between equity and borrowed capital. This approach avoids short-term fluctuations in interest rates on the capital markets that may distort the information provided by the value management system.

The HHLA Group's operating result (EBIT) rose year-on-year by 4.8 % to € 164.0 million in the 2016 financial year (previous year: € 156.5 million). ▶ see also Group Performance, page 41 Average operating assets were up slightly at € 1,317.6 million (previous year: € 1,303.1 million) and the return on capital employed increased by 0.4 percentage points year-on-year to 12.4 %. The minimum ROCE of 8.5 % was therefore comfortably exceeded by 3.9 percentage points. The HHLA Group therefore generated a positive value added of € 52.0 million in the 2016 financial year (previous year: € 45.7 million).

Key Figures Value Added

in € million	2016	2015	Change
Operating income	1,241.9	1,191.0	4.3 %
Operating expenses	- 1,077.9	- 1,034.5	4.2 %
EBIT	164.0	156.5	4.8 %
Ø Net non-current assets	1,211.1	1,213.3	- 0.2 %
Ø Net current assets	106.5	89.8	18.6 %
Ø Operating assets	1,317.6	1,303.1	1.1 %
ROCE in %	12.4	12.0	0.4 pp
Capital costs before tax[1] in %	8.5	8.5	0.0 pp
Capital costs before tax	112.0	110.8	1.1 %
Value added in %	3.9	3.5	0.4 pp
Value added	52.0	45.7	13.7 %

1 Of which 5.0 % for the Real Estate subgroup

Non-Financial Performance Indicators

The main non-financial performance indicators are container throughput and container transport volumes. In addition to the continuous dialogue that HHLA maintains with its customers, the company makes extensive use of macroeconomic forecasts as early indicators for volume trends and its operating activities. These include the anticipated development of gross domestic product for important trading partners and the subsequent estimates for foreign trade and import/export flows, as well as for container traffic on relevant routes and changes in the correlation between gross domestic product and containerised trading volumes.

Research and Development

One of HHLA's strategic objectives is to continuously improve the efficiency of its operating systems, and consequently its competitiveness, by developing application-oriented technologies. The main focus of these activities is therefore on engineering and IT-based innovation projects. Due to close collaboration with technical universities, institutes, industry partners and government authorities, joint projects can be planned, managed and developed by task forces.

In the 2016 financial year, HHLA mainly focused its resources and available capacity on continuing its research in the area of battery-powered container vehicles for horizontal transport.

Battery-Powered Container Vehicles

Researching and developing eco-friendly drive systems is a key aspect of HHLA's sustainable business model. The BESIC project (Battery Electric Heavy Goods Transports within an Intelligent Container Terminal), which was funded by the German Federal Ministry of Economics and Energy and conducted by HHLA at the Container Terminal Altenwerder (CTA) in collaboration with Gottwald Port Technology, Vattenfall Europe Innovation and several research bodies, was successfully concluded in the year under review. As part of the project, a battery management system was developed that uses targeted data exchange between the energy supplier and the terminal to ensure that the batteries for the battery-operated automated guided vehicles (AGVs) are always charged at the best-possible time, from both an environmental and operational perspective.

Performance Certified

In order to document their performance, CTA and CTT once again received certification in accordance with the Container Terminal Quality Indicator (CTQI) in the reporting year. The standard, which was developed by the Global Institute of Logistics and Germanischer Lloyd, checks criteria such as the safety, performance level and efficiency of a terminal on both the quayside and in the hinterland, as well as its links to pre- and onward-carriage systems. With their successful certification, the terminals once again confirmed their high levels of performance and compliance with all quality standards.

Other Research Projects

The foundation for a further research project at CTA was also laid in the year under review. It is supported by the German Federal Ministry of Transport and Digital Infrastructure (BMVI) under the recently introduced Innovative Port Technologies (IHATEC) incentive scheme. The project promotes the development of solutions for man-machine interaction in shared working environments.

Purchasing and Materials Management

Purchasing is a shared service provided by the HHLA Group's management holding company in Hamburg. Important objectives are pooling and harmonising purchasing processes to meet internal customers' requirements in terms of service and performance as far as possible. The purchasing team focuses on standardising the supplier base to ensure that capital goods, raw materials, consumables, supplies, services and other products are provided reliably and on time, taking aspects such as cost, quality and sustainability into account. Market developments relating to new technologies, innovations and the service performance of specific suppliers are considered in close cooperation with the operations and technology departments.

Purchasing actively supports the review and adjustment of the Group's requirements and guidelines for purchasing processes and their mandatory fulfilment. All employees in the purchasing team are obliged to uphold HHLA's code of conduct. The compliance rate and purchase requisition rate are among the many methods used to monitor adherence to these requirements. The compliance rate measures the proportion of procurement orders handled by the Purchasing department. In 2016 this stood at 95.2 % (previous year: 94.5 %). The purchase requisition rate indicates the ratio of requisitions entered and authorised via the SAP enterprise resource planning system in compliance with regulations. At 99.6 %, it was roughly on a par with the prior year in 2016 (previous year: 99.7 %). The automation of purchasing processes to create efficient, transparent and uniform workflows remained a key objective for procurement in 2016. In the reporting period, approximately 14 % of all purchasing processes were handled fully automatically by means of e-procurement systems (previous year: approximately 13 %). The Group is deliberately diversifying its procurement activities and optimising its supplier base. As a result, there were no significant dependencies on individual suppliers in the 2016 financial year, as in the previous year, neither at Group nor at segment level. There were also no supply shortages during the reporting period. In 2016, equipment and energy accounted for 44.5 % of the Group-wide procurement volume, while construction accounted for 22.5 %, MRO (maintenance, repairs and operations) for 14.0 % and information technology (IT) for 19.0 %.

Taking competition law into account, systematic steps are being taken to enhance the way in which suppliers are involved in the development and optimisation of products, facilities and processes from a strategic and collaborative viewpoint. The aim is to safeguard the on-time completion of development and modernisation projects and the associated timely procurement of capital equipment, supplies and replacement parts. The focus here is on analysing and evaluating relationships with suppliers in terms of their reliability, quality, innovative strength, cost structures, economic stability and compliance. An IT-based supplier management system will be implemented in 2017 to support this process. Suppliers register on an internet portal, which uses questionnaires to cover topics such as occupational safety, sustainability and compliance. All content is coordinated with both the purchasing team and the relevant departments and is subsequently evaluated. Certain criteria may result in suppliers being excluded. These include entries in a state corruption register, insolvency proceedings, failure to pay minimum wages or operational restrictions (lack of certain licences etc.).

Registration is mandatory for all suppliers contacting HHLA for the first time as part of bidding processes, market enquiries or on their own initiative. Suppliers already listed in the company's own pool will be asked to complete the registration process successively. The need to register will be prioritised according to the supplier's strategic relevance in terms of revenue, market and/or product and service range.

Downstream supplier management thus allows continual internal evaluation. These strategic suppliers are evaluated annually by the internal customers and departments. The evaluations include experience on first contact, while project procurement and flow are also evaluated and documented. The content and scope of the evaluation criteria are regularly reviewed and adapted according to legal requirements, corporate guidelines and rules, as well as their importance for service performance.

Another key project was the introduction of an electronic tendering platform. Although only mandatory as of April 2018, Purchasing rolled out an e-tendering platform when the amendment of German public procurement legislation came into force in April 2016. The platform not only standardises and transparently documents the tendering processes, but also significantly improves process quality, reliability and efficiency. Secondly, the electronic process creates considerable added value for bidders, as a web-based platform ensures process reliability and fair competition. Premature adoption gives suppliers the time and opportunity to prepare for and adjust to the new process.

Sustainable Performance Indicators

HHLA's actions have always been guided by economic considerations and a sense of responsibility towards its employees, the environment and society as a whole. Due to high levels of capital intensity and long useful lives, those who build and operate port and hinterland terminals, intermodal networks and logistics centres are compelled to take a wider view and gear their business operations towards long-term success spanning several economic cycles. Ever since it was established, the company has therefore attached the utmost importance to sustainable practices.