# Annual Report 2013



# OHB AG in Figures

The Group	in EUR 000s					
	2013	2012	2011	2010	2009	
Revenues	680,121	615,982	555,689	425,448	287,164	
Total revenues	700,063	632,729	555,292	453,323	321,818	
EBITDA	52,803	46,110	43,101	33,688	31,659	
EBIT	36,353	30,997	27,276	22,730	20,771	
EBT	29,728	23,979	19,517	15,384	18,039	
Net income for the period	19,436	14,818	13,523	9,642	14,860	
Earnings per share (EUR)	1.12	0.85	0.78	0.55	0.96	
Total assets	585,407	538,757	528,239	466,396	441,905	
Equity	132,705	117,332	113,577	105,170	98,125	
Cash flow from operating activities	-30,504	17,559	21,137	42,123	32,596	
Equity investments	23,627	21,571	15,533	19,126	14,681	
thereof capital spending	1,046	760	156	6,543	120	
Employees on December 31	2,412	2,493	2,352	1,677	1,546	

The Stock					
	2013	2012	2011	2010	2009
Closing price	17.55	15.15	11.40	16.60	11.20
Year high	18.63	16.50	17.45	18.34	11.35
Year low	14.76	11.16	8.25	11.50	5.85
Market capitalization at year-end	307 million	265 million	199 million	290 million	196 million
Number of shares	17,468,096	17,468,096	17,468,096	17,468,096	17,468,096

# The OHB Group at a glance

OHB AG is a European space flight and technology group and one of the most important independent forces in European aviation/aerospace. With more than 30 years of experience in developing and executing innovative space technology systems and structures and its range of specific aviation/aerospace and telematics products, the OHB Group is superbly positioned to face international competition.

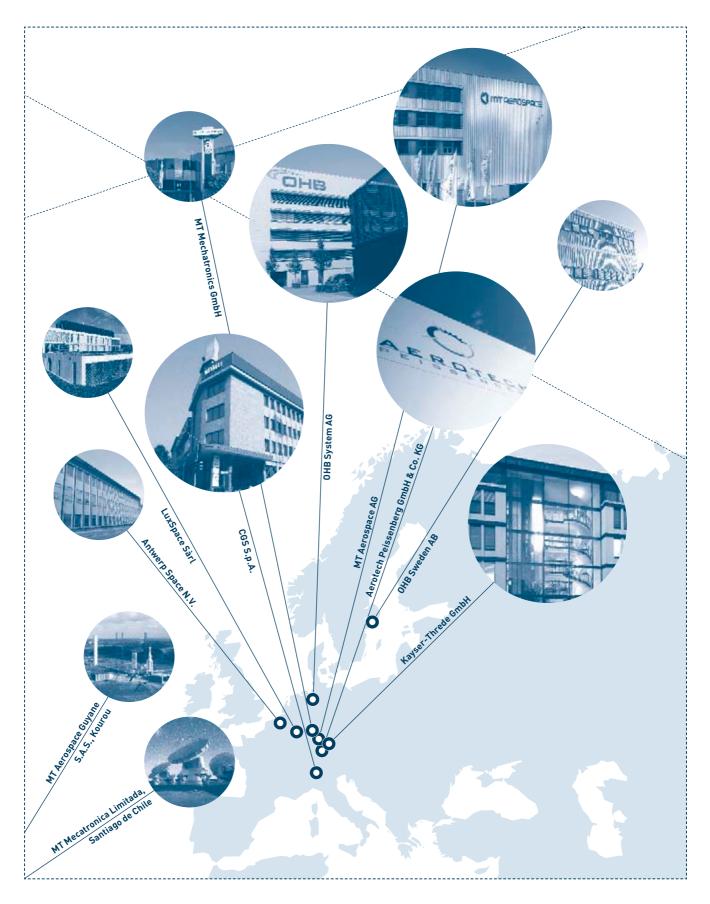
"Form follows function" – this is the principle under which OHB AG has been successfully positioning itself in Europe over the past few years. These strategic decisions on locations and the deliberate separation of functions across Europe allow the Group to participate in numerous European programmes and missions. The two business units "Space Systems" and "Aerospace + Industrial Products" 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 fabricating 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 fitting of the International Space Station ISS, Columbus and ATV. The exploration segment works on studies and models for exploring our solar system, primarily the Mars and the Moon. 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 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 programme and an established producer of critical components for aircraft engines. In addition, OHB is an experienced vendor 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.

	OHB AG				
	$\checkmark$		V		
Space Systems			Aerospace + Industrial Products		
(100 %)	<b>OHB System AG,</b> Bremen, Germany	<b>OHB</b> System	70% MT Aerospace AG, Augsburg, Germany Commension		
(100 %)	<b>Kayser-Threde GmbH,</b> Munich, Germany	KAYSENTHEEDE	70% MT Mechatronics GmbH, Mainz, Germany Commechatronics		
(100 %)	<b>CGS S.p.A.,</b> Mailand, Italy	OHB	MT Aerospace Guyane           5.A.S., Kourou,           French Guiana		
(100 %)	<b>LuxSpace Sàrl,</b> Betzdorf, Luxembourg	LUXSPACE	70 %     Aerotech Peissenberg       GmbH & Co. KG,       Peissenberg, Germany		
(100 %)	<b>Antwerp Space N.V.,</b> Antwerpen, Belgium	antwerpspace	0HB Teledata GmbH, Bremen, Germany		
(100 %)	<b>OHB Sweden AB,</b> Stockholm, Sweden		(74,9%) megatel GmbH, Bremen, Germany megatel		

# OHB Group in Europe



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#### Prof. Dott. Ing. h.c. Manfred Fuchs,

born 1938, engineer, member of the Management Board of OHB AG since 2002

#### Marco R. Fuchs,

born in 1962, attorney, Chief Executive Officer of OHB AG since 2000

#### Ulrich Schulz,

born in 1951, engineer, member of the Management Board of OHB AG since 2000

# Dear Shareholders, Customers and Business Associates,

In 2013, our strategy of continuous and, controlled growth again allowed us to achieve new records in total revenues and earnings. We expect to be able to continue this series this year as well. Against this backdrop, we signed a loan facility contract for the OHB Group last December to secure the liquidity required for our future growth. The agreed total volume of up to EUR 250 million with a term of five years will cover the medium-term funding requirements which have recently arisen as a result of major contract awards. The amount of the initial partial drawdown has been selected to fund not only the current high operating growth but also future operating and strategic initiatives. This precautionary measure is strengthening OHB AG's solid capital base and will help us to preserve our flexibility in the light of the swift organic growth of individual subsidiaries, whose existing bilateral loan facilities have been integrated in the contract.

With a total value of EUR 816 million, the contract for the development and construction of the SARah radar satellite reconnaissance system for the German federal armed forces is one of these recent contract awards. As the prime contractor, OHB System AG is responsible for implementing the entire system, which in 2019 will be replacing the current SAR-Lupe radar-satellite reconnaissance system, which was also developed by OHB and has been very successful.

OHB System is also the industrial prime contractor for the 22 Galileo\* FOC satellites. Named "Doresa", the first FOC satellite in the future European navigation system Galileo\* passed all environmental impact tests at the end of November 2013. Over a period of four weeks, it was tested under severest conditions in the thermal vacuum chamber at European Test Services ETS. For this purpose, it was exposed to extreme heat and cold in a vacuum chamber, where its functions were tested under space-like conditions, with great success. The successful thermal vacuum test marks an important milestone in the entire project's voyage into space.

In October 2013, OHB System AG was awarded a contract by ESA and SES for the definition phase of the telecommunications satellites "Electra" – a fully electrically powered satellite based on OHB's proprietary SmallGEO platform. Such a system has previously not been available commercially in Europe. To date, electric propulsion units have been used only in research satellites or for geostationary orbit maintenance for telecommunications satellites. The aim is to reduce propellant mass requirements by up to 90 percent compared with chemical propulsion units. Consequently, it is possible to cut the launch mass of the satellite by almost half. The public-private partnership project initially entails Phase B1 for the platform development, which in a further step will usher in a joint mission with project partner SES. With this contract, OHB System is tapping a substantially broader area of business in commercial telecommunications and adding an innovative new propulsion unit design to its SmallGEO range.

As innovative as it is demanding, the international science and research programme ExoMars is a joint project between ESA and the Russian space agency Roscosmos. It comprises two missions, which are supposed be heading for Mars in 2016 and 2018 to find answers to the important

question as to whether life ever existed on that planet. In order to find an answer to this question, soil samples will be taken from below the planet's surface and analyzed in situ. The ExoMars programme will do both developing and using the key entry, descent, landing, drilling and exploration technologies. Developed by OHB System and successfully delivered in February 2014, the Trace Gas Orbiter (TGO) will be embarking on its voyage to Mars together with the "Schiaparelli" landing module in 2016. The purpose of the TGO is to find proof of methane or other atmospheric gases which indicate the existence of biological or geological processes on Mars. The TGO has several tasks in the two missions. In the 2018 mission it will be communicating with both the fixed Russian ground station and the European rover.

However, what is decisive for you as our shareholders is the fact that your Company's business success is also reflected in the dividend distributed to you. The Management Board and the Supervisory Board will again be asking the shareholders to approve a dividend of EUR 0.37 per share at this year's annual general meeting.

#### Outlook for 2014

Looking forward to 2014 and beyond, the OHB Group will be maintaining the growth strategy which it has adopted and will be able to continue operating at high capacity utilization in all areas. This will be materially underpinned by a further increase in order books to some EUR 2.3 billion (previous year: EUR 1.6 billion). On the strength of this solid basis for planning, the Management Board expects consolidated total revenues to rise by around EUR 50 million over the previous year to more than EUR 750 million in 2014 as a whole, supported by both business units, whose total revenues will be up on 2013 levels. At over EUR 56 million and more than EUR 39 million, respectively, EBITDA and EBIT should not only exceed the previous year in absolute terms but also lead to wider margins thanks to improved cost structures.

I would like to take this opportunity to thank all our staff at all of the Group's companies for their services, dedication and innovative ideas. If it were not for them, we would not have achieved last year's successes. All business units have contributed to the Group's growth and competitiveness. Together, we will be working with enthusiasm and vigor towards continuing our European success story.

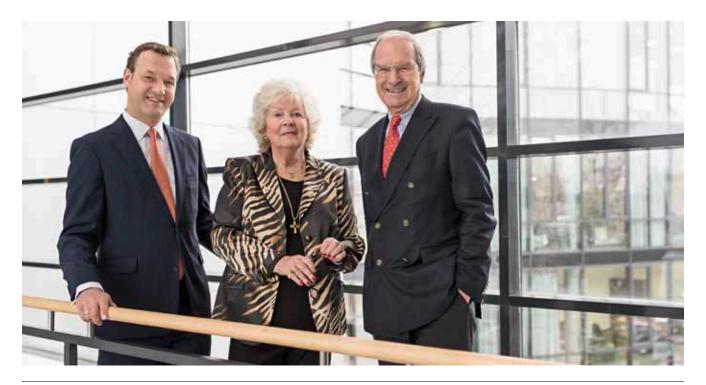
Bremen, March 19, 2014

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Marco R. Fuchs Chief Executive Officer

# Dear Shareholders,

The OHB Group's steady growth with new records achieved in order backlog, total revenues and earnings calls for equally steady monitoring. We have every reason to believe that the OHB Group's favorable business performance in 2013 will continue over the coming years. However, looking forward, absolute growth rates will decline compared with the past as we have now reached a level which calls for consolidation. The current order backlog of around EUR 2.3 billion provides a material basis for continued high capacity utilization and growth within the Group. What we consider to be far more important, however, is the future earnings quality derived from absolute growth. Strict cost management, sophisticated capacity management and early training to cover our own requirements of technical and management staff will allow us to safeguard the quality of our products and services. At the same time, our earnings are continuing to grow more quickly than our total revenues. Research and innovativeness can only prosper in the form of new technologies and marketable projects if we generate the financial resources required for this, while also creating a climate of curiosity, which encourages and expects previous obstacles to be overcome.



#### Robert Wethmar,

Member of the Supervisory Board since 2012, born in 1961, attorney at law, Partner at law firm Taylor Wessing

#### Christa Fuchs,

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

#### Prof. Heinz Stoewer,

Member of the Supervisory Board since 2005, born in 1940, Dipl.-Ing., M. Sc., Professor em. Space Systems Engineering, Technical University of Delft, Netherlands, Managing director of Space Associates GmbH OHB AG 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, ensuring 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 a greater proportion of women in the exciting and interesting career opportunities awaiting them in aviation/aero-space, 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 March 27, 2014, merely marks 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 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 programme in the future.

In 2013, 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 AG as well as within the individual business units, particularly updating it on the progress made in integrating recent acquisitions. 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 five scheduled 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, the progress made in integrating the newly acquired investments and the corporate budgets for 2014 and 2015. Ordinary meetings of the Supervisory Board in 2013 were held on March 13, May 23, September 11, November 5 and December 19 at the Company's offices in Bremen.

The meeting held on March 13, 2013 was chiefly devoted to the Management Board's report on the Group's performance in the period commencing January 1, 2012 and ending December 31, 2012, the current state of business as well as forecasts for 2013. For this purpose, the Management Board submitted the annual financial statements, the consolidated financial statements and the management reports for OHB AG and the Group for 2012. The statutory auditors from BD0 AG, Hamburg, presented the audit report in person and elaborated on it at this meeting. The Supervisory Board approved the annual financial statements and the consolidated financial statements of OHB AG. Deserving of special attention was the fact that Aerotech Peissenberg had returned to

profit-making territory in 2012. In addition, Marco Fuchs reported that CGS had been awarded the ESA MicroWave Imager (MWI) project for the 2nd-generation MetOp-SG Satellite B. With an estimated value of some EUR 120 million, this project represents a very large success for CGS. The Report of the Supervisory Board including the declaration of consent of the Related Parties Report prepared by the Management Board was also approved. At this meeting, the agenda of the 13th annual general meeting, which took place on May 23, including proposed resolutions for the utilization of the unappropriated surplus and the increase in the dividend to EUR 0.37 was finalized. In addition, the mandates placed with law firm Taylor Wessing since the last meeting of the Supervisory Board as well as the payments made were reviewed and approved with the votes of Mrs. Christa Fuchs and Prof. Stoewer, with Mr. Wethmar abstaining due to his relations with that law firm.

At the meeting held on May 23, 2013, the Management Board reported on the Group's business performance in the first quarter of 2013 as well as the current state of business. In particular, Mr. Marco Fuchs reported on the space programme which had been adopted by ESA at the EU Conference of Ministers in November 2012, explaining its relevance for OHB. The Supervisory Board unanimously considered the development of new missions and the Company's self-initiated programmes to be of particular importance for the future. It was also necessary to take this into account in connection with the Group's future personnel strategy among other things. In addition, all members of the Supervisory Board were in agreement that looking forward it was necessary for OHB to additionally concentrate on sales and marketing in order to ensure sufficient utilization of research and production capacities in the future.

In addition, the Management Board and the Supervisory Board engaged in a preliminary review of the 12th annual general meeting, which had been held on the same day and had been characterized by a constructive and open atmosphere.

At the meeting taking place on September 11, 2013, the Management Board reported on OHB AG's business performance in the first half of 2013 as well as the current state of business. Particular attention was paid to the negative developments at Aerotech Peissenberg GmbH & Co. KG, the related changes in that company's management and the planned redundancies, which the Supervisory Board unanimously approved.

In addition, the problems having led to the change in the Kayser-Threde GmbH Management shortly before have been reported on and discussed in detail.

The main business conducted at the Supervisory Board's meeting of November 5, 2013 entailed brief reports on the individual major projects as well as status reports on conditions at the subsidiaries. As a result of detailed discussions stating that this project was fundamentally assessed positively, a resolution was passed authorizing the Management Board of OHB AG to verify a merger of OHB System AG and Kayser-Threde GmbH. Similarly, the Management Board was authorized to have negotiations with the corresponding banks to obtain a working capital facility to safeguard liquidity up to a total amount of EUR 250 million. Held shortly before the end of the year on December 19, 2013, the Supervisory Board's fifth meeting dealt with the Group's business performance in the third quarter of 2013 and the first nine months of 2013, the current state of business and expected earnings for 2013. In addition, the forecast for 2014 and 2015 was considered in detail for each Group company and projections and the medium-term forecasts presented. In view of current trends at Aerotech Peissenberg, the forecast for this company will be determined separately and presented at the upcoming meeting in February 2014. The Management Board reported on the syndicate agreement to be signed on the same day for the establishment of a credit facility for the OHB Group to cover its working capital requirements.

The Management Board tabled the compliance report for 2013 and briefed the Management Board on material events. The Supervisory Board unanimously passed a resolution to adopt updated new rules of procedure for the Management Board of OHB AG, which took effect on the same day. 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.

#### **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 AG's website. The Supervisory Board regularly discussed the application and further development of the principles of corporate governance within the Company. On December 19, 2013, 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 2013

The parent-company financial statements, the consolidated financial statements and the related management reports of OHB AG for 2013 were audited by BDO AG Wirtschaftsprüfungsgesell-schaft, Hamburg, 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 19, 2014, 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 BDO AG Wirtschaftsprüfungsgesellschaft, Hamburg, 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 AG.

Bremen, March 19, 2014

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Christa Fuchs Chairwoman of the Supervisory Board



# BETWEEN FASCINATION AND PRAGMATISM

Space. The final frontier. It is 2014. The adventurers of the OHB Group with their 2,400-strong crew have been spending the last 30 years developing revolutionary technologies and exploring the universe.



Ceremony for the official hand-over of the core module of the Exomars Trace Gas Orbiter on February 3, 2014 at OHB System. From left: Jean-Jacques Dordain, Marco R. Fuchs, Brigitte Zypries, Jens Böhrnsen

The fascination of the legendary TV show "Star Trek" reflects humankind's desire to explore Mars in greater detail and to one day send people there. Europe is ready for the next step and will be embarking in 2016 on the first of two ExoMars missions in an attempt to find an answer to the question as to whether there is or ever has been life on the red planet. A trace gas orbiter and a landing module will be dispatched first, followed in 2018 by a fixed Russian station and a European rover transported by a carrier. Bremen-based OHB System will be making the most important German contribution to ExoMars 2016. In a ceremony in February 2014 attended by high-ranking guests from politics and business and attracting a great deal of media interest, the heart of the orbiter - the propulsion system and the mechanical and thermal subsystems - were officially handed over to the customer. OHB System is assuming overall responsibility for the carrier in the follow-up mission in 2018. Antwerp Space is handling the carrier communications system, while Kayser-Threde (KT) is in charge of various experiments which will be on board the rover.

The fact that the companies of the OHB Group are able to assume and successfully execute such complex exploration programmes is a tribute to their systematic approach, their visionary characteristics and their pragmatism. When the US government generated new global momentum in space exploration at the beginning of the 2000s with its "To the Moon, Mars and Beyond" programme. the OHB Group was already working feverishly on possible missions and follow-up missions for lunar and Mars exploration. With the Group's own funds and also in conjunction with the European Space Agency ESA and the German Space Center DLR, OHB's system engineers were busy determining which missions would be the most sensible for space exploration. The international community quickly agreed that Mars was

"The German federal government attaches key importance to space technology. We are spending a lot of money on exploring space but not indiscriminately but because we are convinced that space research is also of benefit to the earth."

Brigitte Zypries, coordinator of the German federal government for German aerospace/aeronautics

the more interesting destination. Whereas scientists are eagerly awaiting the research results, the system engineers look forward to the challenge as Mars missions are technologically highly complex. Given the planetary orbits, it is only possible to reach the red planet with a maximum payload every two years when the earth and Mars are in opposition, i.e. both on the same side of the sun. In this case, the transfer takes around nine months. To land a rover on the Martian surface, fully automatic precision landing is necessary as remote control is not possible over such a distance. And this is just the beginning – once the rover has landed, the equipment must be able to resist severe dust storms, extreme temperatures of an average of -55 degrees Celsius and radiation from which the thin atmosphere offers very little protection. This makes enormous technological demands of the individual systems such as energy supplies, the propulsion system, aero-thermodynamics, entry technologies, autonomous vehicles, the latest imaging processing and self-protective elements.

By delving into this matter at an early stage and completing numerous studies, OHB has amassed broad-based expertise in the area of exploration (see pages 16-17). With this knowledge, the Group is able to play a key role in leading exploration missions such as ExoMars.

## OHB AG participation in ExoMars 2018



## $\rightarrow$ OHB System AG

- Main contractor for the development of the carrier including
  - mechanical, thermal and electronic interfaces for the landing module
  - Propulsion system
  - Energy supplies for the entire system Carrier and lander
  - Attitude control system

## $\rightarrow$ Antwerp Space N.V.

- Communications systems for the carrier including digital electronics
- Electrical ground systems

### $\rightarrow$ Kayser-Threde GmbH

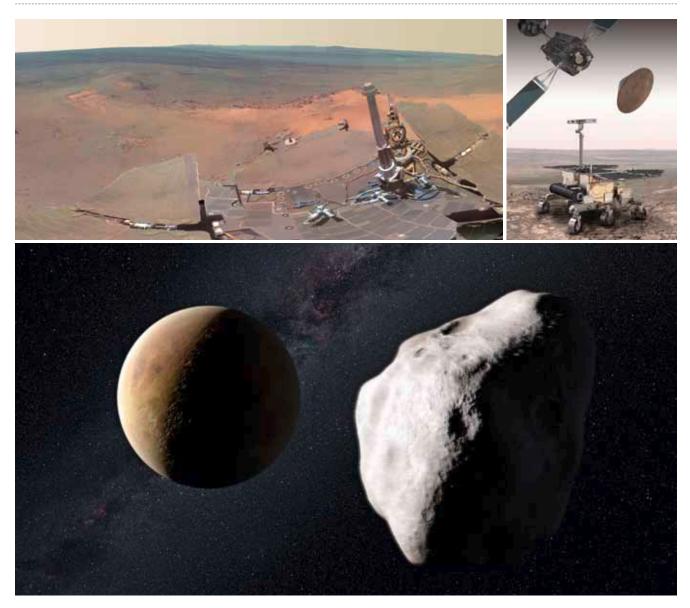
- High-resolution camera for the Rover for maneuvers on the Martian surface
- Sample preparation and distribution system for the Rover
- Structure of the analytical laboratory drawer
- Participation in the Raman laser spectrometer (Pasteur payload)

ExoMars is a scientific and technological programme of the European and Russian space agencies ESA and ROSCOSMOS with the aim of studying the biological environment of the surface of Mars, of searching for traces of life, of obtaining additional general knowledge of the red planet and of detecting any hazards which may be of significance for a manned landing of the planet.

The ExoMars programme comprises two missions. In 2016, an orbiter will be transporting a landing module to Mars to test landing technologies and to study the Martian atmosphere in detail. This will be followed in 2018 by a second mission in which a carrier will be transporting a fixed station and a rover carrying numerous scientific experiments to Mars.

Yet, this pragmatic approach to development is invariably accompanied by a sense of fascination. "When we work on such projects, we initially see our contract, our schedule, the costs and the technological challenge. But there is also another side to it, of course. ExoMars is a very special mission for Europe, which has so far not successfully landed on Mars. We are very proud to be part of this ambitious international science and research programme," says Marco R. Fuchs, the Chief Executive Officer of OHB AG. OHB has been involved in the ExoMars programme from the outset not least of all thanks to its development philosophy best described as "design to cost" and "design to time". This chiefly involves determining what can be achieved within the defined schedule and with what resources. As with all other projects, the first question to be answered for ExoMars was whether there was any proven hardware which could be used either directly or with only minimum modifications. And indeed there was. The project team quickly found a suitable candidate in OHB System's telecommunications segment, namely the SmallGEO

The robotic rovers will be making the first move, exploring in detail the terrain on which we will one day be setting foot. NASA's Mars Exploration Rover Opportunity has already provided impressive panorama shots (left) of the Red Planet. It will be followed by the European ExoMars mission in two stages: the orbiter and landing module in 2016 and the rover (right) in 2018.



platform, the OHB satellite brand, which was suitable for use as a basis for the ExoMars orbiter. Yet, this involved uncharted territory in technological terms, such as aerobreaking, the maneuver required by the orbiter to enter the Martian atmosphere, which makes extreme demands of the thermal system. Special

"I am very satisfied with the work that has been performed. Punctual deliveries were crucial and this was achieved. Obviously, the TGO core module which has been built must also function but given our experience with OHB I have no doubts about this."

Jean-Jacques Dordain, Director General of ESA

investigations at the testing center in Liège confirmed that the excellent system engineering by the project team to combine existing technologies with the necessary new elements was a complete success. In any case, OHB's SmallGEO range proved to be a good candidate and has served as a platform for numerous projects. Further developments and adaptations for satellites such as HispaSat, Heinrich Hertz, Electra and EDRS-C yield mutual benefits for ongoing developments. The projects intermesh, giving OHB a great deal of input for its own product

improvement procedures and saving time and money. As a result, it was possible for OHB to complete its ExoMars 2016 contribution in only four years for around EUR 36 million, a relatively short period and a small amount of money for the space industry. In addition to the project team's strong performance, OHB AG owed this success to a further strategic factor.

With its European orientation, it is able to comply with ESA's regional distribution requirements. This means that the ESA funding returns to the countries which have paid for the projects on a percentage basis via OHB's shares in its subsidiaries. With the progression from ExoMars 2016 to ExoMars 2018, OHB System is rising in the hierarchy - from being a supplier for Thales Alenia Space to a responsible partner for the carrier with the communications system subcontracted to Belgian OHB subsidiary Antwerp Space. Munich-based subsidiary Kayser-Threde is materially involved in the preparation of scientific experiments for the rover and a high-resolution camera for maneuvers on the Martian surface. ExoMars will be taking soil samples at depths of up to two meters for the first time. KT is developing the laboratory unit and the system for preparing and distributing the samples. At the moment, there is a sense of pragmatism combined with a yearn to develop. Yet, the fascination exerted by the scientific mission, exploration of Mars, the search for traces of life on the red planet will come to the fore at the latest when ExoMars starts reporting preliminary results and humankind's dream of traveling to Mars comes a substantial step closer to reality.

Launch Period	January 7–27, 2016
Orbiter insertion into Mars Orbit	October 16, 2016
ExoMars Descend Module (EDM) enters Martian atmosphere and lands on the target site	October 19, 2016
EDM science operations	October 19–23, 2016
Orbiter changes inclination to science orbit	October 25, 2016
Apocentre reduction manoeuvres (from the initial 4-sol orbit to a 1 sol orbit)	October 27, 2016
Aerobraking phase (Orbiter lowers its altitude)	November 4, 2016 – mid 2017
Start operating the Orbiter scientific instruments	mid 2017
Superior conjunction (the Sun is between Earth and Mars. Critical operations ar paused)	July 11 – August 11, 2017
Start of the data relay operations to support communications for the rover mission	January 17, 2019
End of the mission	December 2022

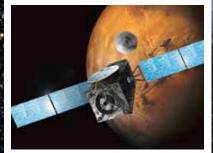
\* Apocenter: the point on an elliptical orbit of a space ship at which it is furthest away from the body which it is orbiting.
\*\* Sol is a name for a Martian day. On Mars, this day-and-night cycle has a duration of 24 hours, 39 minutes and 35,244 seconds.



# EXPERTISE EXPLORATION

Exploration of space calls for new technologies. For more than 15 years, the OHB AG companies have been preparing for the coming exploration projects organized by the space agencies ESA, DLR, CNES and ASI step by step in the form of studies and projects. In this way, the Group has been able to gain a superb position in competition for remote exploration missions.





## Scenarios



 $\rightarrow$  One crucial preliminary step in the exploration of distant planets is the definition of possible and feasible exploration strategies. The OHB Group has examined these matters more closely with studies entitled "Analysis of European Surface Architecture for Space Exploration" (CGS), "Scenario Studies for Human Spaceflight and Exploration" (OHB System, CGS, KT) and "Exploration Architecture Studies" (OHB System

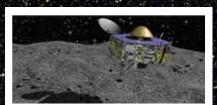
## Orbiters

Humankind is able to make a significant step forward in exploration by conducting research into planets, moons and asteroids at close quarters. The challenge here is to cover the enormous distances involved and to maintain systems and communication paths under harsh conditions. In 2003, OHB Sweden sent SMART-1, the first European space probe, to the moon. The OHB companies have completed numerous further studies and projects to explore heavenly bodies. These include NEXT Mars Orbiter (CGS), Mona Lisa (OHB System), **ROSETTA** (KT), Space Radiation Shielding System (CGS), Lunar Exploration Orbiter (OHB System), MONI (OHB System), ExoMars (OHB System, KT, Antwerp Space), Mars Sample Return - Orbiter (OHB System), Jupiter Icy Moon Explorer (OHB System) and PLATO (KT). Scientific missions are EUCLID, SOFIA, XMM-Newton and Herschel (all with the involvement of KT).



# Entry technology

 $\rightarrow$  As we steadily penetrate space, entry technologies are posing new challenges. Atmospheric conditions vary according to the planet and speed. And space vehicles, such as those returning from Mars, are exposed to far greater strain when they re-enter the earth's atmosphere compared with those that do not stray far from the earth. As early as in 1998, OHB System successfully conducted research into this area with the Netlander project. The OHB Group has expanded and reinforced its position with the Earth Vehicle Demonstrator (OHB System), Inflatable Reentry Technology (OHB System) and **ExoMars** (OHB System, KT, Antwerp Space). Reentry and recovery procedures were tested with the MIRKA capsule (KT).



## Precision landing

→ Landing on planets, moons or asteroids is a further discipline which must be mastered. Different topographies and gravitational forces make high technological demands of the systems. The companies of the OHB Group have amassed considerable knowledge through studies such as Luna Hop (CGS), Precision Landing GNC Test Facility (CGS), NEMO GNC (CGS), Mona Lisa (OHB System), Lunar Lander (OHB System, CGS, Antwerp Space), Mars Precision Lander (CGS) and Marco Polo (OHB System).



## Robotics

 $\rightarrow$  Robotic elements form key components of unmanned exploration missions. Rovers and research stations must be able to automatically take and analyze samples. The OHB Group companies have developed the necessary skills in the following studies and projects: High Mobility Lunar Surface Vehicle (CGS), Pressurized Lunar Rover (CGS), AMALIA Google Lunar Xprize (CGS), Energy Provision and Management (CGS), Mona Lisa (OHB System), LUNARES (OHB System), Mobile Mini-Rover MPE for the Lunar Lander (KT), L-GRASP (KT), SPDS for the ExoMars rover (KT), Marco Polo-R (OHB System) and ROKVISS.





## Capturing Return to the earth

 $\rightarrow$  A mission for returning samples extracted from Mars or asteroids has been a long-standing goal and is the subject of international joint activities between ESA and NASA. Many preparatory studies have been performed on this highly complex mission over the last few years. OHB System has taken part in these with varying tasks: Mars Sample Return - Orbiter: capturing a container of samples in a Martian orbit for transportation back to the earth. The "Moons of Mars Sample Return" study is exploring the possibility of returning samples taken from the Martian moon of Phobos. In the case of the Marco Polo-R project (OHB System), the goal is an asteroid.

Missions





 $\rightarrow$  Is there or has there ever been life on Mars? This is the central scientific question which the ExoMars mission hopes to be able to answer. In order to get one step closer to answering this question, the OHB Group companies will be providing the technologies which they have developed for ExoMars (KT). Following the completion of the unmanned missions, the goal is to fly people to the red planet. The Group is already working intensively on this question. CGS is exploring the possibilities of radiation protection (Radiation Assessment Center), while OHB System is working on BioHab to create biospheres. Projects such as **BIOPAN, EXPOSE** and Skin B (all KT) are addressing questions such as: Can life travel through space? What effect does space radiation have on living organisms and what are the longterm effects of weightless conditions on the organism?

# HIGHLIGHTS 2013

2013 was a year of further growth for OHB AG. Here in brief are the main events of the year in chronological order.

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March

Apr May June July

August

September October

November December 013

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# 2013 at a glance

January 2013

# **Roberto Aceti** new managing director of CGS S.p.A.



Robert Aceti was appointed new managing director of CGS S.p.A. Compagnia Generale per lo Spazio, Milan, on January 11, 2013. He took over from Lanfranco Zucconi, who had managed the company since 1989 and retired for age-related reasons.

Said Marco R. Fuchs, CEO of OHB AG: "I am very pleased that CGS will be remaining in such capable

hands with Roberto Aceti at the helm. His appointment is a clear sign of continuity in the company's ongoing development."

Roberto Aceti was born in Italy in 1960. He graduated from the Milan Politecnico with a degree in aeronautical engineering in 1986, completing a master's of business administration at the Heriot-Watt University in Edinburgh, Great Britain, in 1999. He joined the European Space Agency (ESA) in 1988, where he assumed several management positions over the years. His most recent position at ESA was project manager for the in-orbit technology demonstration programme (TDP). Aceti was appointed marketing director of CGS Compagnia Generale per lo Spazio (known at the time as Carlo Gavazzi Space) in 1999, advancing to the position of general manager in 2004.

### February 2013

# **OHB Group** optimizing the exchange of information during the assembly and operation of offshore wind farms

Offshore wind power is to make a crucial contribution to the national and international energy balance in the future. OHB System AG assembled a skilled syndicate to develop an integrated, multimode communications system for interactive real-time applications in the offshore wind power sector. Terrestrial network coverage is poor or non-existent on the high seas. Satellite communications are the ideal means of providing numerous parties with permanent access to the information they require. This will allow users to substantially lower their logistics costs and hence enhance the viability of renewable energies. In January 2013 the syndicate under the lead management of OHB System started work on the development of the technical solution within the ESA feasibility study "Com40ffshore". The members of the syndicate are Deutsche Offshore Consult GmbH, Media-Mobil Communication GmbH, OHB Teledata GmbH and megatel GmbH.



From left: Andreas Nil (MediaMobil Communication), Oliver Spalthoff (Deutsche Offshore Consult), Ulrich Schulz (OHB AG), Dr. Fritz Merkle (OHB System), Jens Kuckertz (OHB Teledata), Jörg Biesewig (megatel)

Februar 2013

# **Visits by state secretaries** to OHB System AG, Bremen

Cornelia Rogall-Grothe, state secretary at the German Federal Ministry of Internal Affairs and the German Federal Government's information technology attaché, and Rainer Bomba, state secretary at the German Federal Ministry for Transport, Construction and Urban Development, visited OHB System AG in Bremen on February 7, 2013. They spent around two hours talking to members of management about the current status of the Galileo\* project and the potential which the programme offers public-sector users. After inspecting the integration halls, the guests stated at a press conference that they were impressed by OHB's technological skills and its commitment to Galileo\*. "I am proud that the German space industry is making a crucial contribution to Galileo\*. We have just been able to see for ourselves that series production of the 22 satellites is in full swing at OHB," said state secretary Bomba. Added state secretary Rogall-Grothe: "The public regulated service, which is shielded from manipulation and is encrypted, is of particular interest to public-sector users. We want to initially test it in various scenarios in order to gage the potential offered by this service."



From left: Peter Hartmann, Rainer Bomba, Sabine Dannelke, Cornelia Rogall-Grothe and Prof. Manfred Fuchs

February 2013

# **Visit by ESA Director General** Dordain to MT Aerospace in Augsburg

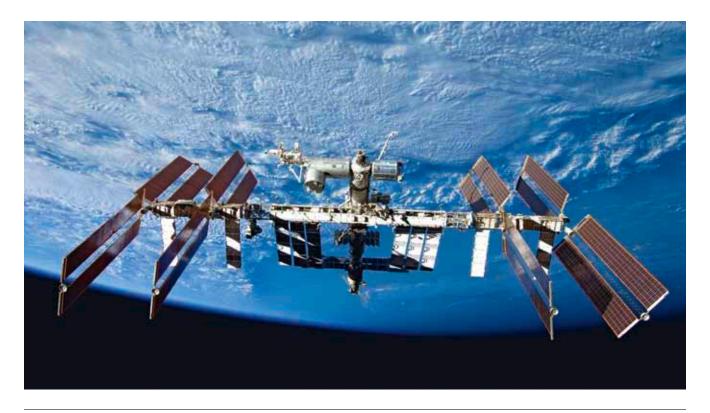


ARIANE launch: MT Aerospace is the largest German supplier of parts

The Director General of the European Space Agency ESA, Jean-Jacques Dordain visited MT Aerospace AG together with ESA Directors Antonio Fabrizi and Eric Morel on February 11, 2013. Their visit to Augsburg marked the beginning of a tour of the eight main ARIANE production facilities in Europe. During the roughly five-hour visit, Jean-Jaques Dordain was able to gain a hands-on impression of the outstanding skills and advanced production technologies possessed by high-tech company MT Aerospace and learn about its visions for the future.

The ESA delegation was particularly impressed by the new systems and technologies developed by MT Aerospace which will be of decisive importance for an inexpensive and robust successor to the ARIANE 5. The relevant system studies have been approved by the ESA Conference of Ministers with the aim of ensuring that ARIANE remains the global market leader for satellite launches in the next decade.

"MT Aerospace is well positioned to tackle these future development tasks. We have full confidence in the efficiency and capabilities of the MT Aerospace team," Dordain said at the conclusion of his visit.



ISS seen from the Space Shuttle Discovery (STS-128)

#### February 2013

# **Research:** In what way does spatial perception change in space? OHB is supporting the successful Neurospat experiment on board the ISS

On February 7, 2013 the Canadian astronaut Chris Hadfield completed his second session of the EPM "Neurospat" experiment on board the European Columbus module of the International Space Station ISS. The ISS "Neurospat" experiment explores spatial perception and senso-motoric adjustments to the gravity-free conditions on board the ISS using visual stimulation in tandem with EEG measurements. The results of these experiments are being used to gain a better understanding of problems in the perception of movement on the surface of the earth.

OHB System was involved in the development of the experiment and the planning and execution of the mission. Developed and built by OHB, the scientific EPM experiment rack (European Physiology Modules Facility) is being used to execute the Neurospat experiment. EPM is one of the most frequently used research facilities on board the ISS. Last year alone, eight different experiment cycles were performed in different sessions involving neurophysiology, metabolism, radiation and the cardio-vasular system.

Looking forward, the EPM is to be additionally used for research into physics. Accordingly, a series of experiments exploring the physics of complex plasmas is being planned. The



Neurospat experiment session on board the Columbus laboratory

experimental "Plasma-Kristall 4" equipment required for this purpose has been developed by OHB subsidiary Kayser-Threde GmbH in Munich and is currently being tested with EPM ground models before going into operation on board the ISS next year.



The night sky above the ALMA Observatory

#### March 2013

## **ALMA observatory** officially opened: 25 high-precision antennas delivered and installed by MT Mechatronics in the Atacama Desert in Chile

The Atacama Large Millimeter/submillimeter Array (ALMA) was officially opened on March 13, 2013 in San Pedro de Atacama, Chile. Consequently, the world's largest and most complex ground-based observatory went into operation to explore the universe. The ceremony was attended by the Chilean president Sebastián Piñera as well as the partners of the multinational project and representatives of the industrial contractors including the shareholders of the OHB Group, Christa and Prof. Manfred Fuchs, and the CEO of MT Aerospace AG, Hans J. Steininger.

ALMA is made up of 66 individual high-precision antennas which together form a single revolutionary telescope system. At the center of the observatory is an array of 50 antennas, each with a diameter of 12 meters, operating like a single telescope in the form of an interferometer. 25 of these 50 high-precision antennas were supplied under a contract for ESO by a European syndicate in which MT Aerospace AG played a decisive role. In addition to delivering the 25 antennas, MT Mechatronics was responsible for the complete assembly of the systems in the Atacama Desert at an altitude of 3,000 meters above sea level. At times, work on assembling the telescopes required up to 100 specialists who were accommodated in a site camp specially set up for this purpose. The ALMA project is being executed jointly by Europe, North America and Eastern Asia in conjunction with the Republic of Chile. It is being financed in Europe by the European Southern Observatory (ESO), in North America by the US National Science Foundation in conjunction with the Canadian National Research Council and the National Science Council of Taiwan and in Eastern Asia by the Japanese National Institutes of Natural Sciences in conjunction with Academica Sinica in Taiwan.

ALMA will be able to explore the universe in the millimeter and submillimeter range of the electromagnetic spectrum with an unprecedented sensitivity and resolution. It has a resolution up to ten times greater than that of the Hubble space telescope. One of ALMA's tasks will be to explore the origins of planets and stars in cold interstellar clouds and protoplanetary accretion disks. Infrared galaxies in the early universe, massive black holes and the origin of galaxies are further areas which ALMA will be exploring. In addition, ALMA will be helping to answer important questions in the exploration of dark matter and dark energy. March 2013

# Manfred Fuchs awarded CEAS Gold Medal



From left: Jean-Jacques Dordain, Prof. Manfred Fuchs and David Marshall

At the Brussels Space Evening organized by the German Aerospace Industries Association (Bundesverband der Deutschen Luft- und Raumfahrtindustrie e.V. – BDLI), CEAS President David Marshall presented the gold medal of the Council of European Aerospace Societies (CEAS) to Manfred Fuchs on March 6 in recognition of his lifetime services to the European space industry.

Prof. Rolf Henke, President of the German Aviation and Space Society (Deutsche Gesellschaft für Luft- und Raumfahrt – DGLR), which is the main partner within the European CEAS, particularly stressed Fuchs' commitment to encouraging science and technology: "In his many years of activity, which has also included a term of office on the DGLR Board, Professor Fuchs has particularly promoted scientific and technical advances and the development of young talent. At the same time, he has been a generous supporter of the DGLR congresses and symposia in Germany as well as those of the CEAS at a European level. In awarding the CEAS Gold Medal, we are honoring a true example for others to follow in the aviation and space industry." March 2013

# **Petra Höfler** appointed to the management of OHB Teledata GmbH

Petra Höfler was appointed commercial director of OHB Teledata GmbH effective March 21, 2013. In her new position, she is supporting managing director Jens Kuckertz and is responsible for all of the company's commercial matters.

Petra Höfler has been in the financial accounting department of OHB System AG since 1989 and is currently the holder of general signing powers and head of accounting. She is retaining this position alongside her new duties.

Established in 1993, OHB Teledata GmbH is chiefly engaged in the area of traffic telematics. It develops comprehensive telematics solutions for communications and for data transfer and processing for applications ranging from transport logistics and consignment tracking to construction material logistics, the transportation of hazardous good and refrigerated transportation.



#### April 2013

# **Kayser-Threde** responsible for payload integration of the anniversary TEXUS-50 mission

TEXUS-50 is the name of the unmanned research rocket, which lifted off from the remote ESRANGE launch pad in Kiruna, Northern Sweden, at 6:25 am Central European Time on April 12, 2013, packed with equipment and experiments. This was the 50th mission in the successful national research programme TEXUS, which had been established by the German Aerospace Center at the end of 1977. The TEXUS national research missions are exploring the properties and behavior of materials, chemicals and biological substances in weightless conditions (microgravitation).

Munich-based space technology company Kayser-Threde had been involved in the project from the outset and was responsible on this anniversary flight for payload integration, i.e. the proper installation of the experiment modules in the payload at the tip of the launcher and for the service systems. This entails the service module (including the units for telemetrics, telecommand, TV image transmission, payment movement monitoring and micro-gravitation measurements) as well as the recovery system. During the flight, the ground station captures and processes the telemetric data and video images. In the free flight phase, it is possible to control the experiments on a telecommand basis.

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Launch of the unmanned research vehicle TEXUS-50



Artist's impression of the EDRS-C satellite

#### May 2013

**Contract signed by** OHB System AG and Astrium GmbH for the delivery of a satellite for the European Data Relay Satellite System (EDRS)

On May 23, 2013, OHB System AG and Astrium GmbH signed the final contract for the delivery of a satellite for the upcoming European Data Relay Satellite System (EDRS). The contract has a value of EUR 157.5 million.

With the establishment of the European Data Relay Satellite System by the European Space Agency ESA, a new standard in space-based communications is to be implemented. The decision to go ahead with EDRS was made at the ESA council of ministers conference in Den Haag in 2008. It is now being implemented under the industrial leadership of Germany with the material support of the German Federal Ministry of Economics and Technology (BMWi) and the German Aerospace Center (DLR). Astrium is ESA's prime industrial contractor and responsible for setting up and subsequently operating the entire EDRS system.

The EDRS-C satellite, which is now being developed and built by OHB System, thus forms part of a constellation of geostationary satellites which will be receiving data from low-flying satellites

and transmitting it to the earth. The geostationary position of the relay satellites over Europe offers great advantages for numerous communications and earth observation applications such as greater data transmission rates, longer and swifter contact times and enhanced data security.

EDRS-C is currently being assembled on the basis of the Small-GEO platform currently under development at OHB System under ESA's ARTES 11 programme. The planned payload comprises an optical laser communications terminal (LCT) for the intersatellite links and a Ka band module for transmitting the data received to the ground. To be supplied by Tesat Spacecom GmbH from Backnang near Stuttgart, the payload transmits 1,800 Mpbs per data at the speed of light across a distance of up to 45,000 kilometers.



Schematic view of the SLS on the launch pad

#### June 2013

# **MT Aerospace** awarded Boeing contract for the development and fabrication of tank components for the NASA Space Launch System

On June 12, 2013, MT Aerospace signed a memorandum of understanding with US aviation and space company Boeing for the development and fabrication of large tank components for the main stage of NASA's Space Launch System (SLS). Boeing is the principal contractor for the SLS. The maiden flight is scheduled for 2017.

MT Aerospace was instructed to develop and fabricate large aluminum segments for the propellant tanks fitted to the SLS main stage. The components will be produced in Augsburg, Germany, and shipped to the main assembly plant in New Orleans, Louisana.

MT Aerospace is using an automated forming technology which will bend the 3x3-meter dome panels three-dimensionally in a single production step. With a diameter of 8.4 meters and a length of some 65 meters, the SLS main stage tanks will hold almost 1,000 tons of liquid hydrogen and oxygen and are 30% larger than the exterior tank fitted to the old Space Shuttle.

The new SLS will be the most powerful launcher ever built. It is being developed to provide a flexible and adaptable response to the numerous requirements which the United States has with respect to manned and unmanned space transport. June 2013

# **Spectacular photos** of ATV-4 thanks to the Kayser-Threde camera system

On June 5, 2013, the European Space Agency ESA launched its fourth ATV supply vessel Albert Einstein on board an Ariane 5 ES from the ESA space center in French-Guayana for transportation to the International Space Station ISS. The on-board camera system (OCAM-2) developed by Kayser-Threde was fitted to the launcher, allowing pictures of the launch and, for the first time, of the separation of the vehicle from the launcher to be made.

On this mission, Kayser-Threde was responsible for the hardware and software of the on-board system and for the video-processing pat of the ground segment. Employees of the company provided local mission support and handled the data processing and evaluation for the stereoscopic imaging. The customers and project partners were the German Aerospace Center (DLR), the European Space Agency (ESA), the French Space Agency (CNES) and Arianespace.

Back in 2006, Kayser-Threde's previous system OCAM had captured unique images of the launch and space flight of an Ariane 5 and the unfolding of an extremely light-weight Japanese reflector antenna in space. Kayser-Threde systems were also fitted to the VEGA European launcher in February 2012 to support testing.



Top: The ATV-4 space transporter after being separated from the launch vehicle Bottom: Launch seen from the Ariane 5 ES



June 2013

# Skin B examining astronauts' skin

On June 7, 2013, astronaut Luca Parmitano performed research on the human skin on board the International Space Station ISS. Modified and tested for use in space by Kayser-Threde, the instruments for the SKIN B experiment were designed to examine the influence that space has on our body's largest sensory organ, namely the skin.

The human organism responds to weightless conditions in the form of balance problems, head aches and skin problems. The SKIN B instruments examine the skin of several astronauts before, during and after their visit to space for any physiological changes. For this purpose, the moisture, loss of water through the skin and the skin surface are examined on a non-invasive basis. Scientists from DermaTronnier, the Institute of Experimental Dermatology at the University of Witten-Herdecke, Prof. Dr. Heinrich and Dr. Gerlach, also want to use the data to explore the effects of weightlessness on internal organs.

Dr. Mario Schweitzer, head of the SKIN B project at Kayser-Threde, explains that the experimental data will also provide an indication of expected physiological changes during future long-term mission, such as those to Mars.

The Italian ESA astronaut Luca Parmitano

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#### July 2013

# **OHB System AG awarded contract for the development** and construction of the SARah radar satellite reconnaissance system for the German federal armed forces

On July 2, 2013, OHB System AG signed a contract with the Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw) for the development and construction of the SARah satellite-based radar reconnaissance system. The contract has a total value of EUR 816 million. OHB System is the main contractor responsible for implementing the overall system and will be supplying the two reflector satellites and the main elements of the ground segment. Under the terms of a subcontract, Astrium GmbH will be supplying the phased-array satellite and the related special functions for the ground segment.

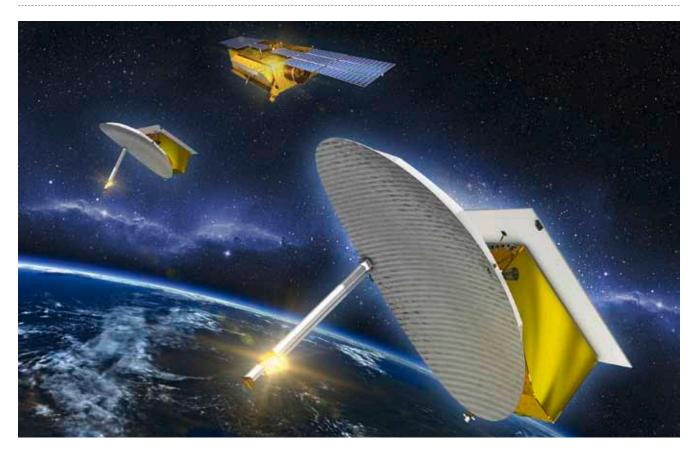
Since 2007, Germany has had outstanding capabilities in global satellite-aided radar reconnaissance thanks to the OHB-developed SAR-Lupe system. The five satellites and one ground station were handed over to the customer at the end of 2008.



Handshake after signature: (from left) Kurt Melching, Thomas Wardecki and Dr. Fritz Merkle

Since then, SAR-Lupe has been operating successfully with OHB System's support. The contract for the operation of the system expires at the end of 2017. In order to maintain its reconnaissance capabilities in the future, the Federal Republic of Germany is now planning the optimized SARah follow-up system, which will have three satellites and two ground stations. The SARah ground segment is to be ready for operation in autumn 2016 in such a way that SAR-Lupe, which will still be operating at that stage, can be managed via this new system. SARah is to be delivered and enter full operation at the end of 2019.

SARah constellation with two reflector satellites (OHB) and a phased array satellite (Astrium)



September 2013

# **64-meter radio telescope completed** by MT Mechatronics in Sardinia

Italy's largest radio telescope was officially inaugurated on September 30, 2013. Some 1,200 international guests from politics, business and science attended the roughly six-hour ceremony. Representing OHB AG, its founder Prof. Dott. Ing. h.c. Manfred Fuchs said: "We are proud of the MT team and of the fact that we have been able to make a further important contribution to studying the universe." The telescope was built by MT Mechatronics GmbH under a contract worth EUR 30 million. The modern, fully movable 3,000 ton-heavy telescope has a reflector diameter of 64 meters, making it one of the three largest radio telescopes in Europe. It is designed to cover an observation frequency range of up to 100 GHZ and is fitted with the latest technology. Thus, the main reflector, which is made of more than 1,000 individual high-precision aluminum panels, is able to eliminate distortion caused by gravity during rotation. The telescope components were produced in several different countries in accordance with MT Mechatronics' detailed plans. It was assembled in Sardinia over a period of several years.

September 2013

# **OHB reorganizing** Kayser-Threde's management

Dr. Fritz Merkle, Peter Hartmann and Boris Penné are the new management at Kayser-Threde. With the new management team under the leadership of Dr. Fritz Merkle, the company will be systematically addressing the current challenges arising from ongoing major projects. At the same time, the foundations are being laid for Kayser-Threde to systematically pool its skills and capabilities with those of its affiliate OHB System. Looking ahead over the next few years, completely new facilities will be established for Kayser-Threde in Oberpfaffenhofen.



With a reflector diameter of 64 meters, the largest radio telescope in Italy





**Electrically powered in a geostationary orbit:** OHB System AG opening up a new area of business with the contract for the next phase of the Electra project

OHB System AG has been awarded a contract for the development of a telecommunications satellite known as Electra which will be powered solely by electricity. The contract was signed in Betzdorf with satellite operator SES on October 15, 2013. Electra is a public-private partnership under the ESA ARTES 33 programme serving the purpose of providing the satellite communications industry with innovative products and systems.

It is an advanced electrically powered telecommunications satellite in the sub-three-ton weight class. A system like this has previously not be available commercially in Europe and can reduce propellant mass requirements by up to 90 percent compared with chemical propulsion units. Consequently, it is possible to cut the launch mass of the satellite by almost half. Electra is now to be used to systematically broaden the scope for implementing this technology in a specially designed satellite system. The project initially entails the platform development which in a further step will lead to a joint mission with industrial project partner SES. As one of the world's largest satellite operators, this company has a keen interest in encouraging competition in the selection of launch vehicles in order to achieve additional savings.

With this contract, OHB System is tapping a substantially broader area of business in commercial telecommunications and adding an innovative new propulsion unit design to its SmallGEO range.

**Contract signed with DLR** for the study phase for the utilization of US company Sierra Nevada Corporation's Dream Chaser<sup>®</sup>



SNC's Dream Chaser® 1:1 prototype for in-flight testing

On October 14, 2013, OHB System launched a bilateral partnership for the commercial provision of supplies for ISS. OHB System AG and the Space Administration of the German Aerospace Center (DLR) signed an agreement providing for the use of funding from the national space programme to finance a study to explore possible uses of the US space vehicle Dream Chaser<sup>®</sup> assembled by US company Sierra Nevada Corporation (SNC).

Named DC4EU (Dream Chaser for European Utilization), the project is to look into ways in which the Dream Chaser<sup>®</sup> can be used to address German and European requirements for the transportation of payloads and astronauts to the International Space Station ISS and for deployment as an unmanned space vehicle allowing German and European scientists to conduct research under weightless conditions over extended periods of time. Given the capability which the Dream Chaser<sup>®</sup> has for reaching orbits of an altitude of 800 km, the study will be determining the extent to which it is able to supply satellites or remove decommissioned satellites from their orbits. The partner in this project is OHB's Munich-based subsidiary Kayser-Threde, which is developing a payload element for capturing satellites. The Space Systems division of SNC from Louisville, Colorado, will be contributing its expertise for these developments and working with OHB on a programme for the long-term deployment of the Dream Chaser® by Europe.

The project participants intend to explore the potential offered by the Dream Chaser® to achieve more intensive scientific utilization of the ISS and opportunities for high-caliber research in weightless conditions in the post-ISS era. Currently, the members of the ISS programme are planning to continue operating the ISS up until 2020 with a renewal option.

"Looking forward, DC4EU will provide interested researchers and space agencies with a modern successor to the US Space Shuttle," says Dr. Detlev Hüser, head of predevelopment of manned space flight at OHB System, going on to say that the partnership with the United States will allow Germany to continue participating in manned space flight programmes even after the decommissioning of the US Space Shuttle and the ISS.

> Artist's impression of the Dream Chaser® docking with the ISS



### **MT Mechatronics –** telescope officially inaugurated by Spanish minister Ana Pastor

On October 21, 2013, the Spanish minister of construction and infrastructure, Ana Pastor, officially inaugurated 13.2-meter radio telescope developed and built by MT Mechatronics GmbH in Yebes, Guadalajara. The telescope is based on the new global VLBI 2010 standard. VLBI (Very Long Baseline Interferometry) is a measuring method in radio astronomy achieving a high degree of positioning accuracy for astronomic and geodetic purposes. VLBI 2010 defines a new global standard for the observation of the participating facilities. Telescopes designed to this standard must satisfy higher demand with respect to precision, travel speeds as well as substantially greater observation frequency. Thus, the new standard calls for 1 million observations a year, i.e. twenty times more than under the previous standard.

In addition to the telescope in Yebes, MT Mechatronics will be assembling an identical model on the Azores and a further one on Gran Canaria. "We are pleased to be able to continue our successful twenty-year business relationship with Instituto Geografico Nacional," said Thomas Zimmerer, Director of Business Development & Sales at MT Mechatronics, who has been overseeing the business relationship. MT Mechatronics is the European market leader in the construction of large radio telescopes. October 2013

## **OHB Sweden and ÅAC Microtec** continuing InnoSat study

OHB Sweden, Stockholm, and ÅAC Microtec, Uppsala, were commissioned by the Swedish National Space Board to continue studying a cost-effective satellite, InnoSat. The two companies' extensive expertise, innovative products and efficient work approaches are being combined effectively, giving Sweden the opportunity to build satellites at a very competitive price. The InnoSat project has entered the phase in which the satellite design will be established to meet the demands of several Swedish scientific missions. In addition to the direct benefits for Swedish science missions, OHB Sweden and ÅAC Microtec see potential for marketing this satellite globally.

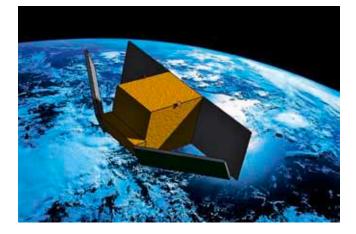
"We are very excited that the Swedish National Space Board wants to continue creating national space missions in a timely and cost effective manner. This will once again give our Swedish scientists the chance for unique world-class research. For us it means that we will retain and develop the national capacity to build complete space systems. As the next innovation step after satellites like Odin, SMART-1 and PRISMA, we are working with ÅAC Microtec to develop a product that will be competitive in the international market" says Gierth Olsson, CEO of OHB Sweden.

InnoSat is a satellite in the micro-class (10-100 kg), which in its standard version has a mass of about 40 kg and dimensions of 50 x 50 x 50 cm. The satellite design is flexible and can be adapted for other instruments with requirements beyond the standard specification.



The new 13.2 m radio telescope in Yebes built by MT Mechatronics

## **LuxSpace** conducting study on in-orbit demonstration mission for ESA



On October 17, 2013, LuxSpace was awarded a contract by ESA for the execution of an IOD study to develop concepts for in-orbit demonstrations. Out of 50 proposals made by European industry, six were selected. The LuxSpace-led team, also consisting of the Switzerland-based RUAG and SES TECHCOM from Luxembourg as major partners proposed a mission that will allow testing of a newly developed vessel detection payload using the emissions from ship radars in combination with the RUAG-developed optical terminal to downlink the huge amount of data. It is planned for both payloads to be hosted on the LuxSpace micro satellite platform called TRITON 3. Within the project, SES TECHCOM will be in charge of the ground segment. "The award of the project to LuxSpace and its team by ESA shows that small countries also have the possibility of establishing dedicated missions", said Jochen Harms, Managing Director of LuxSpace.

The study has a duration of six to eight months and will possibly lead to further development phases.

October 2013

### **CGS awarded contract by Italian Space Agency ASI** to build the METIS instrument for the Solar Orbiter

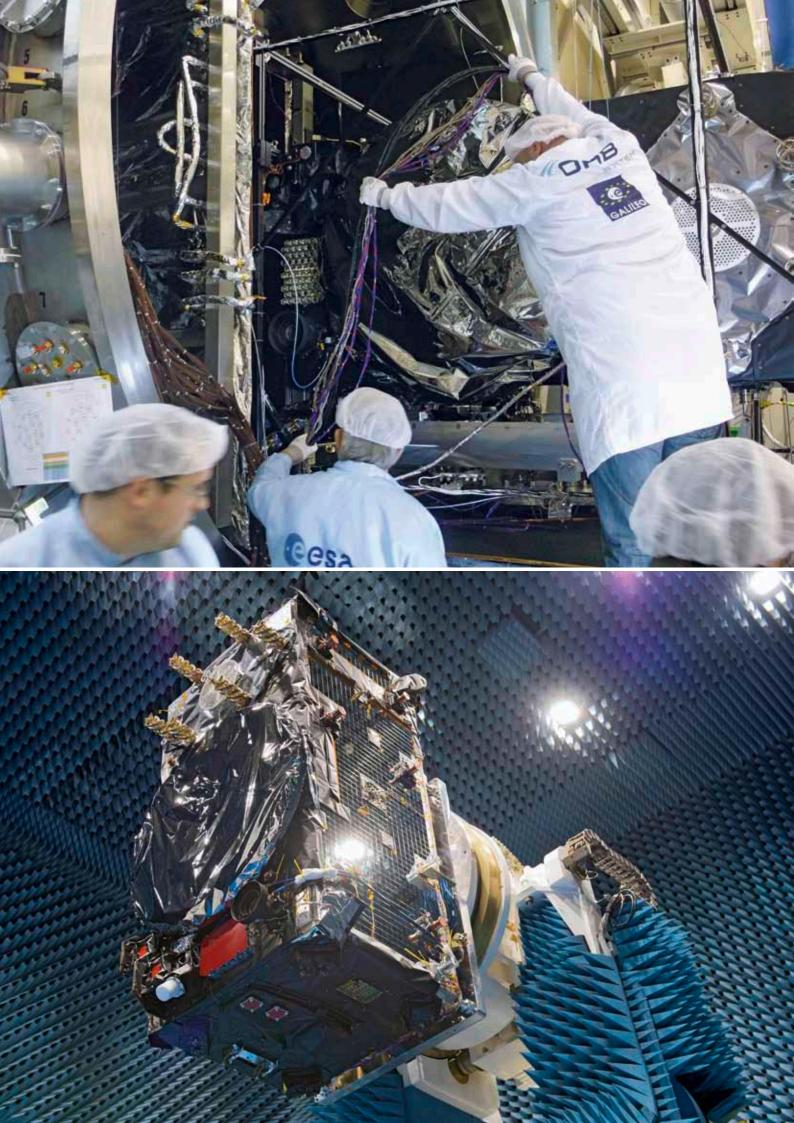
CGS SpA was awarded a contract by the Italian Space Agency (ASI) for the design and development of the METIS (Multi Element Telescope for Imaging and Spectroscopy) instrument for Solar Orbiter, a scientific mission of the European Space Agency (ESA). The Solar Orbiter, which is scheduled for launch in 2017, is a mission dedicated to solar and heliospheric physics. It was selected as the first medium-class mission of ESA's Cosmic Vision 2015-2025 Programme.

METIS, whose principal investigator is Prof. Ester Antonucci from the National Institute for Astrophysics INAG in Turin, is a coronographic instrument that will simultaneously image the visible and ultraviolet emissions of the solar corona and diagnose the structure and dynamics of the full corona with unprecedented temporal coverage and spatial resolution. CGS will be leading and coordinating the industrial team (ATI – Associazione Temporanea di Imprese) formed with Thales Alenia Space Italy for the execution of the activities, under the ASI contract.

In addition to the contractual interface with ASI and the overall instrument system engineering, CGS's main contributions to METIS include the design and development of the optic and electronic subsystems. This contract additionally extends CGS' portfolio of space projects. In this way, it can reinforce its role as an Italian provider of on-board instruments for scientific satellites.



The Solar Orbiter is to explore the sun's corona



November 2013

# **Thermal vacuum test** successfully completed for the first Galileo\*-FOC satellite

The first FOC satellite in the future European navigation system Galileo\* mastered the most difficult of all the environmental impact tests with flying colors. Over a period of four weeks, the satellite known as "Doresa" was tested under the most severe space conditions imaginable in the thermal vacuum chamber at European Test Services ETS, completing the tests with great success.

"The successful thermal vacuum test marks an important milestone in "Doresa's" voyage into space and for the entire project. With the positive completion of environmental impact testing, the entire satellite design has passed its most important technical examination," explains Galileo\* project manager Dr. Pascal Knobloch.

ETS operates the testing facilities. OHB System is the industrial prime contractor responsible for the total of 22 Galileo\* FOC satellites and installed the equipment specifically required for testing the satellite system in the thermal chamber. "Thanks to the good collaboration between the participating industrial teams, ETS and the experts at ESTEC and the European Space Agency ESA as our customer, it was possible to complete the entire thermal vacuum testing campaign successfully," says Dr. Ingo Engeln, the member of OHB's Management Board responsible for Galileo\*. The thermal test is considered to be the most critical part of environmental impact testing. For this purpose, the satellite is exposed to extreme heat and cold in a vacuum chamber, where its functions are tested under space-like conditions.

The second FOC satellite "Milena" was qualified for launching on board a Soyuz rocket in October. This mechanical shock test as well as the thermal test are traditionally the greatest hurdles which a satellite project must clear. "Doresa" has now passed these two milestones. "Adam" and "Anastasia" – the third and fourth Galileo\* FOC satellites, respectively – are currently undergoing function testing at OHB's clean rooms in Bremen, after which they will be shipped to the ESTEC testing center in Nordwijk. Integration of the subsequent satellites is also progressing well at OHB's clean rooms in Bremen. The Galileo\* satellites are named for the children who won a painting competition organized by the European Commission in 2011.

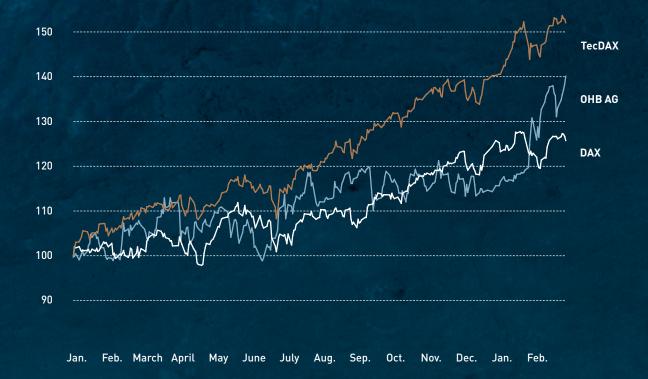


Galileo FOC FM1 during preparations for the PIM test

Top: Galileo\* FOC FM1: Roll-out after successful thermal-vacuum testing; bottom: Measuring the radiation characteristics of the Galileo\* FOC FM1

## OHB STOCK

15% gains in OHB stock in the course of the year



#### DAX closing the 2013 trading year at a historical high

The blue-chip German equities index DAX entered 2013 at 7,689.46 points, closing the year at an all-time high of 9,594.35 points, thus advancing by 1,904.89 points or 25% in the course of the year. The total range stood at 2,175.99 points (29%), with the DAX hitting a low for the year of 7,418.36 points. This favorable performance in the financial market was accompanied by heterogeneous trends in the individual Eurozone economies. Whereas Germany achieved slight growth, underpinned in particular by consumer spending as a result of high employment levels, the prospect of a recession in France, the outcome of elections in Italy and protracted difficulties in Portugal and Greece exerted pressure in the course of the year. The euro saw out the year at a high level, standing at USD 1.378 at the end of the year and thus coming close to its high for the year.

#### 15% gains in OHB stock in the course of the year

OHB AG stock entered the year under review at EUR 15.20, closing it at EUR 17.55, thus advancing by 15% but falling short of the DAX as of the end of the year. The stock reached a high for the year of EUR 18.63 on November 12, 2013 and a low of EUR 14.76 on February 1, 2013, equivalent to a range of 26%. The stock's relative weakness in the course of the year was attributable to media speculation surrounding the Galileo\* project, which was dispelled at the beginning of the current year following the announcement by the European Commission of the positive progress of the Galileo\* programme. This is reflected in the stock, which gained 12.25% in January 2014.

#### Stock buyback programme

In accordance with the authorization granted at the annual general meeting on May 19, 2010, the Management Board decided on September 13, 2011 to execute a stock buyback programme. For this purpose, up to 250,000 shares are to be purchased solely via the stock market. This is to be done via an independent bank, which has been retained to complete the program. In accordance with the authorization granted at the annual general meeting, the stock bought back may be used for several different purposes, e.g. 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.

#### OHB stock data

DE0005936124
OHB
Prime Standard
Technology
Communications Technology
Prime All Share, Tec All Share, CDAX
DZ BANK AG, HSBC Trinkaus & Burkhardt KGaA
EUR 17,468,096
No-par-value ordinary bearer shares

#### **Treasury stock**

As of December 31, 2013, OHB AG's treasury stock comprised a total of 80,496 shares, equivalent to 0.46% of its issued capital, i.e. unchanged in number since December 31, 2012.

#### Investor relations activities

The capital market day was held in Bremen at the beginning of the year under review. On February 14, around 40 guests from the financial markets were given a deeper insight into OHB AG's business performance and projects. On the same day, the Management Board published a preliminary statement on the performance indicators for the current year. The annual financial statements were released on March 14 and presented on the same day at a press conference in Bremen as well as an analyst conference in Frankfurt/Main. In the third quarter, the Company took part in two roadshows and one conference by various organizers in Germany and abroad. A further analyst conference was held with Deutsches Eigenkapitalforum in mid-November in Frankfurt/Main, which the Company attended on two days, giving it an opportunity of holding one-on-ones as well as a presentation in front of a larger audience.

OHB regularly organized telephone conferences for analysts hosted by the CEO as part of its quarterly reporting activities.

#### Continued commitment to dividend continuity

At the annual general meeting held on May 23, 2013, the shareholders passed a resolution to authorize the distribution of a dividend of EUR 0.37 per dividend-entitled share for 2012 (previous year EUR 0.35). Accordingly, the total distribution amount on the 17,387,600 dividend-entitled shares came to EUR 6.4 million, up from EUR 6.1 million in the previous year. The remaining unappropriated surplus of EUR 15.2 million as shown in the financial accounts prepared in accordance with German GAAP (HGB) was carried forward. In addition, a resolution was passed to appoint Mr. Robert Wethmar, an attorney and partner at the Taylor Wessing law firm, to the Supervisory Board to replace Prof. Rath, who had passed away in September 2012. The other items of the agenda, specifically the ratification of the

#### Analyst ratings

		<b>Target price</b>	
Date	Bank	in EUR	Rating
March 2014	HSBC Trinkaus &		
	Burkhardt	23.00	Overweight
March 2014	DZ BANK	23.00	Buy
February 2014	WGZ Bank	24.00	Buy
February 2014	Commerzbank	22.00	Hold
February 2014	Bankhaus Lampe	26.00	Buy

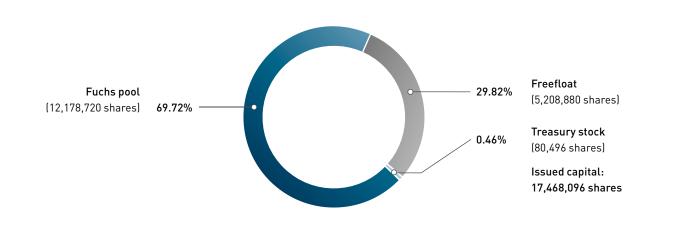
actions of the Management Board and Supervisory Board and the appointment of an auditor for the annual and consolidated financial statements, was also passed with big majorities.

#### **OHB stock parameters in EUR (Xetra)**

	2013	2012	2011	2010
End-of-year price	17.55	15.15	11.40	16.60
High for the year	18.63	16.50	17.45	18.34
Low for the year	14.76	11.16	8.25	11.50
Market capitalization (end of year)	307 millions	265 millions	199 millions	290 millions
Average daily trading volumes (Xetra + floor)	13,322 shares	11,580 shares	20,346 shares	47,546 shares
Price/earnings ratio (P/E) (final trading day of the year)	15.67	17.82	14.62	30.18
Earnings per share (EPS)	1.12	0.85	0.78	0.55
Dividend per share	0.37*	0.37	0.35	0.30
Dividend yield (end of year)	2.11%	2.44%	3.07%	1.81%

\* Subject to approval by the shareholders

#### OHB AG shareholder structure on December 31, 2013

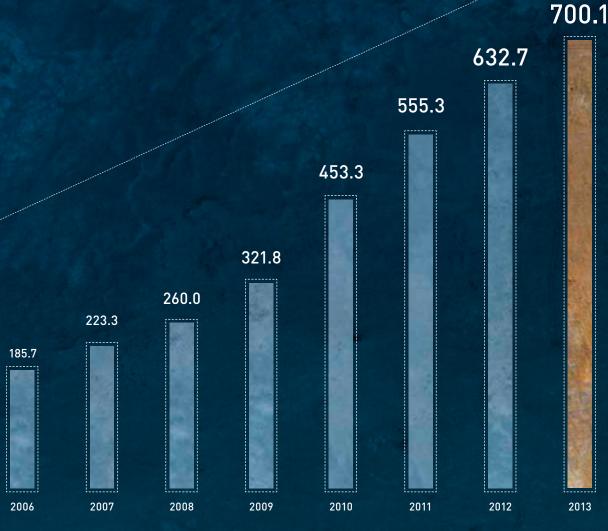




Impressions of the 10th Capital Market Day on February 25, 2014 in Bremen.

## GROUP MANAGEMENT REPORT

### Management report for the year from January 1, 2013 until December 31, 2013



Consolidated total revenues over eight years in EUR millions

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#### I. BUSINESS PERFORMANCE AND UNDERLYING CONDITIONS

#### 1. OHB AG's business performance in 2013

The Company's business performance in the year under review and the resultant favorable performance indicators largely matched the Management Board's positive expectations. The forecast published in February 2013 pointing to an improvement in total revenues, EBIT and EBITDA was duly achieved: Total revenues rose from EUR 633 million in 2012 to EUR 700 million (up 11%), while EBITDA climbed from EUR 46.1 million to EUR 52.8 million (up 15%) and EBIT from EUR 31.0 million to EUR 36.4 million (up 17%). In addition, consolidated net profit after non-controlling interests rose from EUR 14.8 million to EUR 19.4 million (+ 31 %) and earnings per share from EUR 0.85 to EUR 1.12 (+ 32 %). Following the award of the SARah contract last year, the already high order backlog of EUR 1,640 million has risen substantially to EUR 2,340 million. This favorable performance provides a high degree of forward planning visibility and ensures high utilization of existing capacities.

#### 2. Underlying economic conditions

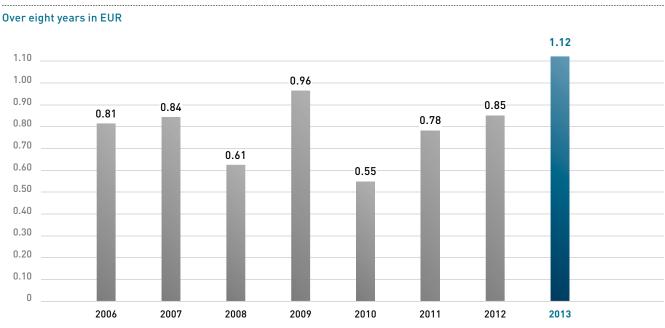
Last year, the German gross domestic product (GDP) expanded by 0.4% and, hence, more slowly than in earlier years (0.7% in 2012, 3.3% in 2011). The number of domestic employees rose again over the previous year, reaching a new high for the sixth consecutive year. At the end of December 2013, there were 42.0 million domestic employees. This positive trend in the

labor market was accompanied by a declining inflation rate, which receded from 2.0% in the previous year to 1.5% in 2013 in Germany.

#### 3. Underlying conditions in the sector a) Space fight

Underlying international conditions for space technology remain upbeat, although there is considerable regional variation. Given the long-term nature of the programmes and projects, macroeconomic conditions in individual countries have only an indirect effect on current projects. Moreover, depending on the region in question, commercial, civil and military space programmes are often linked with each other to different extents or are completely independent of each other.

Whereas in Europe the programmes initiated by the European Space Agency (ESA) and the European Union (EU) ensure stable performance thanks to their long-term planning horizons, over the last few years the US government has made drastic cuts in some cases to the budgets of NASA and other agencies which are potential customers for space projects. Following the restrictions caused by the sequestration, conditions look set to improve substantially in 2014. NASA's budget for 2014 is to be increased by around USD 1 billion over 2013. After two decades of uncertainty as to the future direction, space activities in the Russian Federation have received a new perspective accompanied by radical consolidation and renewal in the Russian space industry. The Russian government has announced far-reaching



Earnings per share

measures and substantial increases in budgets. China, India, South Korea, Turkey and Brazil are still pursuing their ambitions of establishing their own national space flight programmes and infrastructures. China in particular impressively demonstrated its capabilities and plans in September 2013 at the International Astronautical Congress (IAC 2013) in Peking. The establishment of a national space station and a successful lunar landing are just two examples of what can be expected in the future. One of the particular highlights of the 2013 space year, which, however, went largely unnoticed, was that NASA reported that "Voyager 1", which had been launched in 1977, had left our solar system, the first man-made object to do so, and has now commenced its voyage through the endless expanse of interstellar space. In general, the 2013 space year was characterized less by spectacular single events than by the implementation, execution and consolidation of existing programmes and projects. Commenced in 2012, the US Mars mission "Curiosity" with its rover has completed numerous measurements of soil samples; under NASA's Commercial Orbital Transportation Services programme, a further Dragon space capsule supplied by US company Space X flew to the International Space Station; Orbital Sciences launched the maiden flight of its Cygnus capsule (on board the newly developed Antares launcher) and Sierra Nevada Corporation completed the first test flight for its space glider DreamChaser, which competes with space capsules. The main highlights in Europe included the launch of the fourth ATV (automated transfer vehicle) "Albert Einstein" on June 5, 2013 on board an Ariane 5 launcher for supplying and and orbit correcting the International Space Station ISS, the launch of ALPHASAT, the big European satellite, the geoscience mission SWARM and the launch of the GAIA space probe for recording three-dimensional measurements of the billions of stars in the Milky Way.

The resolutions of the ESA Conference of Ministers in Naples on November 20 and 21, 2012 and the finalization of the EU budget for 2014 through 2020 laid the foundations for the medium-term future of European space flight. The focus was on the ARIANE 5ME and ARIANE 6 launchers as well as the "Electra" project, a satellite operated fully by electricity and based on OHB System's SmallGEO platform. Both have led to preliminary studies and orders for subsidiaries of OHB AG. The next Conference of Ministers will be taking place in Luxembourg in December 2014. Preparations, including consultations among the national partners, industry and ESA, commenced as early as in the second half of 2013. This time, the main items of the agenda will be the continued operation of the International Space Station ISS, agreement on the continuation of ARIANE 5ME and decisions on the development and industrial implementation of ARIANE 6 as well as future joint activities between the EU and the United States.

In Germany, the national space technology budget and the country's contributions to the ESA programmes of around EUR 770 million were increased slightly in 2013 as planned. In its coalition agreement, the new Federal Government does express its clear commitment to space flight. The German Federal Ministry of Defense outlined the possible specifications for SARah, a follow-up system to SAR-Lupe, in 2012. On July 2, 2013, it awarded the contract worth EUR 816 million to an OHB System-headed consortium with Astrium Deutschland. The new system is scheduled to go into operation in 2019. This means that a viable German space-based radar reconnaissance system is guaranteed until 2028. Despite the difficult economic conditions in Italy, the second most important market for the OHB Group after Germany, space activities in that country continue to enjoy high priority as, among other things, research activities contribute to high-quality employment precisely in challenging economic times. Furthermore space is perceived as one of the high technology industrial sectors where the Italian industry has a good positioning in Europe.

Demand for launch services remains steady. The enduring technical success of the ARIANE-5 programme with a total of 57 consecutive successful launches as of the end of 2013 should result in a reliable launch cadence at Arianespace again in 2014.

#### b) Aviation

As in the previous year, the aviation market continued to grow in 2013. Passenger air travel, the most important aviation market for Aerotech Peissenberg GmbH & Co. KG, exceeded the 2012 figures. Average monthly RPK (revenue per passenger and kilometer) rose again by around 5.3% in 2013 compared with 2012. In 2013 alone, the market expanded by an average of 4.4% over the previous year. Following the restructuring measures executed by the major airlines in 2011, 2012 and 2013, sufficient liquidity is being generated to finance investments in latestgeneration aircraft and engines. The European aircraft producer Airbus delivered 626 aircraft in 2013, achieving a new company record. A similar situation exists with regard to its peer, US company Boeing, which delivered 648 new aircraft. Airbus received 1,619 new orders and, with a backlog of 5,559 aircraft, has a record volume of orders on its books. Boeing received a similar number of 1,531 new orders in the same period and now has 5,080 passenger aircraft in its order books. There can be no doubt that these growth rates together with the favorable outlook for the aviation market in 2014 will continue to spur business in aircraft business and thus also spur sales in the aircraft components industry.

#### 4. Organizational and legal structure of the Group

As a space flight and technology group, OHB AG combines activities from different areas of high technology. In addition to space flight activities, aircraft components business forms a key element of its activities. 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 parent company. The financial controlling in the Group is made via the following key data: total revenues, EBIT and net current assets; those are fixed by an annual budget and for the period, reported via preview calculations and actual values as well as tracked by deviation analyses.

OHB AG 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. OHB AG 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 manned space flight activities chiefly entail projects for the assembly and fitting 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 programme and an established producer of critical components for aircraft engines. 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.

#### II. BUSINESS PERFORMANCE

The OHB Group's very favorable performance in terms of sales, total revenues, EBITDA and EBIT continued again in 2013. Thus, total revenues rose by 11% over the previous year from around EUR 633 million to some EUR 700 million in the year under review. This was accompanied by a 10% increase in sales to around EUR 680 million, up from EUR 616 million the previous year.

The transformation of the space industry from what was once a solely research or politically/ideologically driven segment to a user-oriented and economically significant market has formed the basis for OHB AG'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: Space flight is a growth market in which new possibilities for using existing or new technologies are unleashing new demand. 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 with potentially improved technology or efficiency.

#### 1. "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 very high order backlog of EUR 2,005 million (December 31, 2013) and the broad potential for generating new project business ensure high forward planning visibility over protracted periods of time in tandem with steady growth.

#### a) Earth observation and reconnaissance

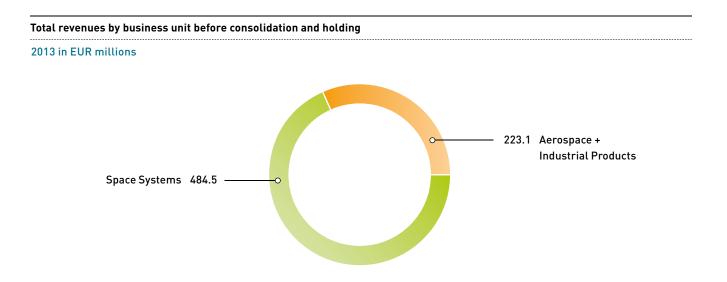
Developed and built by OHB System and put into operation between 2006 and 2008, the SAR-Lupe system with its five radar satellites, ground segments and the combined German-French reconnaissance satellite system made up of SAR-Lupe (radar images) and Helios 2 (optical images) has so far shown no signs of any unexpected degradation and is still operating very stably and to the full satisfaction of the customer (Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw - formerly BWB)) and the German armed forces. In this way, the German armed forces will continue to have a highly modern and capable radar satellite reconnaissance system until the implementation of the followup system SARah, which is scheduled for 2018/2019. OHB System has developed an enhanced concept for the SAR-Lupe successor SARah with substantially improved performance. It submitted a proposal in November 2012 in response to the invitation received in summer 2012. At the customer's request, OHB System was asked to include in its proposal a satellite

supplied by competitor ASTRIUM (now AIRBUS Defense and Space). For this purpose, a plan was drafted providing for three satellites, two based on OHB System's reflector antenna technology and one satellite using the ASTRIUM phased-array technology. All necessary ground equipment will be supplied by OHB System and supplemented with the module required for the phased-array satellite. Overall responsibility for the SARah contract signed on July 2, 2013 rests with OHB System. The contract has a volume of EUR 816 million excluding VAT, making it the largest single contract in OHB System AG's history and constituting the systematic continuation of the line of satellites commenced with SAR-Lupe. The German federal armed forces are considering the possibility of supplementing the three radar satellites with an optical observation satellite. To determine how such a satellite can be integrated and operated with SARah is the purpose of a system architecture study, which OHB System has been performing for BAAINBw since October 2013.

The national optical earth observation programme EnMAP (Environmental Mapping and Analysis Programme) has now largely overcome the difficulties of the past. Together with the client, it was possible to address the unanswered questions of a physical or technical nature and relating to the programme, the results of which were documented in a detailed addendum to the existing contract. The total volume of the contract has now been increased to EUR 191 million. The late-2017 launch date for EnMAP has been confirmed. With its new type of hyperspectral sensors, the EnMAP 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 areas of application, e.g. security.

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. In 2013, various preliminary design reviews were completed to verify the concepts and implementation plans for the six satellite platforms, the two payloads to be supplied by Kayser-Threde with infrared sounders, the integration of these payloads with two of the platforms to fabricate fully enclosed satellite systems, the telescopes and the four imager satellites. At the same time, all main sub-contracts were finalized. A conversion proposal is currently being prepared for the resultant necessary adjustments to the contract for the final construction of the satellites. Kayser-Threde is also operating as a subcontractor for a further instrument (Sentinel 4) under the Copernicus programme, namely the ultraviolet near-infrared spectrometer (UVN), which will be flying on board MTG.

In December 2013, OHB System and Thales Alenia Space submitted a joint proposal to ESA for the second-generation satellites in the METOP (Meteorological Operational Satellite) programme. Like MTG, this programme is a partnership between ESA and EUMETSAT (European Organisation for the Exploration of Meteorological Satellites) for the purposes of long-term weather forecasts. By contrast, MTG is designed for highly precise short-term forecasts. METOP comprises two satellite variants, Sat-A and Sat-B with 6 and 5 instruments, respectively. One of the instruments for Sat B is the Micro Wave Imager (MWI), for which CGS was selected by ESA as prime contractor in 2013.



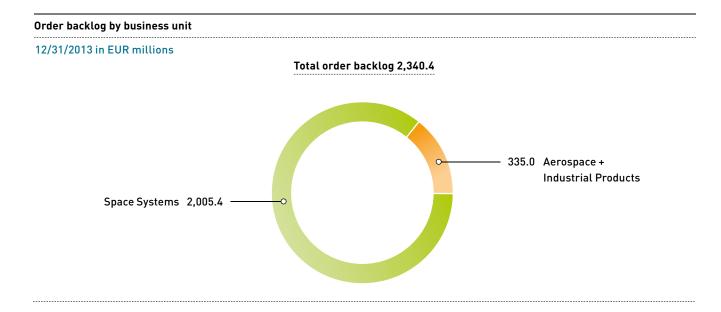
The definition phase of the "CarbonSat" environmental satellite mission for the European Space Agency is proceeding according to schedule and will be completed at the beginning of 2014. "CarbonSat" is a candidate for the eighth earth explorer mission within the ESA Earth Observation Envelope Programme (EOEP). The purpose of the "CarbonSat" mission is to collect reliable global data on emissions and the concentration of the greenhouse gases carbon dioxide and methane in the earth's atmosphere for evaluation. A mission similar to "CarbonSat" is the German/French Merlin programme, on which Kayser-Threde is working as a subcontractor. A contract for a further ESA study (Phase B1) on the future "BIOMASS" earth observation mission was obtained in 2013. This is a P-band radar mission to measure the volume of the earth's biomass.

Developed, built by Kayser-Threde for the German Aerospace Center (DLR) and launched in mid-2012, the TET-1 was handed over to DLR after a one-year trial operating period in mid-2013. This platform has the potential for being used repeatedly for satellite missions in the 100kg class. Substantial progress was also made in Definition Phases A and B1 for the realization of the OPSIS (OPtical System for Imaging and Surveillance) earth observation satellite for the Italian space agency ASI with our Milan subsidiary CGS being the contractor. OPSIS is primarily designed to provide an operational system for high-resolution optical earth observation. For this purpose, the necessary technologies are being developed and qualified in Italy. CGS has been selected as prime contractor for this mission and is lead-managing a consortium of small and mediumsized companies. ASI and the Italian ministry of defense have scheduled the commencement of the C/D realization phase of

the project for 2015. In this way, OHB is active in all areas of earth and weather observation and reconnaissance with products ranging from radar satellites to optical observation systems.

#### b) Communications

At OHB System, the final phase of the assembly of the Hispasat AG1 satellite for the commercial Spanish satellite service provider Hispasat was embarked upon. This is the first time that the OHB-developed SmallGEO platform is being deployed directly in a satellite operator's commercial system. The satellite is scheduled for a 2015 launch. ESA has also selected the SmallGEO platform as a basis for the European Data Relay Satellite (EDRS-C) within the ARTES-7 programme. Accordingly, OHB System is the contractor for the satellite operator AIRBUS Services (previously Astrium Satellite Services), which will be operating it for ESA. The EDRS-C contract was signed on May 23, 2013. Development work has begun in earnest. The enhancements to the SmallGEO model for use as a specialized data relay satellite in ultra-high-speed satellite-to-satellite communications are giving rise to an important new strategic segment in both the civilian and the military market. SmallGEO was also defined by DLR as the basis for a national telecommunications mission ("Heinrich Hertz"). The contract awarded by the German Aerospace Center (DLR) for the definition of this mission was completed in 2013. The results of this definition phase will be used as a basis for the ensuing construction and testing of the satellite, for which separate contracts are to be awarded in the first quarter 2015. "Heinrich Hertz" 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 carry a communications payload for the German federal armed forces. Commenced in 2012, the preliminary studies on "Electra", the "All Electric Spacecraft" resulted in the award in October 2013 of a contract for the definition phase by the world's largest satellite operator 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. As a result, OHB is not only pioneering this technology in Europe but with its SmallGEO technology platform also addressing the entire global market segment of a current 7 to 10 shall geostationary satellites a year.

#### c) Navigation

In 2013, the first two of the 22 satellites for the Galileo\*-FOC (full operational capability) space segment were sent to the ESA satellite testing facility in Noordwijk.As of the end of last year, a further seven satellites were in production at various levels of completion. The Galileo\* FOC satellites are being built on the basis of an "island" principle which will permit satellite deliveries in a sequence of around five to six weeks once series production commences. The first two OHB satellites are to be launched by Arianespace on ESA's behalf in the second quarter of 2014 on board a Soyuz launcher, which will be lifting off from the Kourou space center. In the third quarter of 2013, OHB System submitted a proposal to ESA for a study on the next-generation Galileo\* satellites. This will ensure that after the expiry of its planned service life of 12 years the Galileo\* system will be equipped with new satellites on the basis of as yet undeveloped technology aimed at preserving its leading position in efficiency. Negotiations are currently ongoing, with a contract award expected for the second quarter of 2014.

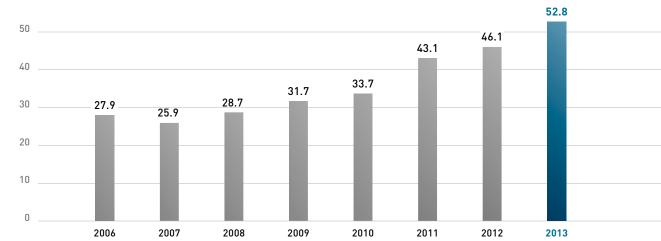
#### d) Space exploration

In 2013, the central unit for the Trace Gas Orbiter developed and built under the ESA ExoMars 2016 programme was completed. It is being shipped to Thales Alenia Space in Cannes, France, in the first quarter of 2014. At the same time, studies for a similar unit for the ExoMars 2018 mission are currently ongoing, with decisions are expected for 2014.

#### e) Space research and robotics

OHB was again involved in several studies in connection with ESA's next European scientific research missions in 2013. In this way, OHB is also building up a position for itself in this classic segment of space technology. It is particularly focusing on the major JUICE mission (to Jupiter and its moons) and the midsized EUKLID and PLATO missions.

#### EBITDA



#### Over eight years in EUR millions

#### f) Manned spaceflight

In 2013 OHB System continued supporting working on board the ISS International Space Station. This included the managing experiments as well as maintenance and repair work for the equipment developed and supplied by OHB System. In 2013, an Ariane-5 launch vehicle transported the fourth automated transfer vehicle (ATV) known as "Albert Einstein" to the International Space Station. Both MT Aerospace AG and OHB System AG again made material contributions to the mission by supplying components for the launch vehicle and the payload. A further final ATV mission, in which both MT Aerospace and OHB System are involved, is scheduled for execution by 2014, OHB System has performed several internal studies to prepare for possible scenarios for sending supplies to the ISS after the expiry of the ATV programme and to explore potential alternatives in micro-gravitation research following the decommissioning of the ISS in 2024 or later. This 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. DLR has been providing funding for these activities since October 2013.

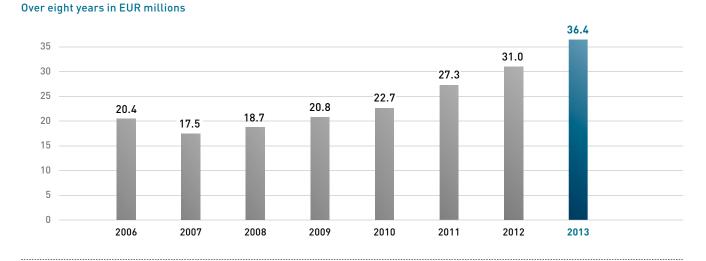
#### g) Ground stations

At the end of 2013, the five SAR-Lupe radar satellites achieved 28 of the 50 contractual cumulative years of operation in space. All five satellites remain in excellent condition and show no signs of any age-related deterioration in their performance. However, planned SAR-Lupe operations will be ending at the end of 2017 but will be integrated in the SARah ground segments in 2016.

#### 2. "Aerospace + Industrial Products" business unit

2013 saw four ARIANE-5 launches. Europe is thus continuing to demonstrate its leading position in the launch services market. As planned, MT Aerospace AG supplied six flight sets for the ARIANE-5 launcher in 2013. Development work continued on a new upper-stage tank for the more efficient future ARIANE-5 Mid-Life Evolution, which will be placed in service in 2017. MT-Aerospace has been able to position itself successfully for the future ARIANE-6 generation and has been short-listed as one of the four possible so-called core team partners. In 2013, business in aircraft products primarily entailed the production and delivery of fresh and waste water tanks for Airbus aircraft as well as light-weight structures for the military transporter A400M. Thanks to Airbus' stable production plan for the A400M, production output rose substantially, with eight ship sets delivered to the customer in 2013. This will increase to a total of 17 in 2014, with an additional two ship sets to be preproduced to ensure a supply of spare parts. Aerotech Peissenberg is involved in various new projects for nearly all aircraft engine producers and is supplying parts for many engine projects. The strategic relations with Rolls-Royce, the largest European manufacturer of aircraft engineers, were additionally strengthened in 2013 with the signing of multiple master contracts for deliveries for a wide range of different programmes. This is an important factor in this company's continued growth. In this connection, Aerotech Peissenberg is playing a particularly important role as a strategic supplier of rotating parts for Rolls-Royce. The most important customers in addition to Rolls-Royce are Snecma and MTU Aero Engines.

#### EBIT



In antenna/telescope business (MT Mechatronics GmbH (MTM)), a major milestone was reached in the ALMA project in September 2013 with the delivery of the 25th and, hence, final 13m antenna to the customer European Southern Observatory (ESO). The construction site has since been prepared for return to the customer. Any additional warranty work, which may be necessary, will be chiefly performed by the Chilean subsidiary of OHB meaning MT Mecatronica Limitada, Santiago de Chile. Following the completion of the delivery contract for the SRT radio telescope in Sardinia in 2012, MT Mechatronics GmbH was awarded the main contract for maintenance of the telescope after two bridging phases in October 2013. The final design review of the ATST Hawaii project was successfully completed in March 2013. Currently, production at Ingersoll in the United States is being monitored. The VLBI Spain project continued according to schedule. Whereas one antenna has already been handed over to the customer, the second one is currently going into operation on the Azores. A further 13m VLBI antenna ordered by Japanese company Toyo was tested and handed over in October 2013. This antenna is identical to the VLBI antennas for the Spanish RAEGE project.

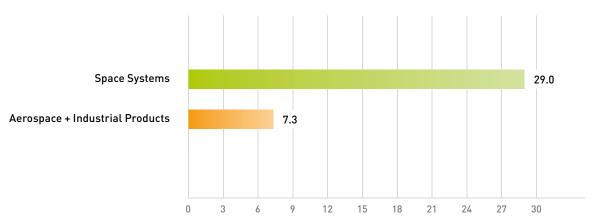
In the telematics segment, the first 10,000 truck navigation devices were delivered on schedule to the world's second largest commercial vehicle Volvo after the commencement of series production. The planned roughly 5,000 telematics devices were shipped to the long-standing core customer MAN. The first phase of working on developing the container tracking units for the German Telekom, which was commenced in 2013, will be completed mid 2014. The contract for the 5,000 units ordered is to be executed over the next two years. In the future, additional requirements are to be developed within the framework of an ESA IAP programme.

#### **III. SALES AND ORDERS**

In 2013, the OHB Group's total revenues rose by EUR 67.3 million or 11% over the previous year to EUR 700.1 million. Consolidated sales came to EUR 680.1 million (previous year: EUR 616.0 million). Orders and ongoing business were strong in the "Space Systems" business unit. Thus, non-consolidated total revenues came to EUR 484.5 million in 2013 (previous year: EUR 409.1 million). Non-consolidated sales reached EUR 466.9 million (previous year: EUR 396.0 million). This encouraging performance is particularly due to progress made in the satellite programmes. At EUR 223.1 million in 2013, non-consolidated total revenues in the "Aerospace + Industrial Products" business unit were down EUR 8.6 million or 4% on the previous year. With a value of EUR 2,340 million as of the reporting date (previous year: EUR 1,640 million), the OHB Group's order backlog substantially exceeded the previous year. Of this, the "Space Systems" business unit contributed EUR 2,005.4 million (previous year: EUR 1,365.9 million) and the "Aerospace + Industrial Products" business unit EUR 335.0 million as of the reporting date (previous year: EUR 273.8 million).

#### EBIT by business unit before consolidation and holding

#### 2013 in EUR millions



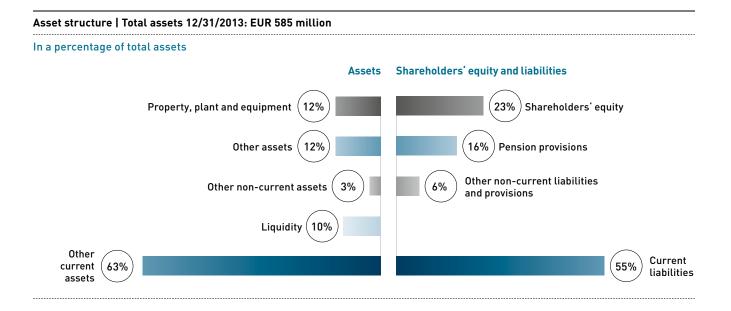
#### **IV. RESULTS OF OPERATIONS**

In the period under review, the OHB Group generated EBITDA of EUR 52.8 million (previous year: EUR 46.1 million) and EBIT of EUR 36.4 million (previous year: EUR 31.0 million). Net profit after tax and non-controlling interests stood at around EUR 19.4 million in the year under review (previous year: EUR 14.8 million), while earnings per share equaled EUR 1.12 in 2013, up from EUR 0.85 in 2012. With the EBIT margin slightly wider, the targets formulated in the full-year forecast for 2013 were achieved. EBIT before consolidation in the "Space Systems" business unit rose from EUR 22.2 million in the previous year to EUR 29.0 million. The 31% increase in this indicator reflects the fact that non-consolidated total revenues grew more quickly than the cost of materials and services purchased. Consequently, the EBIT margin in this business unit relative to nonconsolidated total revenues also increased slightly over the previous year, widening from 5.43% to 5.99%. EBIT in the "Aerospace + Industrial Products" business unit dropped from EUR 8.7 million to EUR 7.3 million. Reflecting the decline in total revenues combined with a disproportionately small drop in the cost of materials and services purchased, the EBIT margin in this business unit contracted to 3.25% (previous year: 3.76%).

The OHB Group recorded net finance expense of EUR 6.6 million in 2013 (previous year: EUR 7.0 million). This includes other finance expense of EUR 7.209 million (previous year: EUR 7.112 million) chiefly comprising interest expense on pension provisions of EUR 3.565 million (previous year: EUR 4.242 million). The parent-company financial statements prepared according to German GAAP (HGB) for OHB AG carry an unappropriated surplus of around EUR 22.7 million for 2013. The Management Board and Supervisory Board will be asking the shareholders to approve a dividend of EUR 0.37 per share for 2013 at this year's annual general meeting.

#### **V. ASSETS AND FINANCIAL CONDITION**

In the year under review, the OHB Group's total assets rose from EUR 538.8 million to EUR 585.4 million. Group capital spending totaled EUR 23.6 million in 2013 (previous year EUR 21.6 million). Inventories rose in value slightly from EUR 82.4 million to EUR 83.0 million; on the other hand, prepayments received from customers climbed to EUR 122.2 million (previous year: EUR 110.4 million). Cash and cash equivalents including securities were valued at EUR 57.3 million as of December 31, 2013, down from EUR 90.0 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. Part of the cash and cash equivalents was used to finance growth in current assets. To this end, a five-year credit facility agreement was signed with a syndicate of seven leading banks to cover short-term liquidity requirements and guarantees. Equity rose by EUR 15.4 million over the previous year, standing at EUR 132.7 million as of December 31, 2013 (previous year: EUR 117.3 million). As a result, the equity ratio widened to 22.7% as of the reporting date, up from 21.8% in the previous year. The pension provisions of EUR 96.3 million at the end of 2013 continue to constitute the largest item on the right-hand side of the balance sheet. The non-current financial liabilities of EUR 12.9 million chiefly relate to the investment loans granted to Group subsidiary Aerotech Peissenberg GmbH & Co. KG. Trade receivables of EUR 269.4 million (previous year: EUR 199.2 million) were



matched by trade payables of EUR 81.0 million (previous year: EUR 98.5 million). The Management Board generally considers OHB AG's net assets and financial condition to be solid.

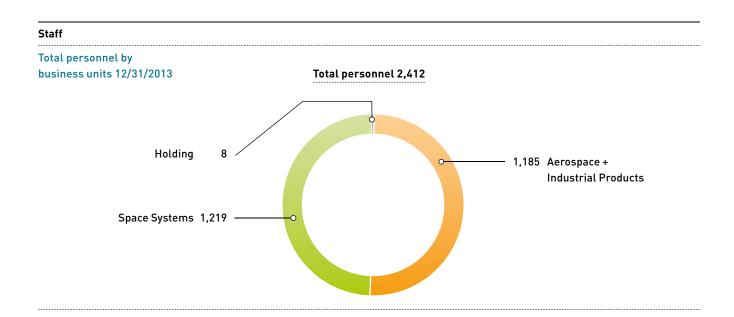
#### **VI. EMPLOYEES**

In contrast to earlier years, the Group headcount dropped slightly from 2,493 as of December 31, 2012 to 2,412 as of December 31, 2013. Hereof, 1,883 staff members were employed in domestic corporations, 420 staff members in Europe (Italy, Sweden, Belgium, Luxembourg, France Czech Republic) and a total of 109 staff members in Chile and French Guayana) The continued high number of domestic and foreign job applications ensures sufficient availability of highly qualified staff. Training to optimize employees' skills is provided in technical and commercial areas as well as in social competence.

#### **VII. RESEARCH AND DEVELOPMENT**

In the year under review, OHB spent roughly EUR 22.1 million (previous year: EUR 16.9 million) on research and development (R+D). Part of the R+D activities (EUR 3.9 million) are funded by grants received from various institutions such as the European Union, the German federal government and the German state governments. 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.

In the "Space Systems" business unit, one of the main focuses was on basic space research. In addition to new and enhanced technologies, the focus was on new types of mission concepts, such as low-flying satellite constellations for ultrahigh-resolution earth observation. A further aspect entailed technologies for enhancing and future-proofing the SmallGEO platform particularly in the light of commercial customers' requirements. The "Aerospace + Industrial Products" business unit particularly performed the following development work on new products and product enhancements and to achieve cost reductions. In the launch vehicle segment, the main focus was on technology programmes ensuring key involvement in the next-generation ARIANE-6 programme. This involves specific demonstrator programmes for the launcher elements which MT Aerospace AG has proposed under the ARIANE-6 ESA RFC. Development work on the metallic upper-stage tanks is focusing on efficient production processes and the appraisal of alternative upper-stage configurations. Both aspects are being backed up with the fabrication of scaled tank demonstrators. In connection with the mitigation projects for the Ariane 6 Lower Composite, efficient CFRP fabrication processes are being developed and tested on demonstrators assembled in accordance with mission-like requirements. TRL 6 must reach technological maturity by the end of 2015 for all technologies which are to be deployed in the future ARIANE-6. MT is thus required to successfully achieve this level for CFRP technologies as well in the short term. The A5ME bare tank project is currently in the CDR phase. At the same time, it has been possible to implement new and efficient fabrication technologies such as spin-forming and friction-stir welding from earlier programmes. In the satellite tank segment, a high-pressure helium tank is currently undergoing qualification. This is a weight-optimized, CFRPcoated tank with titanium liner. In this connection, MT was able



to ease what by international standards are the conservative ESA requirements with the result that the tank is highly competitive in terms of mass. At the same time, the MT satellite products activities, which had been transferred to Augsburg, were consolidated in this product segment. Accordingly, this site is now responsible for the tank family comprising the highpressure tank, the composite-coated tank and the diaphragm tank. In addition, MT has developed a cryogenic hydrogen pressure tank for vehicles as a syndicate partner. This project was successfully completed after the execution of roomtemperature and cryocyclic testing. Aerotech Peissenberg (ATP) is involved in research projects with various universities to protect the lead which it has achieved in the mechanical processing of non-machinable materials. Handling processes, machinery and equipment are undergoing further development as part of continuous improvement processes for ad hoc implementation.

#### VIII. QUALITY AND ENVIRONMENTAL MANAGEMENT, DATA PROTECTION AND PROCESSES

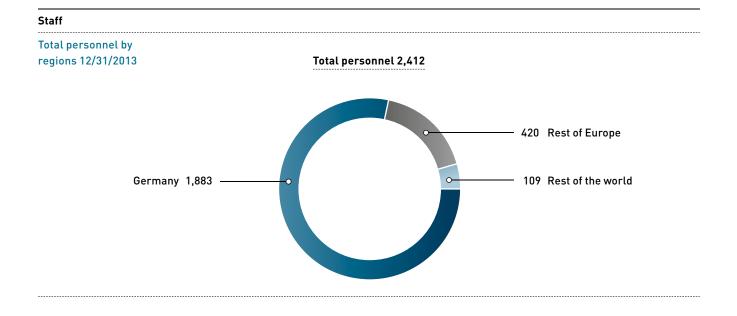
#### 1. Quality and environmental management

Quality and environmental management is monitored and regularly updated on a non-centralized basis by the individual companies.

Working on behalf of OHB AG, OHB System keeps track of the validity of the necessary certificates for coordinating selected individual processes and for harnessing synergistic benefits arising from the implementation of these processes at the following companies:

- OHB System AG, Bremen, Germany
- Kayser-Threde GmbH, Munich, Germany
- CGS S.p.A., Milan, Italy
- LuxSpace Sàrl, Betzdorf. Luxembourg
- Antwerp Space N.V., Antwerp, Belgium
- OHB Sweden AB, Stockholm, Sweden
- MT Aerospace AG, Augsburg, Germany
- MT Mechatronics GmbH, Mainz, Germany
- Aerotech Peissenberg GmbH & Co. KG, Peissenberg, Germany
- OHB Teledata GmbH, Bremen, Germany
- megatel Informations- und Kommunikationssysteme GmbH, Bremen, Germany

Legal responsibility for implementing the certificate requirements in product-related operational quality processes stays with the individual companies.



Certification of the individual companies' quality management encompasses the sum total of distribution, systems management, development, procurement, production and maintenance of products for space and environmental technology, information and communications technology as well as software products and services.

#### a) OHB System AG

#### EN 9100:2009 Quality Management System (aviation/aerospace) based on ISO 9001:2008 Quality Management System

OHB System is certified for system guidance, design development, production and operations for aerospace products as well as reconnaissance and communication technologies. This certification involves inclusion in the BDLI supplier list for the aviation industry and in the global OASIS database managed by IAQG. The certificate QS-3674 HH issued by Germanischer Lloyd is valid until May 2015.

#### AQAP 2110/-2210 (military products)

There is valid certification issued by the German Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw) in accordance with AQAP 2110 (NATO quality assurance requirements for design, development and production) and AQAP 2210 (software quality assurance) for the development, production, sales & marketing in the area of aerospace, reconnaissance and satellite and communication technology. The BAAINBw certificate is contract- and productrelated valid until May 2015.

#### b) Kayser-Threde GmbH

#### ISO 9001:2008 Quality Management System (aviation/aerospace)

Kayser-Threde is certified for development, manufacture and sales of systems for aerospace, scientific and industrial applications. The DEKRA certificate No. 41294186/6 is valid until July 2015. Certification in accordance with EN 9100 is planned for 2015.

#### ISO 14001:2004 Environmental Management

Observance of the environmental management requirements stipulated by this standard is overseen by an environmental management officer; formal certification is not necessary.

#### c) CGS S.p.A.

#### EN 9100:2009 Quality Management System (aviation/aerospace) based on ISO 9001:2008 Quality Management System

GGS is certified for design, construction and integration of satellites, payload and ground equipment. Design and development of hardware and software solutions for aerospace applications. Research and development of innovative technologies for aerospace applications. The certificate No. AS/77/13/S issued by RINA Services covers the CGS sites in Milan, Tortona and Rome and is valid until December 2016.

#### d) LuxSpace Sàrl

**ISO 9001:2008 Quality Management System (base certification)** LuxSpace is certified for the design and development, procurement and sales of space systems and related services. The certificate QS-4930 HH issued by Germanischer Lloyd is valid until June 2014.

#### e) Antwerp Space N.V.

**ISO 9001:2008 Quality Management System (base certification)** Certification for a quality management system in accordance with ISO 9001:2008 was successfully completed at the beginning of 2012. The certificate QS-8094 HH issued by Germanischer Lloyd is valid until February 2015.

#### f) OHB Sweden AB

## ISO 9001:2008 Quality Management System (aviation/space and defence)

After its separation from Swedish Space Corporation, it was not possible for the certificates to be transferred to OHB Sweden. Accordingly, the quality management system is to be recertified in accordance with ISO 9001:2008 during 2014.

#### g) MT Aerospace AG

#### EN 9100:2009 Quality Management System (aviation/aerospace)

based on ISO 9001:2008 Quality Management System MT Aerospace is certified for the development, production and tests of components and subsystems for aerospace, aviation, defence and industrial applications. This certification involves inclusion in the BDLI supplier list for the aviation industry and in the global OASIS database managed by IAQG.

The certificate QS-8086 HH issued by Germanischer Lloyd is valid until February 2015.

Valid approval certifications have been issued by the German Federal Aviation Office for the production (LBA EASA Part 21, Section A, Part G, certificate DE.216.0048) and for maintenance (LBA EASA Part 145, certificate DE.145.0253) of airborne vehicles.

#### h) MT Mechatronics GmbH

#### **ISO 9001:2008 Quality Management System (base certification)** MT Mechatronics GmbH is certified for consultancy, conceptual and design studies, detailed design, manufacturing, installation, commissioning, system integration and service for turn-key communication antennas, radio- and optical large telescopes, mechatronical devices for institutional and industrial applications, launch facilities for the European Space Programme.

The certificate 455233 QM08 issued by DQS is valid until November 2015.

#### i) Aerotech Peissenberg GmbH & Co. KG

### EN 9100:2009 Quality Management System (aviation/aerospace and defense)

based on ISO 9001:2008 Quality Management System Aerotech Peissenberg (ATP) is certified for the production of components for civil and military aero engines, industrial gas turbines and mechanical production of highly stressed and complex parts. This certification involves inclusion in the BDLI supplier list for the aviation industry and in the global OASIS database managed by IAQG.

The certificate 880113001 issued by DEKRA is valid until January 2016.

#### ISO 14001:2004 Environmental Management

Aerotech Peissenberg has a certified environmental management system. The certificate 171212158 issued by DEKRA is valid until December 2015.

#### j) OHB Teledata GmbH

**ISO 9001:2008 Quality Management System (base certification)** OHB Teledata is certified for sales, procurement, development, production and service for products and projects of telematics and telecommunications and battery management.

The certificate QS-2276 HH issued by Germanischer Lloyd is valid until July 2014.

#### ISO 14001:2009 Environmental Management

OHB Teledata is maintaining a certified environmental management system. The certificate EM-4595 HH issued by Germanischer Lloyd is valid until November 2014.

#### k) megatel Informations- und Kommunikationssysteme GmbH ISO 9001:2008 Quality Management System (base certification)

megatel is certified for sales, development and service for information technology products and projects. The certificate QS-6080 HH issued by Germanischer Lloyd is valid until July 2014.

#### 2. Data privacy

#### **Compliance with the German Federal Data Privacy Act**

The data privacy officers at the individual companies in Germany who are formally registered with the responsible state data privacy agencies safeguard the privacy of personal data in accordance with the German Federal Data Privacy Act as most recently amended. Local implementation of the data privacy requirements is set forth in manuals and process descriptions and monitored by the responsible data privacy officers.

#### 3. Important process qualifications

OHB System AG and CGS will be completing the qualification programme for welding of surface-mounted devices (SMDs) for further component groups, including for FPGA with 352 connectors in accordance with ECSS (European Cooperation for Space Standardization) in 2014.

Kayser-Threde also underwent and passed a supplementary qualification programme for further SMD component groups in 2012. A delta qualification programme for individual casing forms has been started in 2013 and shall be completed in 2014.

Aerotech Peissenberg is certified for special processes in aviation, space and defence (NADCAP, National Aerospace and Defence Contractors Accreditation Programme) and holds process certificates for non-destructive testing (NDT FPI), coatings (CT Flame + Plasma Spray), Chemical Processing (Swab Etch and Pre-penetrant Etch) and conventional machining as a special process (CMSP Hole Making). These certificates are being maintained and are to be extended in 2014 with the addition of clearing and turning processes.

## REACH (Registration, Evaluation, Authorization and Restriction of Chemicals)

#### Regulation (EC) No. 1907/2006 (REACH)

EU rules came into effect on June 1, 2007 governing the management of chemical substances in the EU for all industrial products. These rules primarily set out regulations for the registration and monitoring of hazardous substances accounting for more than 0.1 percentage by weight in the product (according with registration in the REACH database).

All OHB companies are aware of this registration duty and impose this requirement on their subcontractors. OHB actively supports a joint initiative of the european space industry to seek exemption for the application of Cr(VI) from the EU to ensure its continued availability for use.

Pending the combination of the REACH regulation and the RoHS (Restriction of the use of certain Hazardous Substances) directive to limit the use of certain dangerous materials in electrical and electronic devices, all companies are seeking to avoid the use of dangerous substances in their electronic products. These are substances, which are already being avoided in space products in accordance with the ECSS standards.

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

There were no significant reportable event between the balance sheet date and the date on which the annual report for 2013 was prepared.

#### X. OUTLOOK

#### 1. "Space Systems" business unit

In 2014 and beyond, the "Space Systems" business unit will be continuing its successful work on the Galileo\*, HISPASAT AG1, EDRS-C, Meteosat Third Generation (MTG), and EnMAP projects as well as SARah, the latest and largest project. Studies on the new concept for the "Electra" geostationary satellites will be continued in consultation with the future operator SES-Astra. A request for a proposal is expected to be received from DLR for the national telecommunications satellite "Heinrich Hertz". ESA is systematically continuing the ExoMars programme. Following the shipment of the central module for the orbiter in the 2016 mission, negotiations for the carrier for the 2018 mission are currently still ongoing. Important ongoing studies include BIO-MASS and the second-generation Galileo\*. A series of requests for proposals for elements of the ESA earth observation and science mission as well as contracts for further studies are expected for 2014. Depending on the programme, OHB plans to submit proposals either as a principal or subcontractor. With respect to national Italian programmes, CGS plans to systematically broaden its role as second player 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 programmes 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 programmes, OHB AG'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.

#### 2. "Aerospace + Industrial Products" business unit

In the "Aerospace + Industrial Products" business unit, the existing order backlog will ensure continued production and delivery of components for the ARIANE-5 in 2014 and 2015. In space flight development work, development of the upper-stage tank for the ARIANE-5 ME configuration will be entering the main implementation phase in 2014 with the construction of the equipment and test models. As well as this, two major contracts signed with ESA in 2013 for the technological development of engine cladding made from composites and a cryotank demonstrator for future upper-stage tanks will be going into implementation in 2014. Consequently, MT Aerospace has created a good basis for participating in new development and production projects for the next-generation ARIANE-6 launcher. In 2013, a contract was also signed providing for participation in the US SLS launcher programme, specifically the development and construction of tank components, and this will additionally boost utilization of development and production capacities.

Looking ahead over the next two years, MT Aerospace AG expects to continue reporting rising sales and operating profitably provided that ARIANE business remains successful and no unforeseen extraordinary strains on earnings arise. The greater number of ARIANE-5 launches and the resultant increase in deliveries of the necessary components may have a positive impact on earnings.

In the aviation segment, an increase in business volumes for the production of fresh and waste water tanks for Airbus is expected thanks to the A350, for which around 100 tanks are to be delivered. Development of water tanks for the Airbus A350 will be completed in full in 2014. The production rate for the structural components for the TIGER Eurocopter will also be stepped up in 2014. The deliveries of the air inlet/outlet systems for the A400M military transporter should generate substantial series sales in 2014, with a further increase expected for the following years. Ahead of the ramp-up of A400M production in 2014, turnaround times will be additionally optimized and the production team extended step by step in 2014. In this business segment, there is potential for benefiting from appreciation in the value of the US dollar as the water tank deliveries for Airbus aircraft are invoiced in that currency. Improvements to earnings will also be achieved from ongoing efforts to enhance competitiveness and to lower costs together with the layout and process improvements initiated in the previous year. A further focus of aircraft business will also be on entering into partnership agreements with small and mid-size companies to optimize the supply chain for Airbus as the OEM or system suppliers. In this way, MT Aerospace is also adopting the Bavarian aviation structure, which provides for small and mid-size companies to assume "one face to the customer" in order to substantially improve their competitiveness in both the European and non-European markets. Where the last few years have been dominated by very large aircraft such as the Airbus A380 and the Boeing 747-8, a trend has since emerged in favor of smaller and more flexible models. With over 900 outstanding orders for the B787 and just under 240 for the A350, the main challenge over the next few years will be to ensure that the delivery plans for the new models can be observed. On the other hand, revenues and earnings in military business are likely to decline due to the gradual withdrawal of international troops from crisis regions in Iraq and Afghanistan, resulting in cuts in conventional budgets. On the other hand, spending on new-generation technologies will continue.

Trends in the portfolios of the large aircraft makers are also reflected in the engine industry. The last few years have been characterized by the development and industrialization of new engines with the aim of setting new standards in efficiency. Developed by Pratt and Whitney together with MTU, the geared turbofan is being used as PW1000G in the Airbus A320neo, the C series and the MRJ regional jet and promises a quantum leap forward in performance and economic efficiency. The CFM syndicate's Leap engine is being fitted to the A320neo and the B737Max. Both engines will be entering the ramp-up phase over the next few years and will gradually replace their technological predecessors in the volume segment comprising small and medium aircraft. Engines for the B787 and the A350 in the new wide-body, twin-engine segment are also on a growth trajectory. Aerotech Peissenberg GmbH & Co. KG is involved in the industrialization and production of these engines and is thus well- positioned to play a firm role in the growth market of civil aviation in the future.

In the antenna and telescope segment, existing order backlog is sufficient to ensure utilization of the existing resources for 2014. In view of the contract awards for major telescope projects and further VLBI antennas expected for 2014, MT Mechatronics GmbH expects order receipts valued in the double-digit millions in the telescope and special antenna segment, resulting in further sales growth and project profit. Looking ahead over the next few years, we expect to generate order intake and sales of a comparable magnitude from marketing the extensive service skills of MTM and the cost-optimized 4-16m antennas for satellite communications. In addition, we see a chance of improving earnings as a result of the structural and process improvements which have been initiated and completed. By means of targeted internal training it is possible to ensure staff acceptance of the optimized processes which have been implemented.

In the truck navigation segment, deliveries of between 10,000 and 12,000 units are planned for 2014. In addition, preparations are under way for the development of a follow-up model, with a market launch planned for 2016 at the earliest. This year, MAN will be taking delivery of some 3,000 devices, upon which the project will be discontinued after a period of over 10 years. Following the completion scheduled for June 2014 of the first phase of the container tracking project, an initial batch of 1,000 units is to be delivered to Deutsche Telekom at the end of the year.

#### 3. Outlook

The Management Board expects continued growth in consolidated total revenues in the OHB Group to more than EUR 750 million in 2014. At over EUR 56 million and EUR 39 million respectively, EBITDA and EBIT will also be higher year on year in 2014. Given the higher order backlog and upbeat outlook for the current year, we assume that the Group's net assets and financial condition will also remain strong. Our guidance for the financial year 2013 was met. It should be expressly noted in connection with forward-looking statements that actual events may differ materially from expectations of future performance.

#### XI. 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 AG'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. Appropriate precautions are taken in the accounting and consolidation process to ensure full implementation of the double-sign-off principle. Access restrictions to the IT system ensure a high degree of data security. 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.

#### XII. OPPORTUNITY AND RISK REPORT

OHB AG'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 AG 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 AG's business activities:

#### 1. Sector risks, risks in underlying conditions

The "Space Systems" business unit primarily works for publicsector 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 is, if anything, favorable for OHB AG in view of its special standing as a German systems provider for space technology. 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 as the award of such contracts is materially determined by the provision of the necessary funding by the national governments involved. A further risk to which this segment is exposed arises from the delivery of parts for aircraft engines, which are heavily dependent on market trends in the aviation industry.

#### 2. Strategic risks

The "Aerospace + Industrial Products" business unit is heavily exposed to the fortunes of the ARIANE programme. A further challenge entails securing market share in the aviation components industry. In the "Space Systems" business unit, current risks relate to the scheduled completion of the 22 Galileo\* satellites. 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.

#### 3. Sourcing risks

The OHB Group constantly optimizes its supply chain by monitoring the buy-side market continually, tracking inventories constantly and increasingly taking measures to safeguard the local availability of supplies. The efficiency of supply chain management has been enhanced through improvements in the vendor complaint system. As a result, it has been possible to reduce response times for complaints. In addition, it is continuing to tap new sources. In the "Aerospace + Industrial Products" business unit, the cost of some raw materials remained predominantly steady in the course of 2013. The agreed delivery periods were very largely observed by the suppliers. The "Space Systems" business unit is exposed to only sporadic supply-side risks in the sourcing of subsystems. There is generally sufficient competition amongst suppliers with little likelihood of delivery shortfalls.

#### 4. 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 AG and the management of the operating companies. All projects from a certain size on 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.

#### 5. IT risks

The Group's business processes rely on information services and systems in all areas. The primary purpose is to ensure smooth operations of all IT systems and networks to support development and production processes as well as commercial application software. 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. OHB has installed special Internet access software to additionally enhance its networks with incoming and outgoing data. In addition, it performed further activities at its Bremen site to prepare for basic BSI certification.

#### 6. 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 aviation segment, the US dollar-denominated orders and receivables were hedged. The securities entail long-term investments with acceptable risks. A conclusive assessment of the risk situation is not possible due to the current situation in the financial markets. Further information is available in the IFRS 7 disclosures contained in the notes to the consolidated financial statements. Working capital requirements can be reduced substantially by means of progress billings. A credit facility agreement has been signed with a syndicate of seven banks to avert liquidity risks.

#### 7. Personnel risks

The OHB Group employs a large number of highly qualified people, on whose motivation and dedication its success depends. However, Group expertise is spread over many people, meaning that there is only very limited dependence on individual specialists. Staff fluctuation is low at the OHB Group. Despite the flourishing labor market in the highly specialized aviation and aerospace industry, the OHB Group has been able to find suitable specialists to cover its personnel requirements. Temporary peak requirements are covered by using temporary or loan staff. Looking ahead, personnel requirements will continue to be analyzed and planned carefully, with corresponding allocations made. Training and skills development remain an important instrument for minimizing personnel risks.

#### 8. Summary

Throughout 2013, the OHB Group's exposure was for the most part confined to the risks described. In the light of current market trends and the outlook for the Company's business, its order backlog and its 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.

#### 9. Opportunity and risk report

The observance and evaluation of and business response to opportunities and the potential which they harbor as well as the response to risks call for professional management, which is combined in the OHB Group's opportunity and risk management system.

#### 10. Material opportunities

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 publicsector contracts and development projects, increasing commercialization of space both worldwide and in Europe is the main growth driver. Telecommunications, the growing exploration, mapping and depiction of the earth by means of space technology are of key importance in this connection. For this purpose, the Group uses its own funds which are channeled in close consultation with its customers.

#### **XIII. 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 (duration of contracts for Marco and Manfred Fuchs: July 1, 2012 until June 30, 2015; duration of contract for Ulrich Schulz: July 1, 2012 until June 30, 2016) provide for variable compensation to be determined on the basis of a direct share in profit (percentage of EBT). 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 are entitled to a company car. The compensation paid to the members of the Management Board breaks down as follows: The total fixed compensation paid in 2013 came to EUR 0.880 million (previous year EUR 0.776 million), while the variable component equaled EUR 0.840 million (previous year EUR 0.683 million). The breakdown by members of the Management Board is as follows: Mr. Marco R. Fuchs received a sum of EUR 0.345 million (previous year: EUR 0.307 million) as fixed compensation including all benefits as well as advances towards health and pension insurance and a non-cash benefit in the form of contributions of EUR 1.7 thousand (previous year: EUR 1.7 thousand) towards an endowment policy. Variable compensation equaled EUR 0.360 million (previous year: EUR 0.293 million). Prof. Dott. Ing. h.c. Manfred Fuchs received a sum of EUR 0.278 million (previous year: EUR 0.263 million) as fixed compensation including all benefits such as advances towards health. Variable compensation equaled EUR 0.360 million (previous year: EUR 0.293 million). In addition, payments of EUR 37,000 were made by OHB System AG pursuant to a pension commitment assumed in 1988 under which he is to receive a sum of EUR 3,000 a month upon turning 65 years. Mr. Ulrich Schulz received a sum of EUR 0.217 million (previous year: EUR 0.205 million) as fixed compensation including all benefits as well as advances towards health and pension insurance and a non-cash benefit in the form of contributions of EUR 1.2 thousand (previous year: EUR 1.2 thousand) towards an endowment policy. Variable compensation equaled EUR 0.120 million (previous year: EUR 0.098 million). In her capacity as chairwoman of the Supervisory Board, Mrs. Christa Fuchs received a sum of EUR 30 thousand for 2013 (previous year: EUR 30 thousand), while Mr. Robert Wethmar received EUR 20 thousand (previous year: EUR 2.7 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. Mrs. Christa Fuchs was paid compensation of EUR 0.128 million (previous year EUR 0.118 million) for her advisory services for members of the OHB Group in the year under review.

#### **XIV. RELATED PARTIES REPORT**

The OHB Group is effectively controlled by the Fuchs family via its direct and indirect equity interests. For this reason, the Management Board has prepared a related parties report in accordance with Section 312 of the German Stock Corporations Act, which was audited and certified as part of the audit procedures for the annual financial statements. In this related parties report, the Management Board makes the following declaration: "The Management Board declares that with respect to the transactions described in the related parties report the Company received reasonable remuneration for each transaction in the light of the circumstances which it was aware of at the point in time at which the transactions described were executed. No actions taken or omitted at the request or in the interest of the aforementioned persons and the companies controlled by them gave rise to any disadvantage."

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

#### Breakdown of the subscribed capital (No. 1)

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

#### Restrictions to voting rights or the transfer of shares (No. 2)

Prof. Dott. Ing. h.c. Manfred Fuchs, Christa Fuchs and Marco R. Fuchs, who are also shareholders of VOLPAIA Beteiligungs-GmbH, and VOLPAIA Beteiligungsgesellschaft mbH in their capacity as shareholders of OHB AG, 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.

#### Shares exceeding 10% of the voting capital (Number 3)

As of the balance sheet date, Prof. Dott. Ing. h.c. Manfred Fuchs holds 16.39% and Marco R. Fuchs 18.23% of OHB AG's subscribed capital. VOLPAIA Beteiligungs GmbH holds a further 21.35% of the Company's shares. Together with the shares held by Christa Fuchs (8.02%) and Romana Fuchs Mayrhofer (5.72%), 69.72% 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.

#### 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. In addition, Article 7 (1) and (2) of the OHB AG's bylaws in the version dated June 8, 2012 stipulate that the Supervisory Board is to appoint the members of the Management Board and determine their number. A member of the Management Board may be appointed Chairman. In addition, the Supervisory Board is empowered to appoint members of the Management Board as deputy to the Chairman of the Management Board. The procedure for amending the bylaws is governed by Sections 133, 179 of the German Stock Corporation Act. Article 20 of OHB AG's bylaws also authorizes the Supervisory Board to make amendments to the bylaws affecting only their version.

## Powers of the Management Board to issue or buy back shares (No. 7)

At the annual general meeting held on May 19, 2010, 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 18, 2015.

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.

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 19, 2010, 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 18, 2015. 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.

#### XVI. CORPORATE GOVERNANCE DECLARATION

The corporate governance declaration was officially published on OHB AG's website in March 2014. The Internet address is: www.ohb.de  $\rightarrow$  Investor Relations  $\rightarrow$  Corporate governance  $\rightarrow$ 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 AG 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 balance sheet date, Christa Fuchs, chairwoman of the Supervisory Board, held 1,400,690 shares, Prof. Heinz Stoewer, a member of the Supervisory Board, 1,000 shares and Marco R. Fuchs, chairman of the Management Board, 3,184,796 shares. The other members of the Management Board Prof. Dott. Ing. h.c. Manfred Fuchs and Ulrich Schulz held 2,863,064 and 54 shares, respectively. On December 31, 2012, VOLPAIA Beteiligungs-GmbH held 3,730,170 shares. Christa Fuchs held 20%, Marco R. Fuchs 25% and Prof. Dott. Ing. h.c. Manfred Fuchs 35% of the capital of this company 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 AG 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 international 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 AG PURSUANT TO SECTION 161 OF THE STOCK CORPORATION ACT CONCERNING THE GERMAN CORPORATE GOVERNANCE CODE

OHB AG welcomes the German Corporate Governance Code and the fact that it is embodied in statutory law. The Management Board and the Supervisory Board of OHB AG declare that the Company conformed to 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 is based on the May 13, 2013 version of the Corporate Governance Code. OHB AG departs from the principles of the German Corporate Governance Code in only a small number of points:

#### Age limits for the Management Board (5.1.2)

OHB AG does not set a maximum age for members of the Management Board as this would limit the availability of Management Board members for appointment by the Supervisory Board.

#### Formation of Supervisory Board committees (5.3)

OHB AG's Supervisory Board has not formed any committees on account of the small number of members (three).

#### Age limits for the Supervisory Board (5.4.1)

The Corporate Governance Code recommends defining maximum ages for the members of the Supervisory Board. The Supervisory Board is elected by the shareholders of OHB; accordingly, a defined age limit is not a desirable factor for selection purposes.

Management Board and Supervisory Board of OHB AG

Bremen, December 19, 2013

## CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Financial Statements for the Period from January 1, 2013 until December 31, 2013

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#### I. CONSOLIDATED INCOME STATEMENT

		in EUR 000s	
	Note	2013	2012 adjusted
1. Sales	(1)	680,121	615,982
2. Changes in inventories of finished goods and work in progress	(2)	-4,085	-3,475
3. Other own work capitalized		12,990	9,259
4. Other operating income	(3)	11,037	10,963
5. Total revenues		700,063	632,729
6. Cost of materials	(4)	422,629	375,254
7. Staff costs	(5)	182,185	168,402
8. Depreciation and amortization	(6)	16,450	15,113
9. Other operating expenses		42,446	42,963
10. Operating profit (EBIT)		36,353	30,997
11. Other interest and similar income	(7)	1,258	1,046
12. Other financial expenses	(7)	7,209	7,112
13. Currency translation gains/losses		32	-170
14. Net profit/loss from shares carried at equity	(7)	-576	-667
15. Investment income	(7)	-130	-115
16. Net financial income/expense		-6,625	-7,018
17. Earnings before taxes		29,728	23,979
18. Income taxes	(8)	9,660	8,286
19. Consolidated net income for the year		20,068	15,693
20. Minority interests	(9)	-632	-875
21. Consolidated net income for the year after minority interests		19,436	14,818
22. Consolidated profit carried forward		75,558	67,173
24. Consolidated profit		94,994	81,991
25. Number of shares		17,387,600	17,387,600
26. Earnings per share (basic, EUR)		1.12	0.85
27. Earnings per share (diluted, EUR)		1.12	0.85

#### **II. STATEMENT OF COMPREHENSIVE INCOME**

		in EU	R 000s
	Note	2013	2012 adjusted
Consolidated net income for the year		20,068	15,693
Exchange difference on translating foreign operations	(21)	-100	41
Net gains/losses from the measurement of financial assets recorded under equity	(21)	3,582	1,471
Cashflow Hedges	(21)		
Recycling		0	0
Gains/losses arising during the year		-37	80
Actuarial gains/losses		-1,526	-6,653
Other comprehensive income after tax		1,919	-5,061
Comprehensive income		21,987	10,632
Of which attributable to			
equity holders of OHB AG		20,633	11,631
other equity holders		1,354	-999

The first-time implementation of IAS 19 (IAS revised) adapted in 2011 has had a material impact on the consolidated financial statements. The revised IAS 19 has to be implemented with retrospective effect; previous year's figures have been adjusted accordingly. Detailed explanations are given in chapter IV. "Notes to the consolidated financial statement", article "Summary of significant accounting policies" and (24) "Provisions for pensions and similar obligations".

#### **III. CONSOLIDATED BALANCE SHEET**

Assets			in EUR 000s	
	Note	December 31, 2013	<b>31.12.2012</b> adjusted	01.01.2012 adjusted
Goodwill	(10)	7,687	7,687	7,687
Other intangible assets	(10)	42,174	36,324	32,412
Property, plant and equipment	(11)	70,282	70,776	68,707
Shares carried at equity	(12)	683	1,259	1,926
Other financial assets	(13)	22,591	17,966	15,793
Non-current assets		143,417	134,012	126,525
Other non-current receivables and assets	[14]	2,277	2,498	3,123
Securities	(16)	1,631	5,418	5,334
Deferred taxes		10,398	8,850	5,935
Other non-current assets		14,306	16,766	14,392
Property, plant and equipment/non-current assets		157,723	150,778	140,917
Inventories	(15)	83,048	82,408	89,007
Trade receivables	(14)	269,355	199,234	186,687
Other tax receivables	(14)	1,201	1,744	5,749
Other non-financial assets	(14)	16,800	14,596	11,815
Securities	(16)	3,021	3,761	3,250
Cash and cash equivalents	(17)	54,259	86,236	91,194
Current assets		427,684	387,979	387,702
Total assets		585,407	538,757	528,619

#### Shareholders' equity and liabilities

	Note	December 31, 2013	<b>31.12.2012</b> adjusted	01.01.2012 adjusted
Subscribed capital	(18)	17,468	17,468	17,468
Additional paid-in capital	(19)	14,923	15,094	15,094
Retained earnings	(20)	521	521	520
Other comprehensive income	(21)	-3,593	-6,260	-3,072
Treasury stock	(22)	-781	-781	-781
Consolidated profit		94,994	81,991	73,259
Shareholders' equity excluding minority interests		123,532	108,033	102,488
Minority interests	(23)	9,173	9,299	10,321
Shareholders' equity		132,705	117,332	112,809
Provisions for pensions and similar obligations	(24)	96,290	92,763	82,716
Other non-current provisions	(25)	3,269	3,419	3,487
Non-current financial liabilities	(26)	12,898	43,784	44,464
Non-current advance payments received on orders	(27)	3,038	32,316	65,757
Deferred tax liabilities		18,114	14,462	13,348
Non-current liabilities and provisions		133,609	186,744	209,772
Current provisions	(25)	29,764	19,519	20,378
Current financial liabilities	(28)	67,965	21,488	18,536
Trade payables	(29)	80,950	98,500	95,089
Current advance payments received on orders	(30)	119,123	78,068	56,617
Tax liabilities		6,797	7,011	5,293
Other current liabilities	(31)	14,494	10,095	10,125
Current liabilities		319,093	234,681	206,038
Total equity and liabilities		585,407	538,757	528,619

in EUR 000s

The first-time implementation of IAS 19 (IAS revised) adapted in 2011 has had a material impact on the consolidated financial statements. The revised IAS 19 has to be implemented with retrospective effect; previous year's figures have been adjusted accordingly. Detailed explanations are given in chapter IV. "Notes to the consolidated financial statement", article "Summary of significant accounting policies" and (24) "Provisions for pensions and similar obligations".

## IV. CONSOLIDATED CASH FLOW STATEMENT

	in EU	IR 000s	
	2013	2012 adjusted	
Operating EBIT	36,353	30,997	
Non-cash income from first-time consolidation	0	-184	
Income taxes paid	-6,194	-4,140	
Depreciation/amortization	16,450	15,113	
Changes in pension provisions	760	619	
Gross cash flow	47,368	42,405	
Increase(–)/decrease (+) in own work capitalized	-11,458	-9,257	
Increase(–)/decrease (+) in inventories	-641	6,599	
Increase(–)/decrease (+) in receivables and other assets	-68,933	-12,848	
Increase(+)/decrease (–) in liabilities and current provisions	-3,228	2,434	
Increase(+)/decrease (–) in advance payments received	11,778	-11,990	
Profit (–)/loss (+) from the disposal of assets	-5,390	216	
Cashflow from operating activites	-30,504	17,559	
Payments made for investments in non-current assets	-12,174	-12,332	
Payments received from the disposal of assets	7,802	57	
Interest and other financial income	1,178	962	
Cashflow from investing activities	-3,194	-11,313	
Dividend payout	-6,433	-6,086	
Payments made for the settlement of financial liabilities	-45,087	-13,506	
Payments received from raising borrowings	60,678	15,778	
Minority interests	-36	-24	
Interest and other financial expenses	-7,339	-7,227	
Cashflow from financing activites	1,783	-11,065	
Changes to cash and cash equivalents	-31,915	-4,819	
Currency-related changes to cash and cash equivalents	-62	-139	
Cash and cash equivalents at the beginning of the period	86,236	91,194	
Cash and cash equivalents at the end of the period	54,259	86,236	

## Cash and cash equivalents at the end of the period and current financial instruments

January 1	95,415	99,778
Changes in cash and cash equivalents including securities and current financial instruments	-36,504	-4,363
December 31	58,911	95,415

## V. CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

in EUR 000s	Subscribed capital	Additional paid-in capital	Retained earnings	Other com- prehensive income	Consolida- ted profit	Treasury stock	Share- holders' equity exclu- ding minori- ty interests	Minority interests	Share- holders' equity
Note	(18)	(19)	(20)	(21)		(22)		(23)	
December 31, 2011	17,468	15,094	520	-2,276	72,972	-781	102,997	10,580	113,577
Implementation of IAS 19R	0	0	0	-796	287	0	-509	-259	-768
January 1, 2012	17,468	15,094	520	-3,072	73,259	-781	102,488	10,321	112,809
Dividend payment (EUR 0.35 per share)	0	0	0	0	-6,086	0	-6,086	0	-6,086
Comprehensive income	0	0	0	-3,188	14,818	0	11,630	-998	10,632
Other changes	0	0	1	0	0	0	1	-24	-23
December 31, 2012*	17,468	15,094	521	-6,260	81,991	-781	108,033	9,299	117,332
Dividend payment (EUR 0.37 per share)	0	0	0	0	-6,433	0	-6,433	0	-6,433
Comprehensive income	0	0	0	2,667	19,436	0	22,103	-90	22,013
Other changes	0	-171	0	0	0	0	-171	-36	-207
December 31, 2013	17,468	14,923	521	-3,593	94,994	-781	123,532	9,173	132,705

## 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. OHB AG exercises the function of an active holding company which manages the subsidiaries within the OHB Group. 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.

#### Accounting principles and methods

In accordance with Regulation (EC) 1606/2002 issued by the European Parliament and the Council on July 19, 2002, OHB AG 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 315 a of the German Commercial Code. The consolidated financial statements have been prepared in accordance 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 133 million according to the consolidated financial statements. The overall strategy pursued by the Group was unchanged over 2012. The Group is not subject to any externally imposed capital requirements. In addition to the consolidated balance sheet, consolidated income statement and the consolidated statement of comprehensive income, the consolidated financial statements include a consolidated cash flow statement and a statement of changes in consolidated equity. The notes to the Consolidated Financial Statements contain the declaration required by Section 314 (1) No. 8 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 AG 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 after further review. 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 at equity are adjusted to allow for the proportionate profit/loss attributable to such companies. Non-consolidated companies are shown at acquisition cost.

#### **Acquired businesses**

No acquisitions were executed during this period.

#### **Consolidated companies**

OHB AG's consolidated financial statements include OHB AG, 13 domestic and five non-domestic subsidiaries and a further non-domestic associate accounted for at equity. The schedule "Consolidated companies" sets out the subsidiaries and associates together with their shareholding percentage. Compared with the previous year, the number of companies consolidated was reduced by two. The business operations of MT Aerospace Satellite Products Ltd., Wolverhampton (United Kingdom) have been transferred to MT Aerospace AG for business-related reasons. However, the company continues in dormant mode. In addition, CGS S.p.A., Milan (Italy) and TS S.p.A. (formerly Telematic Solutions S.p.A.), Milan (Italy), were merged. In addition, shares were held in other companies (see table entitled "Further investments and financial assets", page 74). In accordance with the principle of materiality pursuant to the IFRS/IAS framework, the companies stated in the table, which are in principle subject to compulsory consolidation (OHB share > 20%), are not included in the consolidation perimeter. These companies' current sales and EBIT are not considered to make any material contributions to consolidated earnings either individually or collectively. 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 shareholdings shown in the tables entitled "Consolidated companies" and "Further investments and financial assets" correspond to the voting rights held.

OHB AG's consolidated financial statements include the following companies: see "Consolidated companies" table.

#### **Consolidated companies**

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
STS Systemtechnik Schwerin GmbH, Bremen (Germany) <sup>1</sup>	100.0	Fully consolidated
KT Beteiligungs GmbH & Co. KG, Munich (Germany)	100.0	Fully consolidated
Kayser-Threde GmbH, Munich (Germany) <sup>2</sup>	100.0	Fully consolidated
CGS 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
ELTA S.A., Toulouse (France)	34.0	At Equity
MT Aerospace Holding GmbH, Bremen (Germany)	70.0	Fully consolidated
MT Aerospace AG, Augsburg (Germany) <sup>3</sup>	100.0	Fully consolidated
MT Aerospace Grundstücks GmbH & Co. KG, Munich (Germany) <sup>4</sup>	100.0	Fully consolidated
MT Mechatronics GmbH, Mainz (Germany) <sup>4</sup>	100.0	Fully consolidated
MT Aerospace Satellite Products Ltd., Wolverhampton (UK) 4	100.0	Fully consolidated
MT Aerospace Guyane S.A.S., Kourou (French Guiana) <sup>4</sup>	100.0	Fully consolidated
Aerotech Peissenberg GmbH & Co. KG, Peissenberg (Germany) <sup>3</sup>	100.0	Fully consolidated
OHB Teledata GmbH, Bremen (Germany)	100.0	Fully consolidated
megatel Informations- und Kommunikationssysteme GmbH, Bremen (Germany)	74.9	Fully consolidated
Timtec Teldatrans GmbH, Bremen (Germany)	100.0	Fully consolidated

<sup>1</sup> held by OHB System AG

<sup>2</sup> held by KT Beteiligungs GmbH & Co. KG

<sup>3</sup> held by MT Aerospace Holding GmbH

<sup>4</sup> held by MT Aerospace AG

#### **Currency translation**

Most receivables are denominated in euro. Payables and receivables denominated in a foreign currency are converted and recognized on the closing date. 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 within equity from unrealized gains/losses.

#### Summary of significant accounting policies

The International Accounting Standards Board (IASB) and IFRIC have revised the following standards and interpretations which are subject to compulsory application from 2013:

→ IAS 19 Employee Benefits – The revisions to IAS 19 alter the treatment of defined benefit pension plans and termination benefits. The most significant amendment concerns the recognition of changes in defined benefit obligations and plan assets. The revised guidance provides for immediate recognition of changes in defined benefit obligations and the fair value of the plan assets as soon as they arise. The corridor approach previously stipulated in IAS 19 and hitherto applied by OHB has been abolished. Moreover, past service costs are now recorded immediately. All actuarial gains and losses must be included in other comprehensive income in the year in which they arise. Accordingly, net pension liabilities or assets in the balance sheet show the full extent of any under- or overcoverage. In addition, interest expense or income is calculated on the net defined benefit liability or

asset by applying the discount rate to the net defined benefit liability or asset. This replaces the interest cost on the defined benefit obligation and the expected return on plan assets in accordance with the previous version of IAS 19.

- → Amendments to IAS 1, "Presentation of items of other comprehensive income" these revisions provide guidance on the presentation of other comprehensive income. The main change is that other comprehensive income must be split into parts which are not recycled to profit and loss and those which are. They do not alter the contents of other comprehensive income. The revisions were applied in the year under review.
- → IFRS 13 "Fair Value Measurement" sets out uniform criteria for fair value and defines it as the selling price. For this purpose, the characteristics of the following elements are taken into account: Characteristics of the item to be measured, the transaction and the price. Contrary to the previous practice of measuring values at historical cost, fair-value measurements will be based on an exit price in the future under IFRS 13. The fair value of liabilities is measured on the basis of an assumed transfer (rather than settlement). These rules are not relevant for the OHB Group.
- → Revisions to IAS 12 "Recovery of Underlying Assets" measurement of deferred income tax liabilities and assets is based on whether the carrying amount of the asset is recovered by utilization or sale. Real estate held as financial assets at fair value is subject to particular assessment issues and a particularly high degree of discretion. These rules are not relevant for the OHB Group.
- → "Deferred Tax: Recovery of Underlying Assets" (revision to IFRS 1) – Removal of Fixed Dates for First-time Adopters –

IFRS 10 "Consolidated Financial Statements"	To be applied in accounting periods beginning on or after January 1, 2014
IFRS 11 "Joint Arrangements"	To be applied in accounting periods beginning on or after January 1, 2014
IFRS 12 "Disclosure of Interests in other Entities"	To be applied in accounting periods beginning on or after January 1, 2014
IAS 27 "Separate Financial Statements"	To be applied in accounting periods beginning on or after January 1, 2014
IAS 28 "Investments in Associates and Joint Ventures"	To be applied in accounting periods beginning on or after January 1, 2014
Information on recoverable amount of non-financial assets	To be applied in accounting periods beginning on or after
(amended <b>IAS 36</b> )	January 1, 2014
Novation of derivates and continnation of hedge accounting	To be applied in accounting periods beginning on or after
(amended <b>IAS 39</b> )	January 1, 2014
Transition guidelines	To be applied in accounting periods beginning on or after
(amended IFRS 10, IFRS 11 and IFRS 12)	January 1, 2014
Special purpose entities	To be applied in accounting periods beginning on or after
(amended I <b>FRS 10, IFRS 12</b> and <b>IAS 27</b> )	January 1, 2013
Offsetting Financial Assets and Financial Liabilities	To be applied in accounting periods beginning on or after
(amended <b>IAS 32</b> )	January 1, 2014

this amendment abolishes the previously applicable fixed date of January 1, 2004 for the adoption of IFRS and replaces it with the words "date of transition to IFRS". Hyperinflation – in addition, guidance is provided for the first time for cases in which a company is unable to observe the IFRS rules some time prior to transition as its functional currency is subject to hyperinflation. These rules are not relevant for the OHB Group.

- → Disclosures Offsetting Financial Assets and Financial Liabilities (revision to IFRS 7): This revision introduces extensive disclosure duties to explain in greater detail the functioning of offsetting arrangements. These rules are not relevant for the OHB Group.
- → "Government loans" (revision to IFRS 1) the revisions provide guidance on interest rates on public loans which do not correspond to standard market interest rates. These rules are not relevant for the OHB Group.

The IASB has issued the standards, interpretations and revisions to existing standards set out in the above table which are not yet compulsory and do not become so until future reporting periods and which OHB AG has not voluntarily early adopted. On the basis of a preliminary assessment, the application of the above-mentioned standards and interpretations will not exert any material influence on the presentation of the financial statements. The Management Board of OHB AG has decided not to apply the aforementioned standards before the accounting periods in which application becomes mandatory.

#### Changes in accounting policy

There have been no changes in the recognition or measurement principles compared with the previous year with the exception of the rules contained in the IAS 19 revised.

#### **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 longterm 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 incurred 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 ten years) are recognized as revenues on the basis of production costs plus recoverable

overheads 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 measured, 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 amortized 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 7.380 million (previous year: EUR 5.397 million) were recorded as expense as the criteria provided for in IAS 38.57 were not satisfied. Of the total development costs of EUR 22.1 million, an amount of EUR 10.8 million was capitalized and EUR 3.9 million received in the form of grants.

#### Net finance income/expense

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. The transaction costs for the provision of a syndicated loan were partially recorded as finance expense, part of which was spread over the tenor of the loan in accordance with IAS 39.

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 expenditure on pension 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 loss. 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 programmes, order books acquired and licenses. These are written down on a straight-line basis over a period of between one and six 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. Cashgenerating 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 cashgenerating 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.

#### 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 loss. 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 acquisition 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 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. Property, plant and equipment held under finance leases are reported at the lower of the fair value or the present value of the minimum lease payments and written down over the shorter of their expected useful lives or the term of the lease.

## Further investments and financial assets

Name of company	Share held (%)	Share in capital EUR 000s
RST Radar Systemtechnik GmbH, Salem (Germany)*	24.0	190
DHB France S.A., Paris (France)*	100.0	37
DHB-ElectroOPtics GmbH, Bremen (Germany)*	50.0	13
peos GmbH, Bremen (Germany)	12.0	60
ATB GmbH, Bremen (Germany)	5.0	26
OHB Marine Technologies GmbH, Bremen (Germany)*	100.0	25
COSMOS International Satellitenstart GmbH, Bremen (Germany)*	49.9	13
Cosmos Space Systems AG, Bremen (Germany)*	66.6	40
Telemondo International GmbH, Bremen (Germany)*	100.0	26
<pre>KT Verwaltungsgesellschaft mbH, Bremen (Germany)*</pre>	100.0	25
Antares S.c.a.r.l., San Giorgio Del Sannio (Italy)*	24.0	58
Arianespace Participation, Evry (France)	8.3	8,328
MT Dezentrale Energiesysteme GmbH, München (Germany)*	100.0	1,022
MT Mecatronica Limitada, Santiago de Chile (Chile)*	100.0	530
Aerotech France S.A.S., Chateauroux (France)*	100.0	80
Aerotech Czech s.r.o., Klatovy (Czech Republic)*	100.0	0
ORBCOMM Inc., Rochelle Park NJ (USA)	4.7	10,248
Atfin GmbH, Peissenberg (Germany)	49.0	25

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

Some major investments and financial assets: MT Dezentrale Energiesysteme GmbH with equity as of December 31, 2013 of EUR 1.023 million and net profit for 2012 of EUR 0, RST Radar Systemtechnik GmbH with equity as of December 31, 2012 of EUR 0.519 million and net profit for 2012 of 0.032 million, Aerotech France S.A.S with equity as of December 31, 2013 of EUR 0.196 million and net loss of EUR 397 and Aerotech Czech s.r.o. with equity as of December 31, 2013 of EUR -1.183 million and net loss of EUR 0.313 million.

## Financial assets Shares at equity

Shares in associates are reported at cost net of the share in their profit/loss for the year.

## Other financial assets

Other financial assets are reported at cost (less any impairments) or, if market prices can be identified, at their fair value. This item comprises the investments in ORBCOMM Inc., details of whose stock market prices were available as of the reporting date. Adjustments resulting from fair value accounting are recognized under equity. The deferred tax arising from this is reported under deferred tax liabilities. Other financial assets are set out in the table entitled "Further investments and financial assets".

## Inventories

Inventories are recognized at historical cost or the lower net recoverable value prevailing on the reporting date. Part of the inventories were measured using the moving average method.

### Receivables

Receivables and other assets are reported at their settlement amount. 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.

In the case of consolidated companies with construction contracts as defined in IAS 11 on their books, the percentageof-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 eight years) are recognized as assets on the basis of production costs plus prorated recoverable overheads provided that a partial profit can be estimated with a reasonable degree of reliability. 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 fiscal year in question.

## Securities/financial instruments

The fair values are determined on the basis of the stock market prices as of the reporting date. Non-current securities are measured in accordance with IAS 39 and IFRS 7 (Reclassification of Financial Assets).

## 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 result in deferred income taxes. The OHB Group applies a uniform domestic tax rate of 32% for calculating deferred taxes.

## 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 AG defines equity as subscribed capital, the share premium, unrealized gains and losses recognized within equity, retained earnings and accrued profit brought forward. Treasury stock is deducted from subscribed capital.

## Provisions for pensions 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 matters resulting in an outflow of enterprise resources to settle present obligations in accordance with IAS 37. Estimates are primarily based on detailed calculations.

## Liabilities

Liabilities comprise financial liabilities, trade payables and other liabilities. Financial liabilities are reported at amortized cost. Any differences between historical cost and the settlement amount are reported in accordance with the effective interest method. Other liabilities are recognized at their nominal or settlement amount.

## Estimates

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. 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 situation of the sector or 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 result in the impairment of intangible assets and property, plant and equipment. The useful lives of intangible assets and property, plant and equipment are estimated on the basis of historical data. 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. Pension provisions are calculated on the basis of a number of assumptions 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. 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 2014.

## VII. NOTES ON THE CONSOLIDATED INCOME STATEMENT

#### (1) Sales

Revenues from construction contracts as defined in IAS 11 came to EUR 506.830 million in 2013 (previous year: EUR 429.385 million). The related contract costs stood at EUR 476.507 million (previous year: EUR 395.141 million). The resultant earnings before interest and taxes (EBIT) for 2013 equaled EUR 30.324 million (previous year: EUR 25.200 million).

Sales break down by business unit as follows:

in EUR 000s	2013	2012
Space Systems	466,927	396,011
Aerospace + Industrial Products	220,316	227,717
Consolidation	-7,122	-7,746
Total	680,121	615,982

#### Additional disclosures on POC measurement (IAS 11)

in EUR 000s	Net assets	Net liabilities	Total
Expenses + profit	1,400,159	195,570	1,595,729
Prepayments received	1,191,401	269,030	1,460,431
Amount shown on balance sheet	208,758	-73,460	135,298

## (2) Reduction in inventories of finished goods and work in progress

The decline in inventories of finished goods and work in progress relates to the reduction of EUR 3.7 million in the "Aerospace + Industrial Products" segment (previous year: decrease of EUR 3.8 million). In total, inventories declined by EUR 4.1 million (previous year: EUR 3.5 million).

#### (3) Other operating income

Other operating income of EUR 11.037 million (previous year: EUR 10.963 million) includes income of EUR 7.000 million from the sale of the industrial activities of the Group subsidiary CGS S.p.A. in the ground and telemetrics segments on July 26, 2013 to Vinci Energies, France, and income of EUR 3.892 million (previous year: EUR 5.600 million) from 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. In the year under review, reimbursements were made to the providers of grants in accordance with the applicable terms and conditions.

#### (4) Cost of materials

in EUR 000s	2013	2012
Cost of raw materials and goods purchased	301,294	269,786
Cost of services bought	121,335	105,468
Total	422,629	375,254

#### (5) Staff costs

in EUR 000s	2013	2012
Total ages and salaries	151,700	139,661
Social security charges and expenditure on old age pensions and support	30,485	28,741
Total	182,185	168,402

Pensions and pension provisions came to EUR 4.447 million (previous year: EUR 4.225 million).

#### (6) Depreciation and amortization

No non-scheduled depreciation/amortization was required in the year under review. Further details on depreciation/amortization are set out in the consolidated statement of changes in assets.

#### (7) Net finance income/expense

#### Interest

The interest income of EUR 1.258 million (previous year: EUR 1.046 million) primarily comprises interest earned on the investment of cash in fixed-term deposits.

The other finance expense of EUR 7.209 million (previous year: EUR 7.112 million) mainly relates to interest expenditure on pension provisions of EUR 3.565 million (previous year: EUR 4.242 million) and borrowing costs of EUR 1.951 million (previous year: EUR 2.219 million).

#### Share of profit/loss of associates

The share of profit/loss of associates comprises the share in the loss of EUR 0.576 million (previous year: loss of EUR 0.667 million) sustained by ELTA S.A., which is consolidated at equity.

#### (8) Income taxes

Actual income tax of EUR 7.367 million (previous year: EUR 6.648 million) arose with respect to the consolidated German companies; income tax of EUR 1.099 million (previous year EUR 0.567 million) arose outside Germany. Domestic income taxes in 2013 were calculated in detail using different tax rates. Deferred tax assets are recognized pursuant to IAS 12. The domestic deferred income tax is calculated on the basis of tax rates of 32%.

#### **Reconciliation of tax expense**

in EUR 000s	2013	2012
Taxes at a tax rate of 32.00%	9,513	7,678
Reductions in tax expenses as a result		
of partially tax-exempt income	-1	59
Tax losses utilized	-386	-47
Effects on the balance sheet of unused		
tax losses not previously recognized	-	-743
Non-deductible operating expenses	335	630
Other tax effects	-6	105
Off-period tax expense	197	175
Additional non-domestic taxes	8	434
Effective tax expense	9,660	8,291

#### **Deferred income taxes**

The deferred income tax assets primarily arise from the difference in provisions for pension commitments in accordance with tax laws on the one hand and IFRS on the other. In 2013, deferred income tax expense of EUR 1.196 million (previous year: EUR 1.301 million) was recognized in profit and loss.

Four subsidiaries recognized deferred income tax assets on unused tax losses of EUR 0.823 million (previous year: EUR 0.173 million). The forecast for the next five years indicates that the unused tax losses will be utilized in full. No deferred income taxes were recognized on the unused tax losses of EUR 21.617 million reported by Antwerp Space N.V.

#### (9) Minority interests

Non-controlling interests are valued at EUR 0.632 million (previous year: EUR 0.878 million) and relate to MT Aerospace Holding GmbH and megatel GmbH.

#### IFRS/IAS earnings per share

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. The calculations were based on 17,387,600 dividend-entitled shares as the Company held 80,496 treasury shares. The consolidated net profit of EUR 19.436 million (previous year: EUR 14.826 million) net of noncontrolling interests was used for calculation purposes. Earnings per dividend-entitled share for 2013 came to EUR 1.12 (previous year: EUR 0.85).

#### Analysis of deferred taxes and assets

in EUR 000s	20	13	2012 adjusted		2013	2012
	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities	Change effecting net income	Change effecting net income
Intangible assets and property,						
plant and equipment	217	12,379	435	10,888	-1,709	-1,938
Financial assets	393	310	420	275	-105	279
Current assets	125	13,919	217	11,875	-2,194	-412
Provisions	11,776	8	10,290	32	2,519	347
Liabilities	177	28	576	73	-354	190
Tax losses and credits	6,546	306	5,874	281	647	233
Consolidation	-8,836	-8,836	-8,962	-8,962	0	0
Total	10,398	18,114	8,850	14,462	-1,196	-1,301

## **VIII. NOTES ON THE CONSOLIDATED BALANCE SHEET**

#### (10) Goodwill and other intangible assets

The balance sheet for the year ending December 31, 2013 includes goodwill of EUR 7.687 million (previous year: EUR 7.687 million).

#### Goodwill

in EUR 000s	2013	2012
Goodwill from consolidation of:		
STS Systemtechnik Schwerin GmbH	566	566
Timtec Teldatrans GmbH	115	115
ORBCOMM Deutschland AG	556	556
CGS S.p.A.	801	801
megatel GmbH	646	646
Teilkonzern Kayser-Threde	5,003	5,003
Total	7,687	7,687

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, 2013. No impairments were identified. 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. A pre-tax weighted average cost of capital (WACC) of 10.90% (previous year: 10.20%) was applied for domestic goodwill and of 14.60% (previous year: 13.50%) for non-domestic goodwill. A sensitivity analysis involving an increase of 1 percentage point in WACC did not result in any impairment of goodwill for any of the cash-generating units. The other intangible assets mainly comprise own work capitalized (see consolidated statement of changes in assets). Goodwill and other intangible assets are analyzed on pages 88/89.

#### (11) Property, plant and equipment

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. The depreciation amounts are set out in the consolidated statement of changes in assets. No impairment losses were recognized. The residual carrying amounts of the assets under finance leases stand at EUR 0.557 million (previous year: EUR 1.297 million). Favorable purchase options are available for the corresponding assets upon the expiry of the minimum lease period. Property, plant and equipment are analyzed on pages 88/89.

#### (12) Shares at equity

This item includes the cost of acquiring the investment in ELTA S.A. Toulouse, plus the share in its profit/loss for the year. The majority shareholder exercises a controlling influence on this entity's business model.

#### (13) Other financial assets

Changes in the carrying amounts of the other financial assets are as follows:

in EUR 000s	2013	2012
Amount on January 1	17,966	15,793
Net fair-value gains/losses recognized in equity	3,625	1,472
Changes to consolidated companies	0	0
Additions	1,046	760
Disposals	-46	-59
Total	22,591	17,966

The change in fair value recognized within equity relates to 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, 2013 and the USD/EUR exchange rate as of the same date. The statement of comprehensive income includes net gains/losses from the measurement of financial assets of EUR 3.625 million.

#### (14) Receivables and other assets

Receivables and other assets are recognized at amortized cost. Receivables of EUR 2.277 million (previous year: EUR 2.498 million) are due for settlement in more than one year. The carrying amounts of current assets and other receivables primarily match their fair value. Receivables of EUR 215.174 million (previous year: EUR 150.581 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. As of the reporting date, currency forwards worth USD 4.5 million had been transacted to hedge underlying contracts of USD 9.1 million to cover the exports of a consolidated company. The difference is reported as cashflow hedges for expected order receipts in 2014. Trade receivables are due for settlement in less than one year and are reported at amortized cost, which generally equals their settlement amount net of any adjustments. Reasonable adjustments are made to allow for discernible risks. As of the reporting date, adjustments of a total of EUR 3.794 million (previous year: EUR 4.009 million) had been made. Other tax receivables chiefly comprise income tax refund claims.

## (15) Inventories

Inventories increased over the previous year to EUR 83.048 million (previous year: EUR 82.408 million). Prepayments received are not netted with inventories.

in EUR 000s	2013	2012
Raw materials and supplies	18,105	19,449
Unfinished goods and services	49,491	56,357
Finished goods and merchandise	6,178	2,653
Advance payments made	9,274	3,949
Total	83,048	82,408

Prepayments made were allocated to inventories due to their close relationship. Impairments were recognized on work in progress and included in profit and loss in the year under review.

#### (16) Securities

As of the reporting date, the securities portfolio was valued at EUR 4.652 million (previous year: EUR 9.179 million). This breaks down as follows: financial assets at fair value through profit or loss EUR 2.830 million (previous year: EUR 3.058 million), available-for-sale financial assets EUR 0 million (previous year: EUR 0 million) and loans and receivables EUR 1.822 million (previous year: EUR 5.418 million). Financial risks primarily comprise liquidity, market price and counterparty default risks. There are no material short-term liquidity or counterparty default risks as low-risk investment funds are selected for the most part. In the interests for averting market price risks, virtually all cash is invested in funds which can be redeemed at short notice in order to achieve broad risk diversification.

#### (17) Cash and cash equivalents

Cash and cash equivalents were valued at EUR 54.259 million on the reporting date (previous year: EUR 86.236 million) and comprised 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.

#### (18) 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 nopar-value ordinary bearer shares equivalent to a notional share of EUR 1.00 each in the Company's issued capital. Of these changes, an unchanged number of 17,387,600 is outstanding. 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. 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 19, 2010, 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 (authorized capital) on or before May 18, 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 2010 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 the 2010 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 provided that 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 19, 2010, 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 18, 2015. Upon this authorization taking effect, the authorization granted on May 13, 2009 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 AG holds a majority stake for their account or for third-party account.

The authorization expires on May 18, 2015. The authorization granted by the shareholders in their resolution passed on May 13, 2009 was canceled upon this new authorization taking effect.

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 pur-

pose 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 since 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.

#### (19) Share premium

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

in EUR 000s	2013			2012 adjusted		
	before tax	tax effects	net	before tax	tax effects	net
Exchange difference on translating foreign operations	-86	0	-86	41	0	41
Net gains/losses from the measuremenmt of financial assets recorded under equity	3,625	-43	3,582	1,472	-1	1,471
Cashflow Hedges	-37	11	-26	115	-35	80
Actuarial gains/losses	-1,501	698	-803	-6,726	1,946	-4,780
Total	2,001	666	2,667	-5,098	1,910	-3,188

## Changes in equity not recognised through the income statement

#### (20) Retained earnings

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

#### (21) Unrealized gains and losses recognized under equity

This equity item relates to 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 values. It is recognized under equity.

The first-time adoption of IAS 19 in the period under review resulted in a substantial change in the figure for 2012 under this item. In the year under review, no provisions which had been set aside in earlier years were released to profit and loss or netted against acquisition costs. It also includes the foreign currency translation differences arising in connection with independent subsidiaries.

#### (22) Treasury stock

On September 13, 2011, the Management Board of OHB AG decided to implement a stock buyback programme 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. Upon this authorization taking effect, the authorization granted on May 13, 2009 for the acquisition and utilization of treasury stock was revoked. The purpose of the treasury stock is 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 has been buying back shares on the stock market floor since September 14, 2011. Since the beginning of the buyback programme, a total of 13,542 shares have been acquired at an average price of EUR 11.0145. No shares were bought back in the year under review. As of December 31, 2013, OHB AG's treasury stock comprised a total of 80,496 shares, equivalent to 0.46% of its issued capital.

#### (23) Minority interests

The non-controlling interests are valued at EUR 9.173 million (previous year: EUR 9.299 million including IAS 19 effect) and relate to the co-shareholders in the MT Aerospace subgroup and megatel GmbH.

#### (24) Provisions for pensions and similar obligations.

Provisions for pensions and similar obligations break down as follows:

in EUR 000s	2013	2012*
Retirement benefits	94,340	91,002
Similar obligations	1,950	1,761
Provisions for pensions and similar obligations	96,290	92,763

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. 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 postretirement 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: 3.60% (previous year: 3.80%)
- Estimated future salary/wage increase: 2.75% (previous year: 2.75%)
- Wage and salary drift: 0.00% (previous year 0.00%)
- Estimated future pension trend 1.75% (previous year: 1.75%)

The following alternative actuarial assumptions apply to the subsidiary CGS S.P.A.:

- Estimated future salary/wage increase: 0.00% (previous year 0.00%)
- Estimated future pension trend 3.00% (previous year 3.00%)

The following alternative actuarial assumptions apply to the subsidiary Antwerp Space N.V.:

- Discount rate: 3.15% (previous year: 2.80%)
- Estimated future salary/wage increase: 1.00% (previous year: 1.00%)
- Estimated future pension trend 2.00% (previous year 2.00%)
- Expected return on plan assets: 3.15% (previous year: 2.80%)

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 pension commitments breaks down as follows:

in EUR 000s	2013	2012*
Current service cost	927	859
Interest expense	3,608	4,242
Expect income (–) from plan assets	-227	-266
Total	4,308	4,835

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

in EUR 000s	2013	2012*
Present value of the defined benefit obligations on January 1	97,488	86,757
Present value of the entitlement acquired in the year	928	860
Interest expenditure on entitlement already acquired	3,607	4,242
Payments from provisions	-4,631	-4,225
Actuarial gains (–)/losses (+)	2,890	9,854
Present value of the defined benefit obligations on December 31	100,282	97,488

The plan assets break down as follows

in EUR 000s	2013	2012*
Value of plan assets on January 1	6,729	6,679
Payments made	-517	-283
Expected income	227	266
Actuarial gains (+)/losses(–)	58	67
Value of plan assets on December 31	6,497	6,729

Actual income from plan assets came to EUR 0.286 million (previous year: EUR 0.332 million).

The present value is reconciled with the defined benefit (defined benefit liability (+)/defined benefit asset (-)) as follows:

2013	2012*
100,282	97,488
-6,497	-6,728
93,785	90,759
	100,282 -6,497

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

Benefit Liability und Defined Benefit Asset auf:

in TEUR	2013	2012*
Defined benefit asset	-555	-242
Defined benefit liability	94,340	91,002

#### Statement of changes in provisions

in EUR 000s	Balance on December 31, 2012*	Added	Utilized	Released	Balance	Changes to consolidated companies	Balance on December 31, 2013
Pension provisions	92,763	7,939	4,412	0	0	0	96,290
– of which non-current	92,763	7,939	4,412	0	0	0	96,290
Other provisions	22,938	26,578	15,091	1,392	0	0	33,033
– of which non-current	3,419	1,961	1,633	478	0	0	3,269
Total	115,701	34,517	19,504	1,392	0	0	129,322

The first-time adoption of IAS 19 (revised 2011) had a material impact on OHB's consolidated financial statements. The revised IAS 19 is to be applied retrospectively. The previous year's figures have been adjusted accordingly.

The revisions to IAS 19 alter the treatment of defined benefit pension plans and termination benefits. The most significant amendment for OHB concerns the recognition of changes in defined benefit obligations and plan assets. The revised guidance provides for immediate recognition of changes in defined benefit obligations and the fair value of the plan assets as soon as they arise. The corridor approach previously stipulated in IAS 19 and applied by OHB up until 2012 has been abolished. Moreover, past service costs are now recorded immediately. All actuarial gains and losses must be included in other comprehensive income after deferred income taxes immediately upon arising in the year in which they arise. Accordingly, net pension liabilities or assets in the balance sheet show the full extent of any underor overcoverage. In addition, interest expense or income is calculated on the net defined benefit liability or asset by applying the discount rate to the net defined benefit liability or asset. This replaces the interest cost on the defined benefit obligation and the expected return on plan assets in accordance with the previous version of IAS 19R. The figures for the previous year were adjusted as follows:

#### **IAS 19**

in EUR 000s	January 1, 2012 (before adjustment)	Adjustment IAS 19R	January 1, 2012 (after adjustment)	December 31, 2012 (before adjustment)	Adjustment IAS 19R	December 31, 2012 (after adjustment)
Other non-current receivables and assets	2,875	248	3,123	2,609	-111	2,498
(Active) deffered taxes	5,803	132	5,935	5,686	3,164	8,850
Other comprehensive income	-2,276	-796	-3,072	-713	-5,547	-6,260
Consolidated profit carried forward	72,972	287	73,259	66,886	287	67,173
Staff costs	0	0	0	168,386	16	168,402
Income taxes	0	0	0	8,291	-5	8,286
Consolidated net income for the year	0	0	0	15,704	-11	15,693
Anteile anderer Gesellschafter am Jahresergebnis	0	0	0	-878	3	-875
Consolidated profit	72,972	287	73,259	81,712	297	81,991
Shareholders' equity excluding minority interests	102,997	-509	102,488	113,301	-5,268	108,033
Minority interests	10,580	-259	10,321	11,462	-2,163	9,299
Shareholders' equity	113,577	-768	112,809	124,763	-7,431	117,332
Provisions for pensions and similar obligations	81,676	1,040	82,716	82,279	10,484	92,763
Deferred tax liabilities	13,240	108	13,348	14,462	0	14,462

The data in the statement of comprehensive income has been adjusted as follows:

The data in the statement of comprehensive income has been adjusted as follow in EUR 000s	2012 (before adjustment)	Adjustment IAS 19R	2012 (after Adjustment)
Consolidated net income for the year	15,704	-11	15,693
Actuarial gains/losses from defined benefit plans	0	-6,653	-6,653
Other net profit/loss after taxes	1,592	-6,653	-5,061
Comprehensive income	17,296	-6,664	10,632
Of which attributable to			
equity holders of OHB AG	16,390	-4,759	11,631
other equity holders	906	-1,905	-999

The present value of a defined benefit obligations of EUR 0.691 million (previous year: EUR 0.788 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 4.9%. 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 pension obligations would increase by EUR 3.342 million. If the discount rate were 0.25% higher, the present value of the pension obligations would decrease by EUR 3.166 million. If future pension increase trend were 0.25% higher, the present value of the pension obligations would increase by EUR 2.885 million. If future pension increase trend were 0.25% lower, the present value of the pension obligations would decrease by EUR 2.768 million.

#### (25) Other provisions (current and non-current)

Non-current provisions primarily comprise provisions for phased retirement scheme obligations in the "Aerospace + Industrial Products" business unit. Current provisions of EUR 13.182 million (previous year: EUR 5.066 million) were set aside for the cost of purchased materials and services for which deliveries had already been received but for which the corresponding invoices were still outstanding. Other provisions primarily relate to obligations towards employees of EUR 12.604 million (previous year: EUR 10.917 million).

#### (26) Non-current financial liabilities

This mostly entails non-current liabilities towards banks owed by the subsidiary Aerotech Peissenberg GmbH & Co. KG in an amount of EUR 10.556 million (previous year: EUR 7.569 million). These liabilities are due for settlement in more than twelve months after the reporting date. The average interest rate on these liabilities stands at 2.97%.

## Carrying amounts of financial instruments by type in 2013

in EUR 000s	Financial assets	Trade receivables	Other receivables and assets	Securities and cash and cash equivalents	Total
Held-to-maturity assets (HtM)	0	0	0	0	0
Loans and receivables (LaR)	0	269,355	20,279	56,081	345,715
Available-for-sale assets (AfS)	22,591	0	0	0	22,591
Trading assets (FAHfT)		0	0	2,830	2,830
in EUR 000s	Financial liabilities	Trade payables	Advance pay- ments received on orders	Other liabilities	Other liabilities
Financial liabilities measured at amortised cost (FLAC)	80,863	80,950	122,161	21,291	305,265
Trading liabilities (FLHfT)	0	0	0	0	0

## Carrying amounts of financial instruments by type in 2012

Financial assets	Trade receivables	Other receivables and assets	Securities and cash and cash equivalents	Total
0	0	0	0	0
0	197,157	19,769	91,845	308,771
17,966	0	0	0	17,966
0	0	0	3,570	3,570
Financial liabilities	Trade payables	Advance pay- ments received on orders	Other liabilities	Total
65,272	90,525	119,087	17,106	291,990
0	0	0	0	0
	0 0 17,966 0 Financial liabilities	Financial assetsreceivables000197,15717,96600000Financial liabilitiesTrade payables	Trade receivablesreceivables and assets0000197,15719,76917,966000 <td>Trade receivablesreceivables and assetscash and cash equivalents00000197,15719,76991,84517,96600000000003,570Advance pay- ments received on orders65,27290,525119,08717,106</td>	Trade receivablesreceivables and assetscash and cash equivalents00000197,15719,76991,84517,96600000000003,570Advance pay- ments received on orders65,27290,525119,08717,106

## Net gains/losses by category in 2013

in EUR 000s		Historical cost	Fair value	Net fair-value gains/losses recognized in equity	Net profit/loss for the period
Financial assets at fair value through profit and loss	FAFVPL	2,920	2,818	0	123
of which financial instruments designated using the fair v	alue option	0	0	0	0
of which held for trading		2,920	2,830	0	123
Held-to-maturity financial assets	HtM	0	0	0	0
Loans and receivables	LaR	345,715	345,715	0	80
Available-for-sale financial assets	AfS	18,813	22,591	3,625	0
Financial liabilities at fair value through profit and loss	FLFVPL	0	0	0	0
of which financial instruments designated using the fair v	alue option	0	0	0	0
of which held for trading		0	0	0	0
Financial liabilities at amortized cost	FLAC	305,265	305,265	0	0

## Net gains/losses by category in 2012

in EUR 000s		Historical cost	Fair value	Net fair-value gains/losses recognized in equity	Net profit/loss for the period
Financial assets at fair value through profit and loss	FAFVPL	3,789	3,570	0	41
of which financial instruments designated using the fa	ir value option	0	0	0	0
of which held for trading		3,789	3,570	0	41
Held-to-maturity financial assets	HtM	0	0	0	0
Loans and receivables	LaR	308,771	308,771	53	84
Available-for-sale financial assets	AfS	18,813	17,966	1,472	0
Financial liabilities at fair value through profit and loss	FLFVPL	0	0	0	0
of which financial instruments designated using the fa	ir value option	0	0	0	0
of which held for trading		0	0	0	0
Financial liabilities at amortized cost	FLAC	291,990	291,990	0	0

## Liquidity risks

## Loan settlement periods

in EUR 000s	Less than one year	One to two years	Three to five years	More than five years	Total
Non-current financial obligations	0	3,056	7,858	1,984	12,898
Non-current prepayments received	0	2,508	530	0	3,038
Current financial liabilities	67,965	0	0	0	67,965
Trade payables	80,950	0	0	0	80,950
Current prepayments received on orders	112,772	6,351	0	0	119,123
Tax liabilities	6,797	0	0	0	6,797
Other current liabilities	14,494	0	0	0	14,494
Total	282,978	11,915	8,388	1,984	305,265

#### (27) 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.

#### (28) Current financial liabilities

This entails current liabilities towards banks and under operating leases held by OHB AG (EUR 38.000 million), MT Aerospace AG (EUR 10.096 million), Aerotech Peissenberg GmbH & Co. KG (EUR 4.390 million), Kayser-Threde GmbH (EUR 11.000 million) and the Italian subsidiary CGS S.p.A. (EUR 4.479 million). The related lease liabilities stand at EUR 0.555 million.

#### (29) Trade payables

Liabilities are reported at their settlement amount. All liabilities are due for settlement within one year.

#### (30) Current prepayments received

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

#### (31) Other current liabilities

These primarily entail personnel-related obligations.

#### Additional disclosures on financial instruments

Originated financial assets primarily comprise other financial assets, 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 the other financial assets 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 mainly 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.

#### **Credit risks**

Credit risks are generally low, the portfolio of receivables is broadly diversified (no risk clustering) and business is transacted only with investment-grade counterparties. In addition, however, general credit risks may always occur as a result of specific economic conditions. The Group as a whole does not take out any credit insurance for receivables as a large part of its customer base is made up of public-sector agencies.

## Segment reporting

	Space	Systems	Aerospace + In	dustrial Products
in EUR 000s	2013	<b>2012</b> adjusted	2013	<b>2012</b> adjusted
Sales	466,927	396,011	220,316	227,717
of which internal sales	338	1,083	6,697	6,663
Total revenues	484,465	409,135	223,079	231,672
Cost of materials and services purchased	322,385	272,632	106,214	109,423
EBITDA	36,396	27,938	16,322	18,113
Depreciation and amortization	7,398	5,720	9,069	9,398
EBIT	28,998	22,218	7,253	8,715
Non-current assets	55,326	48,727	71,643	72,729
Current assets	285,198	255,096	195,236	199,769
Total assets	340,524	303,823	266,879	272,498
Equity	68,871	49,309	25,211	26,962
Liabilities	271,653	254,514	241,668	245,536
Total equity and liabilities	340,524	303,823	266,879	272,498
Investments net of financial assets	12,978	11,766	9,602	9,025

#### **Currency risks**

The USD/EUR exchange rate influences income in aviation business. Around 50% of orders and receivables denominated in US dollars have been hedged by means of currency forwards for 2014.

In the "Space Systems" business unit, only a single contract is exposed to the USD exchange rate. The budget for 2014 assumes an exchange rate of USD/EUR 1.37. If the exchange rate increased by USD 0.10 over the end-of-year exchange rate, this would cause the planned income to drop by EUR 0.023 million.

#### Interest risks

In general, 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 revolving credit 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 0.700 million. In addition, a minor amount is used to cover certain investments in property, plant and equipment via fixed-rate investment loans with matching maturities.

#### IX. ADDITIONAL INFORMATION

#### Segment report

IFRS 8 stipulates that operating segments are to be defined on the basis of internal segment reporting which is regularly re-

viewed 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 liquidity.

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 mainly 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 AG exercises the function of an ac-

	Reconci	T	otal		
Holding	Holding company Consolidation				
2013	2012 adjusted	2013	2012 adjusted	2013	2012 adjusted
0	0	-7,122	-7,746	680,121	615,982
0	0	-7,035	-7,746	0	0
5,185	4,165	-12,666	-12,243	700,063	632,729
0	0	-5,970	-6,801	422,629	375,254
85	59	0	0	52,803	46,110
34	46	-51	-51	16,450	15,113
51	13	51	51	36,353	30,997
52,505	42,479	-36,057	-29,923	143,417	134,012
59,385	26,804	-97,829	-76,924	441,990	404,745
111,890	69,283	-133,886	-106,847	585,407	538,757
64,215	60,513	-25,593	-19,452	132,705	117,332
47,674	8,770	-108,293	-87,395	452,702	421,425
111,890	69,283	-133,886	-106,847	585,407	538,757
7	39	0	0	22,587	20,830

## Consolidated statement of changes in assets

	Production and aquisition costs								
For the year from January 1 until December 31, 2013	Balance on January 1, 2013 Revaluations		Additions from first-time consolidation Additions		Disposals	Reclassi- fications	Balance on December 31, 2013		
	EUR 000s	EUR 000s	EUR 000s	EUR 000s	EUR 000s	EUR 000s	EUR 000s		
I. Goodwill	8,957	0	0	0	0	0	8,957		
II. Intangible assets									
Concessions and industrial property rights	2,044	0	0	5	0	6	2,055		
Software acquired	13,133	0	0	1,242	110	-6	14,259		
Software produced	64,396	0	0	11,458	0	0	75,854		
III. Property, plant and equipment									
Operating and business equipment	97,457	0	0	9,798	1,873	0	105,382		
Property and plant	58,478	0	0	83	4	0	58,557		
IV. Financial assets									
Investments in affiliated companies									
Investments in associated	63	0	0	0	0	0	63		
companies	1,259	0	0	0	576	0	683		
Other investments	36,462	3,625	0	1,046	46	0	41,087		
Total	282,249	3,625	0	23,632	2,609	0	306,897		

## Production and aquisition costs

For the year from January 1 until December 31, 2012	Balance on January 1, 2012	Revaluations	Additions from first-time consolidation	Additions	Disposals	Reclassi- fications	Balance on December 31, 2012
	EUR 000s	EUR 000s	EUR 000s	EUR 000s	EUR 000s	EUR 000s	EUR 000s
I. Goodwill	8,957	0	0	0	0	0	8,957
II. Intangible assets							
Concessions and industrial property rights	2,044	0	0	0	0	0	2,044
Software acquired	12,532	0	609	865	965	92	13,133
Software produced	56,031	0	0	8,365	0	0	64,396
III. Property, plant and equipment							
Operating and business equipment	91,474	0	-139	8,352	2,138	-92	97,457
Property and plant	55,249	0	0	3,229	0	0	58,478
IV. Financial assets							
Investments in affiliated companies							
Investments in associated	63	0	0	0	0	0	63
companies	1,926	0	0	0	667	0	1,259
Other investments	34,384	1,472	0	760	154	0	36,462
Total	262,660	1,472	470	21,571	3,924	0	282,249

	Accu		Book	values		
Balance on January 1, 2013	Additions from first-time consolidation	Additions	Disposals	Balance on December 31, 2013	Balance on December 31, 2013	Balance on December 31, 2012
EUR 000s	EUR 000s	EUR 000s	EUR 000s	EUR 000s	EUR 000s	EUR 000s
1,270	0	0	0	1,270	7,687	7,687
1,947	0	21	0	1,968	87	
9,742	0	1,169	109	10,802	3,457	3,391
31,560	0	5,664	0	37,224	38,630	32,836
63,925	0	7,428	1,094	70,259	35,123	33,532
21,234	0	2,168	4	23,398	35,159	37,244
0	U	U	0	U	63	63
0	0	0	0	0	683	1,259
18,559	0	0	0	18,559	22,528	17,903
148,237	0	16,450	1,207	163,480	143,417	134,012

	Accu	Book	values			
Balance on January 1, 2012	Additions from first-time consolidation	Additions	Disposals	Balance on December 31, 2012	Balance on December 31, 2012	Balance on December 31, 2011
EUR 000s	EUR 000s	EUR 000s	EUR 000s	EUR 000s	EUR 000s	EUR 000s
1,270	0	0	0	1,270	7,687	7,687
1,902	0	45	0	1,947	97	142
9,372	0	1,334	964	9,742	3,391	3,160
26,921	0	4,639	0	31,560	32,836	29,110
59,260	0	6,617	1,952	63,925	33,532	32,214
18,756	0	2,478	0	21,234	37,244	36,493
0	0	0	0	0	63	63
0	0	0	0	0	1,259	1,926
18,654	0	0	95	18,559	17,903	15,730
136,135	0	15,113	3,011	148,237	134,012	126,525

tive holding company. The share of loss of ELTA S.A., which is carried at equity, was assigned to the holding company's net finance income/expense (loss of EUR 0.576 million). The carrying amount of the investment in ELTA S.A. of EUR 0.683 million was allocated to the holding company's assets. As of December 31, 2013, ELTA S.A. had assets of EUR 35.442 million, equity of EUR 1.783 million and debt capital of EUR 33.659 million. ELTA S.A. reported a net loss for 2013 of EUR 1.693 million. As OHB holds less than 50% of the voting rights in ELTA S.A., it is not able to exercise any material influence on this company.

Sales (non-consolidated) break down by product group as follows:

in EUR 000s	2013	2012
Space technology	619,729	547,610
Aviation	82,374	82,806
Antennas	21,467	24,594
Automotive	763	111
Process control technology	4,186	4,783
Telematics	4,270	4,053
Total	732,789	663,957

OHB AG's non-consolidated sales break down by region (location of customer) as follows:

in EUR 000s	2013	2012
Germany	202,132	200,258
Rest of Europe	520,673	456,586
Rest of the world	9,984	7,113
Total	732,789	663,957

With sales of EUR 137.263 million and EUR 109.361 million, respectively, two 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 130 million (previous year: EUR 116 million) are located in Germany and those with a carrying amount of EUR 28 million (previous year: EUR 31 million) are located in other countries.

#### Notes on the cash flow statement

Liquidity comprises cash and cash equivalents as of December 31, 2013.

#### Other financial obligations

Financial obligations under leases are valued at EUR 51.678 million (previous year: EUR 44.981 million); of this, an amount of EUR 11.409 million (previous year: EUR 11.047 million) is due for settlement in less than one year, an amount of EUR 27.718 million (previous year: EUR 29.455 million) in one to five years and an amount of EUR 12.551 million (previous year: EUR 4.479 million) in more than five years. Operating leases entail financial obligations of EUR 1.696 million (previous year: EUR 2.047 million) due for settlement in one to five years; an amount of EUR 0.714 million (previous year: EUR 0.726 million) is due for settlement in less than one year, an amount of EUR 0.936 million is due for settlement in one to five years and an amount of EUR 0.046 million in more than five years. The main operating leases are for buildings and have a term of one to five years. There are no purchase options.

Following the transfer of business activities held by a Group company to a subsidiary, there are other financial obligations of EUR 3.577 million (previous year: EUR 69.810 million) due for settlement in less than one year in the form of letters of comfort. There are no other obligations necessitating an outflow of resources. Aerotech Peissenberg GmbH & Co. KG has issued a declaration of subordination in favor of its subsidiary Aerotech CZ for its own receivables of EUR 1.183 million. As of the reporting date, there were obligations under guarantees of EUR 63.301 million (previous year: EUR 13.553 million).

Pledges on land and buildings with residual carrying amounts of EUR 22.029 million have been provided as collateral for loans of EUR 10 million at the level of one Group company. This land charge will be canceled in 2014 due to the new credit facility. The participating companies within the OHB Group have assumed joint and several liability for obligations under the credit facility. In the case of a further subsidiary, pledges on land and buildings with residual carrying amounts of EUR 6.310 million have been provided as collateral for loans of EUR 10.485 million. OHB AG has issued a letter of comfort in favor of a customer for the completion of two projects/contracts by Group members and, in one case, a guarantee in favor of the customer.

#### Employees

The average head count stood at 2,437 in the year under review (previous year: 2,442).

#### X. MANAGEMENT BOARD AND SUPERVISORY BOARD

The Company's Management Board comprises:

- Mr. Marco Fuchs, Lilienthal, CEO
- Prof. Dott. Ing. h.c. Manfred Fuchs, Bremen
- Mr. Ulrich Schulz, Bremen

The Company's Supervisory Board comprises:

- Mrs. Christa Fuchs, Bremen, managing shareholder of VOLPAIA Beteiligungs-GmbH, Bremen, chairwoman
- Prof. Heinz Stoewer, St. Augustin, Professor em. Space Systems Engineering, Technical University of Delft, Netherlands, managing director of Space Associates GmbH, St. Augustin
- 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 2013:

- Mr. Marco R. Fuchs, ZARM Technik AG, Bremen, chairman of the supervisory board; MT Aerospace AG, Augsburg, chairman of the supervisory board (Group mandate); ORBCOMM Inc. Fort Lee, NJ, United States, member of the board of directors (Group mandate); CGS S.p.A., Milan, Italy, member of the board of directors (Group mandate); TS S.p.A., Milan, Italy, member of the board of directors (Group mandate) until December 2013, Jacobs -University Bremen gGmbH, member of the supervisory board
- Prof. Dott. Ing. h.c. Manfred Fuchs, OHB System AG, Bremen, chairman of the supervisory board (Group mandate); MT Aerospace AG, Augsburg, member of the supervisory board (Group mandate); CGS S.p.A., Milan, Italy, president of the board of directors (Group mandate); TS S.p.A., Milan, Italy, member of the board of directors until December 2013 (Group mandate)
- 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)
- Robert Wethmar, Wolff & Olsen GmbH & Co. KG, chairman of the advisory council until July 2013

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

as of December 31, 2013	Shares	+/- 2013/12
Christa Fuchs,		
Chairwoman of the Supervisory Board	1,400,690	-
Professor Heinz Stoewer,		
Member of the supervisory boar	1,000	-
Marco R. Fuchs,		
Chief Executive Officer	3,184,796	-
Professor Manfred Fuchs,		
member of the Management Board	2,863,064	-
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 8, 2013, 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. With respect to Aerotech Peissenberg GmbH & Co. KG, a resolution was passed on September 18, 2013 to make use of the exemption to disclose its annual financial statements in accordance with Section 264 b of the German Commercial Code.

## **Related parties disclosures**

Related parties as defined in IAS 24 comprise Christa Fuchs, Romana Fuchs Mayrhofer, Prof. Dott. Ing. h.c. Manfred Fuchs, Marco R. Fuchs, Ulrich Schulz, 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 0.002 million (previous year: EUR 0.002 million) arose from transactions with related parties, while expenditure on goods and services purchased and rentals came to around EUR 5.151 million (previous year: EUR 5.236 million) at Group companies. Outstanding receivables as of the reporting date were valued at EUR 0.152 million (previous year: EUR 0.130 million). As of December 31, 2013, there were liabilities of EUR 0.007 million (previous year EUR 0.493 million). References should also be made to the Company's explanations on the related parties report included in the management report in accordance with Section 312 of the German Stock Corporation Act.

## Declaration of conformity with the Corporate Governance Code pursuant to Article 161 of the Joint Stock Companies 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 64) 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:

http://www.ohb.de/investorrelations/corporate-governance/ entsprechenserklaerung.html

## Allocation of earnings

The parent-company financial statements prepared for OHB AG pursuant to German GAAP (HGB) for the year ending December 31, 2013 carry net profit for the year of EUR 22,404,340.46. OHB AG exercises the function of an active holding company. Its main assets comprise investments which were carried at a value of EUR 41.927 million on the balance-sheet date. OHB AG's equity stood at EUR 61.642 million on December 31, 2013. The Company's single-entity financial statements carry cash and cash equivalents of EUR 6.841 million. Income of EUR 11.097 million under profit transfer agreements made a particular contribution to net profit for 2013. The Management Board will be asking the shareholders to pass a resolution providing for the allocation of the Company's unappropriated surplus of EUR 22,404,340.46 for 2013 (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, the distributable dividend per dividend-entitled share will change.

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 2012 came to EUR 0.37 per dividend-entitled share (17,387,600 shares), resulting in a total payout of EUR 6,433,412.00. In addition, an amount of EUR 15,195,571.32 was carried forward. The unappropriated surplus came to EUR 21,628,983.32 in 2012.

#### Allocation of earnings

in	EU	R	00	0s
	20	••	υυ	03

Dividend of EUR 0.37 proposed for each dividend	
entitled share (17,387,600 shares)	6,433,412.00
Amount to be carried forward	15,970,928.46
Unappropriated surplus	22,404,340.46

#### Compensation

Generally, 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 longterm 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 62).

The total compensation paid to the members of the Management Board for 2013 came to EUR 1.720 million (previous year: EUR 1.506 million). Of this, variable components account for EUR 0.840 million, fixed components for EUR 0.840 million, contributions to endowment policies for EUR 2.9k and payments under a pension commitment for EUR 37k.

The total compensation paid to members of the Supervisory Board for 2013 came to EUR 0.070 million (previous year: EUR 0.070 million). Of this, the chairwoman of the Supervisory Board received EUR 0.030 million and the other two members of the Supervisory Board EUR 0.020 million each. Variable compensation components were dispensed with.

Mrs. Christa Fuchs received arms-length compensation of EUR 0.128 million (previous year: EUR 0.118 million) for her advisory services for OHB Group companies in the year under review.

#### Audit fees

In the period under review, the OHB Group recorded the following fees paid to BDO AG Wirtschaftsprüfungsgesellschaft, Hamburg, the auditors of its financial statements:

- Auditing of annual and consolidated financial statements: EUR 0.235 million (previous year: EUR 0.231 million)
- Tax consultancy services: EUR 0.136 million (previous year: EUR 0.286 million)
- Other services: EUR 0.011 million (previous year: EUR 0.004 million).

#### Events after the reporting date

There were no significant reportable event between the reporting date and the date on which the annual report for 2013 was prepared.

The consolidated financial statements were approved by the Management Board for publication following the Supervisory Board's meeting of March 19, 2014.

The Management Board Bremen, March 19, 2014

2013

Marco R. Fuchs Marco R. Fuchs

Prof. Dott. Ing. h.c. Manfred Fuchs

Ulrich Schulz

## XI. AUDITOR'S CERTIFICATE

We have audited the consolidated financial statements prepared by the OHB AG, Bremen, comprising the statement of financial position, the statement of comprehensive income, the statement of changes in equity, the statement of cash flows and the notes to the consolidated financial statements, together with the group management report for the financial year from January 1, 2012 to December 31, 2012. The preparation of the consolidated financial statements and the group management report in accordance with IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to § 315a(1) of the HGB are the responsibility of the legal representatives of the parent company. Our responsibility is to express an opinion on the consolidated financial statements and on the group management report based on our audit.

We conducted our audit of the consolidated financial statements in accordance with § 317 of the HGB and the 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 accor-dance with the applicable financial reporting framework 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 assessing the financial information of those components consolidated, the scope of the

consolidation, the accounting and consolidation principles used and the significant estimates made by management, 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 findings of our audit, the consolidated financial statements comply with IFRSs as adopted by the EU, the additional requirements of German commercial law pursuant to § 315a(1) of the HGB and give a true and fair view of the net assets, financial position and results of operations of the group in accordance with these requirements. The group management report is consistent with the consolidated financial statements and as a whole provides a suitable view of the group's position and suitably presents the opportunities and risks of future development.

Hamburg, March 19, 2014 BDO AG Wirtschaftsprüfungsgesellschaft

#### **Declaration of the management Board**

To the best of our knowledge, and in accordance with the applicable reporting principles, 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 Group management report 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.

The Management Board Bremen, March 19, 2014

# Contact information Imprint

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## ✓ Glossary

## Calendar of events in 2014

Annual press conference and release of annual report for 2013, Bremen	March 20
Analyst conference, Frankfurt/Main	March 20
3 month report/analyst conference call	May 14
Annual general meeting, Bremen	July 2
6 month report/analyst conference call	August 13
9 month report/analyst conference call	November 13
Analyst presentation at Deutsches Eigenkapitalforum, Frankfurt/Main	November 24–26

## Glossar

ALMA Atacama Large Millimeter Array; a telescope system in the Andes comprising a total of 66 mobile antennas each with a diameter of 12 meters

AQAP Allied Quality Assurance Publications; series of standards developed by NATA from the military standard for quality assurance systems

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 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

**BIOMASS** Earth observation programme of the European Space Agency

BMVg German Federal Ministry of Defense

BMWi German Federal Ministry of Economics and Technology

CFRP Carbon fiber-reinforced plastic

COLUMBUS Name of the European module of the International Space Station

**CPS** Chemical Propulsion System

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

DEKRA Testing body for determining the roadworthiness of vehicles, certification services, safety checks and examination of technical equipment

**Design-to-cost** Designing and Engineering in terms of costs considering the given circumstances

DLR Deutsches Zentrum für Luft- und Raumfahrt; German Space Agency

**Dream Chaser®** The primary 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-C** Dedicated satellite for the European Data Relay Satellite System for implementing a data network in space using optical satellite communications

Electra Fully electrically driven satellite based on the SmallGEO platform

**EnMAP** Environmental Mapping and Analysis Programme; satellite for hyperspectral terrestrial observation

EOEP ESA Earth Observation Envelope Programme

**EPS** Earnings per share

ESA European Space Agency

**EU** European Union

**EUMETSAT** European Organisation for the Exploration of Meteorological Satellites;

**European** Southern Observatory; intergovernmental research organisation for astronomy that has built and operated some of the largest and most technologically-advanced telescopes in the world

**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 The Full Operational Capability phase of the Galileo programme is managed and fully funded by the European Union. The Commission and ESA have signed a delegation agreement by which ESA acts as design and procurement agent on behalf of the Commission. The views expressed in this Press Release can in no way be taken to reflect the official opinion of the European Union and/or ESA."Galileo" is a trademark subject to OHIM application number 002742237 by EU and ESA.

Hispasat AG1 Hispasat Advanced Generation 1

HGB German Commercial Code

IAC International Astronautical Congress; yearly space symposium that takes place in different event locations

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

NADCAP, National Aerospace and Defense Contractors Accreditation Programme; certification of special aviation,space and defense processes

NASA National Aeronautics and Space Administration; US space agency

**OPSIS** OPtical System for Imaging and Surveillance, satellite mission operated by the Italian space agency ASI

**PPS** Precise Positioning Service

R+D Research and development

**REACH** Registration, Evaluation, Authorization of Chemicals; EU chemicals regulation

**RFC** Request for comments

**RoHS** Restriction of the use of certain hazardous substances; EU directive to limit the use of certain dangerous materials in electrical and electronic devices

**ROSCOSMOS** Space Agency of Russia

**RPK** Revenue Passenger Kilometer

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

SmallGEOs Small geostationary satellites for telecommunications and multimedia applications

SRT Sardinia Radio Telescope (diameter of 64 meters)

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

TET Technology mule; core element of the national "On-Orbit Verification of New Techniques and Technologies" project

**TRL** Technology Readiness Level; is a measure used to assess the maturity of evolving technologies

USD US-Dollar

VLBI Very Long Baseline Interferometry; is a type of astronomical interferometry used in radio astronomy.

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