termination at the latest.

**Measurement hierarchy for financial assets at fair value through profit and loss**

**Level 1:** Financial instruments traded in active markets, the listed prices of which are applied for measurement purposes.

**Level 2:** Financial instruments are measured using methods with parameters which are derived directly or indirectly from observable market data.

**Level 3:** Financial instruments are measured using methods with parameters which are not based solely on observable market data.

in EUR 000	<b>2016</b>			2015		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
<b>AVAILABLE-FOR-SALE FINANCIAL ASSETS</b>						
Equity interest in ORBCOMM	17,495			14,795		
Held for trading Securities	385			401		

The fair value of the securities is derived from their listed market price. There were no transfers between the individual hierarchical levels in the year under review.

## Loan settlement periods

					2016
in EUR 000	Less than one year	One to two years	Three to five years	More than five years	Total
Non-current financial liabilities	0	349	0	0	349
Current financial liabilities	93,108	0	0	0	93,108
Trade payables	67,308	0	0	0	67,308
Prepayments received on account of orders	102,389	35,020	2,378	0	139,787
Other current financial liabilities	2,929	0	0	0	2,929
<b>Total</b>	<b>265,734</b>	<b>35,369</b>	<b>2,378</b>	<b>0</b>	<b>303,481</b>

					2015
in EUR 000	Less than one year	One to two years	Three to five years	More than five years	Total
Non-current financial liabilities	110	622	202	0	934
Current financial liabilities	139,517	0	0	0	139,517
Trade payables	75,432	0	0	0	75,432
Prepayments received on account of orders	54,550	6,565	0	0	61,115
Other current financial liabilities	6,880	0	0	0	6,880
<b>Total</b>	<b>276,489</b>	<b>7,187</b>	<b>202</b>	<b>0</b>	<b>283,878</b>

## Additional disclosures on financial instruments

in EUR 000	31/12/2016		31/12/2015	
	Non-current	Current	Non-current	Current
Available-for-sale financial assets (available for sale)	30,979		26,335	
Financial assets held for trading		385		401
Loans and receivables				
Trade receivables and PoC		318,761		326,446
Securities	632		1,702	
Other financial assets	2,491	34,572	2,338	21,825
Cash and cash equivalents		56,567		59,949
	<b>3,123</b>	<b>409,900</b>	<b>4,040</b>	<b>408,220</b>
	<b>34,102</b>	<b>410,285</b>	<b>30,375</b>	<b>408,621</b>
Historical cost				
Trade payables		67,308		100,896
Financial liabilities	349	93,108	934	139,517
Other financial liabilities		2,929		6,880
	<b>349</b>	<b>163,345</b>	<b>934</b>	<b>247,293</b>

It is assumed that the carrying amount of the other financial assets, the trade receivables, the PoC receivables and cash and cash equivalents equals their fair value due to their short-term status.

The carrying amount of the non-current assets classified as loans and receivables (EUR 2.491 million, previous year: EUR 2.338 million) approximates their fair value. These chiefly comprise non-interest-bearing deposits. However, in view of the current low interest rates, there is virtually no difference.

The shares in ORBCOMM Inc. are classified as available for sale and recognized at their fair value (EUR 17.495 million, previous year: EUR 14.795 million) as determined by the price of the shares quoted on the New York Stock Exchange. As in the previous year, the shares in Arianespace Participation (EUR 8.328 million), MAN Dezentrale Energiesysteme GmbH (EUR 1.022 million), MT Mecatronica SpA (EUR 0.530 million) and other small shares are recognized at their carrying amount as it was not possible to reliably calculate a fair value.

The securities classified as financial assets held for trading (FAHfT) are recognized at their fair value, meaning that the carrying amount equals the fair value. The fair value was derived from the listed stock exchange price on the reporting date.

The carrying amount of current financial liabilities measured at amortized cost as well as financial liabilities and trade payables equals their fair value due to their short-term nature.

Non-current financial liabilities measured at amortized cost (FLAC) have a carrying amount of EUR 0.349 million (previous year: EUR 0.934 million), which is close to their fair value due to the variable interest rate due to the variable interest rates.

Net earnings do not include any interest income or interest expense. These are described in the section on net finance income/finance expense.

**Net gains/losses by type**

in EUR 000	<b>2016</b>	2015
Assets held for trading	0	2
Available-for-sale financial assets	2,699	2,788
Loans and receivables	7	37
of which impaired	7	37
Financial liabilities at amortized cost	0	0

**CREDIT RISKS**

Credit risks are generally considered to be small. However, general risks of default may always occur as a result of specific economic conditions. Receivables comprise a large proportion of amounts owed by public-sector customers free of any credit risk, while there is no risk clustering with respect to the other amounts owed. For this reason, the Group as a whole does not take out any credit insurance for receivables.

**CURRENCY RISKS**

The USD/EUR exchange rate influences income in aviation business. All orders and receivables denominated in US dollars have been hedged by means of currency forwards for 2017.

As of the reporting date, currency forwards with a nominal value of USD 7.125 million (EUR 6.403 million) had been transacted to cover the exports of a Group company. Of this, cash flow hedges account for USD 3.891 million (EUR 3.494 million). Cash flow hedges of USD 3.141 million (EUR 2.808 million) mature in the first half of 2017 and USD 0.750 million (EUR 0.686 million) in the first half of 2018. Other liabilities include currency forwards with a fair value of EUR 0.130 million (previous year: EUR 0.267 million) for fair value hedges and EUR 0.120 million (previous year: EUR 0.068 million) for cash flow hedges.

The fair value of the derivatives was calculated on the basis of forward prices on the reporting date.

**INTEREST RISKS**

Generally speaking, investments with low interest rates are preferred so as to avert interest risks and are subject to normal market fluctuation. Short-term loans are raised to cover requirements of current assets arising from project payment cycles. For this purpose, funds under a loan facility agreement with a market-based floating interest rate component are used. A 1% change in the interest rate on such drawings would result in additional expense of around EUR 0.930 million. There is unlikely to be any further decline in interest rates.

**CAPITAL RISK MANAGEMENT**

One of the OHB Group's most important financial targets is to achieve sustained growth in enterprise value and to ensure solvency at all times in the interests of protecting its going-concern status and to achieve an optimum capital structure. In this connection, the creation of adequate liquidity reserves is of crucial importance as is the ability to distribute an annual dividend to the shareholders. These goals are achieved by means of an integrated controlling system in connection with which management receives various data on individual items of the balance sheet as part of a monthly analysis. This provides information on trends in the Company's equity and also serves as a basis for necessary business decisions. As of 31 December 2016, the equity ratio stood at 26.9% (previous year: 26.4%). The equity ratio was calculated relative to the Group's total assets. The Company is seeking an equity ratio of over 25%.

## IX. OTHER DISCLOSURES

### SEGMENT REPORTING

IFRS 8 stipulates that operating segments are to be defined on the basis of internal segment reporting which is regularly reviewed by the Company's chief operating decision maker with respect to the allocation of resources to these segments and the assessment of their profitability. The main management indicators used within the OHB Group are total revenues, EBIT and EBITDA. Information reported to the Management Board as the chief operating decision maker for the purposes of allocating resources to the Company's segments as well as the assessment of their profitability mostly covers the types of goods and services which are produced or provided. The Group comprises the following reportable segments as defined in IFRS 8

- Space Systems
- Aerospace + Industrial Products

The Space Systems segment chiefly develops and executes space projects. The Aerospace + Industrial Products segment is primarily responsible for fabricating aviation and space products as well as other industrial activities. The segments are described in detail in the Group management report. Segment income, expenses and earnings also entail business relations between the business units. These transfers were netted in full. The measurement principles applied in segment reporting are identical to those applied in the preparation of the consolidated financial statements. The holding company is shown separately as most of the equity interests are held on this level. OHB SE exercises the function of an active holding company. Sales (non-consolidated) break down by product group as follows:

#### Sales by product group (non-consolidated)

in EUR 000	<b>2016</b>	2015
Space technology	686,341	737,303
Aviation	18,542	15,178
Antennas	12,133	14,488
Process control technology	6,043	9,438
Telematics	5,955	5,864
<b>Total</b>	<b>729,014</b>	<b>782,271</b>

#### Sales by region (non-consolidated)

in EUR 000	<b>2016</b>	2015
Germany	260,257	297,673
Rest of Europe	463,509	471,233
Rest of the world	5,248	13,365
<b>Total</b>	<b>729,014</b>	<b>782,271</b>

With sales of EUR 152.028 million, EUR 123.190 million and EUR 101.121 million, respectively, three customers in the Space Systems segment each account for more than 10% of the OHB Group's total sales. Non-current assets with a carrying amount of EUR 179.999 million (previous year: EUR 127.764 million) are located in Germany and those with a carrying amount of EUR 41.372 million (previous year: EUR 38.011 million) are located in other countries.

## Segment reporting

in EUR 000	Space Systems		Aerospace + Industrial Products	
	2016	2015	2016	2015
Sales	524,636	532,747	181,681	196,586
of which internal sales	233	1,527	6,900	8,100
Total revenues	559,451	553,140	175,943	186,778
Cost of materials and services purchased benefits	368,204	375,777	75,665	94,748
<b>EBITDA</b>	<b>33,060</b>	<b>31,534</b>	<b>21,861</b>	<b>20,454</b>
Depreciation/amortization	7,569	7,524	4,636	4,434
<b>EBIT</b>	<b>25,491</b>	<b>24,010</b>	<b>17,225</b>	<b>16,020</b>
Intangible assets, property, plant and equipment and financial assets	110,356	82,589	57,467	47,264
Current assets	338,184	377,090	174,377	165,090
<b>Total assets</b>	<b>448,540</b>	<b>459,679</b>	<b>231,844</b>	<b>212,354</b>
Equity	106,864	95,887	40,160	34,569
Liabilities	341,676	363,792	191,684	177,785
<b>Total assets</b>	<b>448,540</b>	<b>459,679</b>	<b>231,844</b>	<b>212,354</b>
Investments net of financial assets	35,408	21,830	14,766	2,777

## OTHER FINANCIAL OBLIGATIONS

in EUR 000	2016			
	Less than one year	One to five years	More than five years	Total
Rental contracts (operating leases)	11,963	33,830	33,945	79,738
Leases (operating leases)	730	1,317	0	2,047
<b>Total</b>	<b>12,693</b>	<b>35,147</b>	<b>33,945</b>	<b>81,785</b>

in EUR 000	2015			
	Less than one year	One to five years	More than five years	Total
Rental contracts (operating leases)	11,538	29,172	33,958	74,668
Leases (operating leases)	582	687	0	1,269
<b>Total</b>	<b>12,120</b>	<b>29,859</b>	<b>33,958</b>	<b>75,937</b>

There are no purchase options. The participating companies have assumed joint and several liability for obligations under the credit facility. OHB SE has issued a letter of comfort of EUR 14.453 million in favor of a customer of Group companies for the completion of projects.

Reconciliation						
Holding company		Consolidation			Total	
<b>2016</b>	2015	<b>2016</b>	2015	<b>2016</b>	2015	
0	0	-7,133	-9,627	699,184	719,706	
0	0	-7,133	-9,627	0	0	
7,562	6,015	-14,570	-15,565	728,386	730,368	
0	0	-5,443	-8,172	438,426	462,353	
<b>160</b>	<b>147</b>	<b>0</b>	<b>0</b>	<b>55,081</b>	<b>52,135</b>	
27	14	149	-51	12,381	11,921	
<b>133</b>	<b>133</b>	<b>-149</b>	<b>51</b>	<b>42,700</b>	<b>40,214</b>	
61,497	58,842	-39,688	-39,428	189,632	149,267	
53,410	44,660	-72,689	-97,382	493,282	489,458	
<b>114,907</b>	<b>103,502</b>	<b>-112,377</b>	<b>-136,810</b>	<b>682,914</b>	<b>638,725</b>	
64,974	66,603	-28,408	-28,308	183,590	168,751	
49,933	36,899	-83,969	-108,502	499,324	469,974	
<b>114,907</b>	<b>103,502</b>	<b>-112,377</b>	<b>-136,810</b>	<b>682,914</b>	<b>638,725</b>	
42	10	0	0	50,216	24,617	

#### EMPLOYEES

The average head count stood at 2,220 in the year under review (previous year: 2,054). As of December 31, 2016, there were 1,500 employees in the Space Systems business unit (previous year: 1,346), 789 employees in the Aerospace + Industrial Products business unit (previous year: 701) and 9 employees in the holding company (previous year: 9).

## X. MANAGEMENT BOARD AND SUPERVISORY BOARD

The Company's Management Board comprises:

- Mr. Marco Fuchs, Lilienthal, Chief Executive Officer
- Dr. Fritz Merkle, Eching/Freising
- Mr. Ulrich Schulz, Bremen
- Mr. Klaus Hofmann, Bremen

The Company's Supervisory Board comprises:

- Mrs. Christa Fuchs, Bremen, managing shareholder of VOLPAIA Beteiligungs-GmbH, Bremen; Chairwoman
- Prof. Heinz Stoewer, Munich, Professor em. Space Systems Engineering, Technical University of Delft, Netherlands, managing director of Space Associates GmbH, Munich
- Mr. Robert Wethmar, Hamburg, partner at law firm Taylor Wessing

Offices held by members of the Company's Management Board and Supervisory Board in other supervisory boards and management bodies in 2016:

- Mr. Marco Fuchs

Group mandates:

- MT Aerospace AG, Augsburg, chairman of the supervisory board;
- ORBCOMM Inc., Rochelle Park, NJ, United States, member of the board of directors
- OHB Italia S.p.A., Milan, Italy, chairman of the board of directors
- OHB Sweden AB, Kista, Sweden, chairman of the board of directors
- Antwerp Space N.V., Antwerp, Belgium, chairman of the board of directors
- LuxSpace Sàrl, Betzdorf, Luxembourg, chairman of the board of directors

Non-group mandates:

- SV Werder Bremen GmbH & Co. KGaA., Bremen, deputy chairman of the supervisory board
- ZARM Technik AG, Bremen, chairman of the supervisory board
- Jacobs University Bremen gGmbH, Bremen, member of the supervisory board
- Mrs. Christa Fuchs
  - ORBCOMM Deutschland AG, Bremen, chairwoman of the supervisory board (Group mandate)
  - Cosmos Space Systems AG, Bremen, chairwoman of the supervisory board (Group mandate)
  - OHB System AG, Bremen, chairwoman of the supervisory board (Group mandate)
- Mr. Ulrich Schulz
  - ATB GmbH, Bremen, chairman of the supervisory board (Group mandate)

**Securities held by members of the Company's Management Board and Supervisory Board**

as of December 31, 2016	Shares	Changes 2015/16
Christa Fuchs, Chairwoman of the Supervisory Board	1,401,940	+ 1,250
Prof. Heinz Stoewer, member of the Supervisory Board	1,000	-
Marco Fuchs, Chairman of the Management Board	6,046,610	+ 2,861,814
Dr. Fritz Merkle, member of the Management Board	1,000	-
Ulrich Schulz, member of the Management Board	54	-

**EXEMPTION FROM THE DUTY TO DISCLOSE THE FINANCIAL STATEMENTS OF THE GROUP COMPANIES**

At their meeting of March 21, 2016, the shareholders of OHB System AG passed a resolution to adopt the exemption provisions in Section 264 (3) of the German Commercial Code with respect to disclosure of the annual financial statements.

**RELATED PARTIES DISCLOSURES**

Related parties as defined in IAS 24 comprise Christa Fuchs, Romana Fuchs Mayrhofer, Marco Fuchs, Ulrich Schulz, Dr. Fritz Merkle, Klaus Hofmann, Prof. Heinz Stoewer and Robert Wethmar. The following companies are related parties:

- OHB Grundstücksgesellschaft, Achterstraße GmbH & Co. KG, Bremen
- OHB Grundstücksgesellschaft, Kitzbühler Straße GmbH & Co. KG, Bremen
- OHB Grundstücksgesellschaft, Universitätsallee GmbH & Co. KG, Bremen
- OHB Grundstücksgesellschaft, Karl-Ferdinand-Braun-Straße GmbH & Co. KG, Bremen
- VOLPAIA Beteiligungs-GmbH, Bremen
- Apollo Capital Partners GmbH, Munich
- Immobiliare Gallarate S.r.l., Milan
- KT Grundstücksverwaltungs GmbH & Co. KG, Munich
- Schloß Annaberg GmbH, Latsch, Italy

Business transactions with related parties are conducted on arm's length terms. In the year under review, sales and other income of EUR 0 million (previous year: EUR 0 million) arose from transactions with related parties, while expenditure on goods and services purchased and rentals came to around EUR 7.154 million (previous year: EUR 4.901 million) at Group companies. Under a contract with the law firm Taylor Wessing, of which Robert Wethmar is a partner, fees of a total of EUR 0.305 million were paid in consideration of the advisory services for Group companies. Outstanding receivables as of the reporting date were valued at EUR 0 million (previous year: EUR 0 million). As of December 31, 2016, there were liabilities of EUR 0 million (previous year: EUR 1.113 million).

As of the reporting date, there were receivables of EUR 0.025 million (previous year: EUR 0.025 million) and liabilities of EUR 0.968 million (previous year: EUR 1.105 million) against related parties. Sales with related parties came to EUR 7.154 million in the year under review (previous year: EUR 4.901 million).

There are loans with a carrying amount of EUR 27.175 million (previous year: EUR 23.575 million) for an associate subject to a fixed interest rate of 3-5%. This loan is automatically renewed unless it is terminated before the expiry date. Interest of EUR 1.076 million (previous year: EUR 0.300 million) was recognized. All loans expire within one year. The outstanding loan amount is payable in a single amount upon termination. No collateral has been provided for the loans. The carrying amount of the loans is roughly the same as their fair value due to the variable interest rate. In addition, there are trade receivables of EUR 1.644 million (previous year: EUR 1.644 million).

#### **DECLARATION OF CONFORMITY WITH THE CORPORATE GOVERNANCE CODE PURSUANT TO SECTION 161 OF THE GERMAN STOCK CORPORATIONS ACT**

The Management Board and the Supervisory Board have published the declaration required pursuant to Section 161 of the German Stock Corporation Act confirming that save for a few small exceptions (see Corporate Governance on page 69) the Group already conforms to the German Corporate Governance Code and will continue to do so in the future. The declaration of conformance is available on the Internet at:

<https://www.ohb.de/en/investor-relations/corporate-governance/declaration.html>

#### **ALLOCATION OF EARNINGS**

OHB SE exercises the function of an active holding company. Its main assets comprise investments which were carried at a value of EUR 45.054 million on the reporting date. OHB SE's equity stood at EUR 53.738 million on December 31, 2016. The Company's single-entity financial statements carry cash and cash equivalents of EUR 1.308 million. The net loss for 2016 of EUR 5.394 million was particularly due to loss-absorption expenses of EUR 6.612 million. The single-entity financial statements prepared by OHB SE pursuant to German GAAP (HGB) for the year ending December 31, 2016 carry an unappropriated surplus of EUR 14,500,292.76. The Management Board will be asking the shareholders to pass a resolution providing for the allocation of the Company's unappropriated surplus of EUR 14.500 million for 2016 (as specified in the table entitled "Allocation of unappropriated surplus"). The figures stated for the total dividend and the amount to be carried forward are based on the number of dividend-entitled shares as of the date of the Management Board's allocation proposal. Pursuant to Section 71b of the German Stock Corporation Act, the Company's treasury stock (80,496 shares) as of the reporting date is not dividend-entitled. If the number of shares held as treasury stock on the date on which the shareholders pass a resolution adopting the proposal for the allocation of the Company's unappropriated surplus is greater or smaller than on the reporting date, the amount payable to the shareholders will be increased or, as the case may be, decreased by the amount attributable to the difference in the number of shares. The amount to be carried forward will be adjusted accordingly. However, there will be no change in the distributable dividend per dividend-entitled share. If necessary, the shareholders will be presented with a correspondingly modified proposal for the allocation of the Company's unappropriated surplus. The dividend distributed for 2015 came to EUR 0.40 per dividend-entitled share (17,387,600 shares), resulting in a total payout of EUR 6,955,040.00. In addition, an amount of EUR 19,984,784.32 was carried forward. The unappropriated surplus came to EUR 26,849,824.32 in 2015.

#### **Allocation of earnings**

in EUR	<b>2016</b>
Dividend of EUR 0.40 for each dividend entitled share (17,387,600 shares)	6,955,040.00
Amount to be carried forward	7,545,252.76
Unappropriated surplus	14,500,292.76

#### **REMUNERATION**

As a matter of principle, the compensation paid to the members of the Management Board comprises fixed and variable components. There is currently no provision for any share-based compensation components or compensation components with a long-term incentive. In the event of the death of a Management Board member, his surviving dependents are entitled to receive continued payment of that member's fixed compensation for a further period of six months. The principles of the compensation system as well as the individualized compensation paid to the Management Board are described in detail in the compensation report, which forms part of the management report (page 66). The total fixed compensation paid to the Management Board in 2016 came to EUR 2.056 million (previous year:

EUR 1.575 million). Of this an amount of EUR 0.950 million (previous year: EUR 0.719 million) comprises variable remuneration, EUR 1.106 million (previous year: EUR 0.858 million) fixed remuneration components including benefits such as advances towards health and pension insurance and the use of a company car. The total compensation paid to members of the Supervisory Board for 2016 came to EUR 70 thousand (previous year: EUR 70 thousand). Of this, the chairwoman of the Supervisory Board received EUR 30 thousand (previous year: EUR 30 thousand) and the other members of the Supervisory Board a total of EUR 40 thousand (previous year: EUR 40 thousand). Variable compensation components were dispensed with. Under a contract with the law firm Taylor Wessing, of which Robert Wethmar is a partner, fees of a total of EUR 0.305 million were paid in consideration of the advisory services for Group companies. Surviving-dependant benefits of EUR 22 thousand were paid to members of the Supervisory Board. Retirement benefit provisions of EUR 0.205 million have been set aside for this purpose.

#### AUDITOR FEES AND SERVICES

In the period under review, the OHB Group recognized the following fees paid to PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Bremen (previous year: BDO AG Wirtschaftsprüfungsgesellschaft, Hamburg), the auditors of its financial statements:

- Auditing of annual and consolidated financial statements: EUR 0.220 million (previous year: EUR 0.222 million)
- Tax consultancy services: EUR 0 million (previous year: EUR 0.083 million)
- Other services: EUR 0.042 million (previous year: EUR 0.038 million)

#### EVENTS AFTER THE BALANCE SHEET DATE

The telecommunications satellite H36W-1, which OHB System AG engineered and assembled for Spanish satellite operator Hispasat, was successfully placed in a geostationary orbit on January 28, 2017. A Russian Soyuz carrier had lifted off on schedule at 2.03 hours CET from the European launch pad in Kourou, French Guiana. Roughly half an hour later, the carrier released the satellite with a weight of a 3.2 tons into its geostationary transfer orbit. The successful launch of the first satellite from the SmallGEO range marks a milestone in OHB's history. SmallGEO is the first telecommunications satellite to be developed, integrated and tested in Germany in more than 20 years. The consolidated financial statements were approved by the Management Board for publication following the Supervisory Board's meeting of March 20, 2017.

The Management Board

Bremen, March 20, 2017



DR. FRITZ MERKLE



MARCO FUCHS



KLAUS HOFMANN



ULRICH SCHULZ

## AUDITORS' REPORT

We have audited the consolidated financial statements prepared by OHB SE, comprising the income statement, the statement of comprehensive income, the statement of financial position, the cash flow statement, the statement of changes in equity and the notes to the consolidated financial statements, as well as the Group management report for the financial year commencing on January 1, 2016 and ending on December 31, 2016. The preparation of the consolidated financial statements and the Group management report in accordance with the International Financial Reporting Standards (IFRS), as they are to be applied in the EU, and the additional accounting provisions in accordance with Section 315a (1) HGB is the responsibility of the Company's Management Board. Our responsibility is to express an opinion on the consolidated financial statements and the group management report based on our audit. We conducted our audit of the consolidated financial statements in accordance with Section 317 HGB [Handelsgesetzbuch – German Commercial Code] and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany – IDW).

Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the consolidated financial statements in accordance with the applicable principles of proper accounting and in the Group management report are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Group and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the consolidated financial statements and the group management report are examined primarily on a test basis within the framework of the audit. The audit includes an assessment of the financial statements of the companies included in the Group, the definition of the scope of consolidation, the accounting and consolidation principles used and the significant estimates made by the Management Board as well as evaluating the overall presentation of the consolidated financial statements and the Group management report. We believe that our audit provides a reasonable basis for our opinion. Our audit has not led to any reservations.

In our opinion based on the results of our audit, the consolidated financial statements comply with IFRS as they are to be applied in the EU, the supplementary provisions of German commercial law in accordance with Section 315a (1) of the German Commercial Code and in the light of these provisions give a true and fair view of the net assets, financial position and results of operations of the Group. The Group management report is consistent with the consolidated financial statements and complies with the statutory provisions and on the whole provides a suitable understanding of the Group's position and suitably presents the opportunities and risks to future development.

Bremen, March 20, 2017

PricewaterhouseCoopers GmbH  
Wirtschaftsprüfungsgesellschaft

Prof. Dr. Gregor Solfrian  
Wirtschaftsprüfer  
(German Public Auditor)

Dr. Thomas Ull  
Wirtschaftsprüfer  
(German Public Auditor)

## **RESPONSIBILITY STATEMENT**

"To the best of our knowledge, and in accordance with the applicable reporting principles for financial reporting, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the management report of the Group includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group."

Bremen, March 20, 2017

The Management Board

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**SERVICE**

FOR THE PERIOD  
FROM JANUARY 1, 2016  
UNTIL DECEMBER 31, 2016



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and Imprint

# GLOS- SARY



## **ARIANE**

Series of European launch vehicles for space launch use, developed on behalf of the European Space Agency (ESA). Ariane 5 is currently used, Ariane 6 will be the follow-up from 2020 on

## **ARTES**

Advanced Research in Telecommunications Systems; Technology program initiated by ESA to support research and development in the area of telecommunication

## **ARTES-7**

Long-term ESA plan for developing a European communications satellite network using the latest laser communications

## **ASI**

Agenzia Spaziale Italiana; Italian space agency

## **ATV**

Automated Transfer Vehicle; unmanned space transporter for supply flights to the ISS

## **BAAINBW**

Federal Office of Bundeswehr (German Federal Armed Forces) Equipment, Information Technology and In-Service Support (formerly BWB German Federal Office of Defense Technology and Procurement)

## **BDLI**

German Federal Aviation and Space Industry Association

## **BMVG**

German Federal Ministry of Defense

## **BMWI**

German Federal Ministry of Economics and Technology

## **CFRP**

Carbon fiber-reinforced plastic

## **CTO**

Chief Technical Officer

**DAX**

German bluechip share index, tracking the performance of the 30 largest shares listed on the Frankfurt stock exchange

**DLR**

Deutsches Zentrum für Luft- und Raumfahrt; German Space Agency

**DREAM CHASER\***

The Dream Chaser Space System mission is to provide NASA with a transportation service for crew and cargo to the International Space Station

**EBIT**

Earnings before interest and taxes

**EBITDA**

Earnings before interest, taxes, depreciation and amortization

**EBT**

Earnings before taxes

**EDRS**

European Data Relay Satellite System; European system for implementing a data network in space using optical satellite communications

**EDRS-C**

Dedicated satellite for the European Data Relay Satellite System

**ELECTRA**

Fully electrically driven satellite based on the SmallGEO platform

**ENMAP**

Environmental Mapping and Analysis Programme; satellite for hyperspectral terrestrial observation

**EPS**

Earnings per share

**ESA**

European Space Agency

**EU**

European Union

**EXOMARS**

Scientific mission of the European Space Agency and ROSCOSMOS to explore the Mars

**FOC**

Full operational capability; final satellite configuration for the operation of a system

**GALILEO**

European global satellite-based navigation system; the FOC (full operational capability) phase of the Galileo program is being funded and executed by the European Union. The European Commission and the European Space Agency ESA have signed a contract under which ESA acts as the development and sourcing agency on behalf of the Commission. The view expressed here does not necessarily reflect the official position of the European Union and/or ESA. Galileo is a registered trademark owned by the EU and ESA and registered under OHIM application number 002742237.

**GEO**

Geostationary orbit; circular orbit 35,786 kilometres (22,236 miles) above the Earth's equator and following the direction of the Earth's rotation

**HEINRICH HERTZ**

Satellite mission based on the SmallGEO platform to explore new communications technologies in space

**HGB**

German Commercial Code

**HISPASAT 36W-1**

(formerly: Hispasat Advanced Generation 1) telecommunication satellite for the Spanish satellite operator Hispasat

**IAS**

International Accounting Standards

**IFRS**

International Financial Reporting Standards

**ISS**

International Space Station

**MTG**

Meteosat Third Generation; programme to develop, build and launch third-generation weather satellites

**NASA**

National Aeronautics and Space Administration; US space agency

**R+D**

Research and development

**ROI**

Return on Investment; the profit from an activity for a particular period compared with the amount invested in it

**SAR-LUPE**

Synthetic Aperture Radar-Lupe; system of small satellites with a process for enhancing the quality of radar images

**SATCOMBW2**

Satellite Communication System of the German Federal Forces which is in full operation mode since end of 2011

**SMALLGEO**

Developed by OHB System AG as part of the ESA ARTES program (Advanced Research in Telecommunications Systems), SmallGEO is a flexible geostationary satellite platform which can be tailored for different mission goals such as telecommunications, Earth observation and technology testing.

**SOYUZ**

Series of spacecraft (used for medium heavy payloads) designed for the Soviet space programme, since 2011 the rocket has also been launched from the Europe's Spaceport in Kourou

**TECDAX**

German stock index, that tracks the performance of the 30 largest German companies from the technology sector in terms of order book turnover and market capitalization

**TELEMATICS**

A system linking telecommunications and IT

**USD**

US-Dollar

**VLBI**

Very-long-baseline interferometry; a type of astronomical interferometry used in radio astronomy which allows very precise observations with regard to resolution and positioning

**H36W-1 TEST CAMPAIGN**

In June 2016, the first SmallGeo satellite was extensively checked to verify its suitability for space, the tests were executed i.a. in the thermal-vacuum chamber of IABG's Space Test Centre.

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**ANNUAL PRESS CONFERENCE**  
AND PUBLICATION OF ANNUAL  
REPORT FOR 2016, BREMEN

**ANALYST CONFERENCE**  
ON THE ANNUAL FINANCIAL  
STATEMENTS FOR 2016,  
FRANKFURT AM MAIN

**3-MONTH REPORT/  
CONFERENCE CALL  
WITH ANALYSTS**

**ANNUAL GENERAL MEETING,  
BREMEN**

**6-MONTH REPORT/  
CONFERENCE CALL  
WITH ANALYSTS**

**9-MONTH REPORT/  
CONFERENCE CALL  
WITH ANALYSTS**

**ANALYST PRESENTATION,  
FRANKFURT AM MAIN**

**MARCH 21**

**MARCH 21**

**MAY 10**

**MAY 16**

**AUGUST 10**

**NOVEMBER 14**

**NOVEMBER 27-29**





## CONTACT INFORMATION

OHB SE  
Karl-Ferdinand-Braun-Str. 8  
28359 Bremen

Marco Fuchs  
Chief Executive Officer

Martina Lilienthal  
Investor Relations  
Phone: +49(0)421 2020-720  
FAX: +49(0)421 2020-613  
ir@ohb.de

## IMPRINT

### Photos:

ESA  
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OHB SE,  
Bremen  
OHB System AG,  
Bremen  
Danela Sell,  
Bremen  
PvF Investor Relations,  
Oberursel

### Concept and design:

IR-ONE AG, Hamburg  
info@ir-one.de  
www.ir-one.de

**OHB SE**

Karl-Ferdinand-Braun-Str. 8  
28359 Bremen, Germany

Phone: +49[0]421 2020-8

FAX: +49[0]421 2020-613

ir@ohb.de

[www.ohb.de](http://www.ohb.de)